

**THE EFFECTS OF RECIPROCAL TEACHING ON ENGLISH READING
COMPREHENSION IN A THAI HIGH-SCHOOL CLASSROOM**

A DISSERTATION

BY

YUWADEE YOOSABAI

**Presented in Partial Fulfillment of the Requirements for the
Doctor of Philosophy Degree in English
at Srinakharinwirot University**

February 2009

**THE EFFECTS OF RECIPROCAL TEACHING ON ENGLISH READING
COMPREHENSION IN A THAI HIGH-SCHOOL CLASSROOM**

A DISSERTATION

BY

YUWADEE YOOSABAI

**Presented in Partial Fulfillment of the Requirements for the
Doctor of Philosophy Degree in English
at Srinakharinwirot University**

February 2009

Copyright 2008 by Srinakharinwirot University

ผลการใช้การสอนการอ่านแบบ RECIPROCAL TEACHING ต่อความเข้าใจในการอ่าน

ภาษาอังกฤษในชั้นมัธยมศึกษาตอนปลาย

บทคัดย่อ

ของ

ยุวดี อยู่สบาย

เสนอต่อบัณฑิตวิทยาลัย มหาวิทยาลัยศรีนครินทรวิโรฒ เพื่อเป็นส่วนหนึ่งของการศึกษา

ตามหลักสูตรปริญญาศิลปศาสตรบัณฑิต สาขาวิชาภาษาอังกฤษ

กุมภาพันธ์ 2552

ยวดี อยู่สบาย (2552). ผลของการใช้การสอนการอ่านแบบ *RECIPROCAL TEACHING* ต่อความ
เข้าใจในการอ่านภาษาอังกฤษในชั้นมัธยมศึกษาตอนปลาย. ปรินญาณิพนธ์.ศศ.ด.
(ศิลปศาสตร์ศึกษา).กรุงเทพฯ: บัณฑิตศึกษา มหาวิทยาลัยศรีนครินทรวิโรฒ
คณะกรรมการควบคุม: อาจารย์ ดร.แสงจันทร์ เหมเชื้อ,
อาจารย์ ดร.อุมาพร คาดการณ์ไกล, อาจารย์ ดร.วไลพร ฉายา.

จุดมุ่งหมายในการวิจัยครั้งนี้เพื่อศึกษาประสิทธิภาพของการสอนการอ่านแบบ Reciprocal Teaching ต่อความเข้าใจในการอ่านภาษาอังกฤษและยุทธวิธีอภิปัญญาไทยในชั้นมัธยมศึกษาปีที่ 6 กลุ่มตัวอย่างที่ใช้ในการศึกษาครั้งนี้แบ่งนักเรียนออกเป็นเป็น 2 กลุ่ม คือเป็นกลุ่มทดลอง และกลุ่มควบคุม โดยกลุ่มทดลองที่ได้รับการสอนการอ่านแบบ Reciprocal Teaching และกลุ่มควบคุมได้รับการสอนการอ่านแบบ Skill-based Teaching การสอนการอ่านแบบ Reciprocal Teaching ประกอบด้วยยุทธวิธีในการอ่าน 4 ยุทธวิธีคือ การทำนาย การตั้งคำถาม การหาความชัดเจน และการสรุป เครื่องมือที่ใช้ในการวิจัยในครั้งนี้ประกอบด้วย การอ่านเพื่อความเข้าใจจากข้อสอบเข้ามหาวิทยาลัยวิชาภาษาอังกฤษปีพ.ศ.2547 แบบสอบถามเรื่องยุทธวิธีอภิปัญญา แบบบันทึกการใช้ยุทธวิธีอภิปัญญาระหว่างการอ่าน การอัดเทปทสนทนาในขณะที่นักเรียนทำงานกลุ่ม และการสัมภาษณ์

ผลงานวิจัยสรุปได้ว่า Reciprocal Teaching มีผลในทางบวกต่อการอ่านเพื่อความเข้าใจและการใช้ยุทธวิธีอภิปัญญา อย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05 คะแนนเฉลี่ยของการสอบหลังเรียนของกลุ่มทดลอง มีค่าสูงกว่าคะแนนเฉลี่ยของกลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05 การสอนแบบ Reciprocal Teaching ช่วยเพิ่มความสามารถในการอ่านเพื่อความเข้าใจ ของนักเรียนที่มีความสามารถในการอ่านสูง และนักเรียนที่มีความสามารถในการอ่านต่ำ นอกจากนั้นแล้ว Reciprocal Teaching มีผลต่อการใช้ยุทธวิธีอภิปัญญา นักเรียนใช้ยุทธวิธีอภิปัญญามากขึ้น หลังการเรียนการสอนการอ่านแบบ Reciprocal Teaching อย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05

**THE EFFECTS OF RECIPROCAL TEACHING ON ENGLISH READING
COMPREHENSION IN A THAI HIGH-SCHOOL CLASSROOM**

AN ABSTRACT

BY

YUWADEE YOOSABAI

Presented in Partial Fulfillment of the Requirements for the

Doctor of Philosophy Degree in English

at Srinakharinwirot University

February 2009

Yuwadee Yoosabai (2009). *The Effects of Reciprocal Teaching on English Reading Comprehension in a Thai High-School Classroom*. Dissertation, Ph.D. (English). Bangkok: Graduate School, Srinakharinwirot University. Advisor Committee: Dr. Saengchan Hemchua, Dr. Walaiporn Chaya, Dr. U-maporn Kardkarnklai.

The purpose of this study was to investigate the effects of reciprocal teaching modified from Palincsar and Brown's (1984) on the English reading comprehension and metacognitive reading strategies of 12th-grade students in a Thai high-school classroom. The participants were purposively selected and randomly assigned into two groups: an experimental and a control group. The experimental group was taught through reciprocal teaching while the control group was taught through skill-based teaching. Reciprocal teaching involves four main metacognitive reading strategies: predicting, questioning, clarifying, and summarizing. Skill-based teaching is a reading instruction that focuses on reading comprehension skills, vocabulary skills, sentence structure, finding the main idea of a paragraph, finding the details and facts of a text, and explaining the grammar and structure of a passage with the teacher's help. The reading section of the National English Entrance Examination 2004, a questionnaire on metacognitive reading strategies, a Reading Think Aloud Sheet, audio-taping, and interviews were all used to collect the data. The results indicated that reciprocal teaching had a significantly positive effect on the English reading comprehension and usage of the four main metacognitive reading strategies of high-school 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 results from the questionnaire showed that the students in the experimental group

employed significantly more metacognitive reading strategies after reciprocal teaching, at 0.05 level.

The Dissertation Titled

“The Effects of Reciprocal Teaching on English Reading Comprehension in a Thai
High-school Classroom”

by

Yuwadee Yoosabai

has been approved by The Graduate School as partial fulfillment of the requirements
for the Doctor of Philosophy of Arts Degree in English of Srinakharinwirot University.

..... Dean of Graduate School

(Associate Professor Somchai Santiwatanakul)

October 2008

Dissertation Committee:

..... Chair

(Dr. Saengchan Hemchua)

..... Co-Advisor

(Dr. Walaiporn Chaya)

..... Co-Advisor

(Dr. U-maporn Kardkarnklai)

..... Reader

(Dr. Saiwaroon Chumpavan)

..... Reader

(Dr. Ubon Dhanesschaiyakupta)

ACKNOWLEDGEMENTS

In my exploring of knowledge and in the course of completing my dissertation, many individuals have assisted me. I would like to acknowledge wholeheartedly their assistance, cooperation, and encouragement which all contributed in making this study possible. Without them, this study would not have been completed.

First, my sincere appreciation goes to Dr. Saengchan Hemchua my advisor. She has guided me through the completion of the doctoral program and through this dissertation. Dr. Hemchua always listened to me patiently and carefully, and challenged me to think critically. She has constantly provided me with encouragement and support. It is an honor for a student like me to have had Dr. Hemchua as an advisor during my research and a role model for my forthcoming teaching profession.

My sincere gratitude also goes to my research committee, Dr U-maporn Kardkranklai and Dr. Walaiporn Chaya, for their professional and insightful comments and for trusting my capacity as a researcher and my responsibility. Their guidance kept me alive throughout the ongoing research. They gave me a lot of recommendations and an invaluable feedback to my qualified work. As my appreciation, my respectful heart goes with them forever.

I also wish to thank Dr. Ubon Dhanesschaiyakupta and Dr. Saiwaroon Chumpavan for their insightful comments which they kindly shared as external members of the committee.

Appreciation is extended to the Foreign Language Department at Nuannordit School for their permission to conduct this study. I am also indebted to the teachers and students participating in this study. Without their patience, cooperation, and attention to this investigation into new knowledge, this study could never have been completed.

Additionally, special thanks are given to Mr. Regent Lamoureux, my very best English editor, who helped me proofread my English language. Finally, a million thanks go to my family, in particular, my mother, my sisters, my brothers, and my husband who always take care of me and support me with understanding.

Yuwadee Yoosabai

TABLE CONTENTS

Chapter	Page
1 INTRODUCTION	1
Background of the study.....	1
Conceptualization of the Reading Process and Reading Strategies.....	3
Reciprocal Teaching and its Theoretical Framework.....	7
Related Research on Reciprocal Teaching.....	8
Statement of the Problem.....	9
Purposes of the Study.....	10
Research Questions.....	10
Significance of the Study.....	11
Scope of the Study.....	11
Definition of Terms.....	12
2 REVIEW OF RELATED LITERATURE	15
Theory of Reading.....	15
Models of the Reading Process.....	16
Language Learning Strategies.....	19
Cognitive and Metacognitive Strategies and Reading Comprehension.....	20
Metacognition and its Components.....	21
Role of Metacognition in Reading.....	22
Reciprocal Teaching.....	24
Definition of Reciprocal Teaching.....	24
Reciprocal Teaching and Reading Comprehension.....	25
Reciprocal Teaching and its Theoretical Framework.....	26
Three Features of Reciprocal Teaching.....	29
Studies Related to Reciprocal Teaching.....	35
Palincsar and Brown’s Research.....	35
Reciprocal Teaching in First Language (L1) Context.....	37
Reciprocal Teaching in ESL and EFL Context.....	42
3 RESEARCH METHODOLOGY	47
Research Design.....	47
Context of the study.....	49
Target Population	49
Participants.....	49
Sampling Procedure.....	50
Confidentiality of the Participants and of their Responses.....	51
Research Procedures.....	51
Research Instrumentation.....	51
The Construct of the Research Instruments.....	56
Lesson Plans and Teaching Materials.....	58
Teaching Procedures.....	60

TABLE CONTENTS (Continued)

Chapter	Page
3 (Continued)	
The Reciprocal Teaching Model for Reading Comprehension.....	60
Skill-based Teaching for Reading Comprehension.....	63
Pilot Study.....	66
Data Collection Procedure.....	68
Collection of Quantitative Data.....	68
Collection of Qualitative Data.....	69
Data Analysis.....	71
Quantitative Data Analyses.....	71
Qualitative Data Analyses.....	73
Data and Variables.....	74
4 RESULTS OF THE STUDY.....	75
Quantitative Results of the Study.....	76
Results of English Reading Comprehension for the Experimental Group.....	76
Comparison of English Reading Ability Results between the Experimental Group and the Control Group.....	78
Comparison of Metacognitive Reading Strategies Used before and after the Reciprocal Teaching.....	79
Comparison of the Ten Types Metacognitive Strategies Students Employed before and after the Reciprocal Teaching...	82
Comparison of the Metacognitive Strategy Processes the Students Employed before and after Reciprocal Teaching.....	84
Qualitative Results.....	86
The Written Record from the Reading Think Aloud Sheet.....	86
Interview Results.....	90
Audio Taping Results.....	94
5 DISCUSSION AND CONCLUSION.....	96
Discussion of the findings.....	97
Implications.....	111
Theoretical Implications of the Study.....	111
Methodological Implications of the Study.....	111
Pedagogical Implication for Reading Strategy.....	113
Recommendation for Further Studies.....	115
REFERENCES.....	118
APPENDIXES.....	131

LIST OF TABLES

Table	Page
1 Description of the Metacognitive Strategies and the Number of Items in the Reading Strategies Questionnaire.....	54
2 Summary of Elements of Reciprocal Teaching and Skill-based Teaching in this Study.....	64
3 Reading Comprehension Mean Scores and Standard Deviations (SD) of the Participants in the Reciprocal Teaching Group.....	77
4 Comprehension Mean Scores and Standard Deviations of the Proficient and Less Proficient Students.....	78
5 Reading Comprehension Mean Scores and Standard Deviations (SD) of the Proficient Readers in the Reciprocal and Skill-Based Teaching Groups.....	79
6 The Comparison of the Metacognitive Reading Strategies Students Employed before and after Reciprocal Teaching	80
7 Mean, Standard Deviation, and Level of Use of Metacognitive Strategies Employed Before and After the Instruction of Reciprocal Teaching.....	83
8 Comparison of the Metacognitive Processes the Students Employed Before and After Reciprocal Teaching.....	84
9 Comparison of the Metacognitive Strategies the Students Employed in Each Reading Step before and after Reciprocal Teaching.....	85
10 The examples the answers form interview questions of two proficient students and. two less proficient students.....	90

LIST OF FIGURES

Figure	Page
1 Vygotsky's Model of Zone of Proximal Development.....	27
2 The Reciprocal Teaching Theoretical Framework.....	35
3 The Reciprocal Teaching Model for Reading Comprehension.....	62

CHAPTER I

INTRODUCTION

Background of the Study

In Thailand, English is taught as a foreign language, and the purpose of learning English is for communication (Chandavimol, 1998). To communicate efficiently, learners need the four skills of listening, speaking, reading, and writing, but of all these four skills, reading is regarded as the most vital and necessary for students in both a classroom context and an extracurricular environment (Carrell, 1989; Grabe & Stoller, 2002). In classrooms of higher education, Thai college and graduate students need efficient reading skills to comprehend a mass of reading materials from various sources related to their studies (Piyankool, 2001). Reading is even more important for high-school students since they have to be highly competitive in the English entrance examination (Chandavimol, 1998) and the National English Test. Therefore, the ability to read and comprehend texts efficiently is crucial for Thai students. In addition, because of the demanding expectations for academic success in all areas of learning, high-school students, as English foreign language (EFL) learners, need to develop their English reading comprehension abilities to a stronger, more advanced level (Soonthornmanee, 2002).

However, these Thai high-school students do not have much opportunity to develop these abilities, since most of the time English language teaching emphasizes on linguistic knowledge such as grammar points and vocabulary (Chandavimol, 1998). Results from previous studies have revealed that the Thai students' English reading ability does not reach a very high level of proficiency. This may come from many causes

including classes of a large size, limited reading strategies, and the methods of teaching reading comprehension in Thai classrooms (Chandavimol, 1998; Mejang, 2004). For example, Ratanakul (1998) stated that a Thai reading classroom counts about 50 students, so in such a large class the teacher cannot interact with each student and learners have little opportunity for a consultation with the teacher about their reading difficulties and for assistance with their specific reading problems.

In addition, the findings from Ratanakul's study have revealed that Thai students do not know how to solve problems when struggling with difficult texts, or when lacking background knowledge. They do not know how to work through their reading difficulties to get the full meaning from the reading texts. These struggling students might not be aware of these difficulties, they might lack the proper repertoire of reading strategies, and they might not know how to apply reading strategies effectively to improve their reading comprehension. They were never exposed to systematic training in reading strategies. According to studies from Chandavimol (1998) and Mejang (2004), all this contributes in making the learners uninterested in reading in English.

Most importantly, the method of teaching English reading comprehension in the Thai classrooms is based on translation from English into Thai instead of based on a reading process which would help the readers construct meaning from a text. This traditional instruction has failed to develop Thai students' abilities to comprehend English texts or to interpret them meaningfully (Chandavimol, 1998; Soonthornmanee, 2002) because reading is more than just a receptive skill through which the readers learn new words and translate sentences or a whole text word by word into their native language. It is thus essential to clarify the reading process and its nature, what reading is, and how proficient readers engage in the reading process and comprehend a text so that a full

understanding of these concepts help Thai EFL readers develop a higher level of reading comprehension.

Conceptualization of the Reading Process and Reading Strategies

Many researchers have defined reading using three models: the bottom-up, the top-down, and the interactive models. There appears to be a consensus that reading is a highly complex cognitive process that involves the reader, the text, and the interaction between the reader and the text (Kern, 1989). In the reading process, the reader interacts with the text to construct meaning from it using various kinds of background knowledge: linguistic knowledge of words, sentences and paragraphs, and cognitive abilities (Carrell, 1989). Reading comprehension then involves a complex combination of the reader's cognitive process, language proficiency, and metacognitive processes (Cohen, 1998). For example, the reader has to make inferences on the context of a text or on the end of a story by using information from various sources: the title, the illustrations, or generally from the previous paragraphs. In addition, readers have to monitor their reading behavior and find out whether they understand the text (Grabe & Stoller, 2002). When a text is difficult, the reader might reread it (parts of it or the whole of it), or he/she can ask questions about it (Paris, Cross & Lipson, 1984). The reading comprehension processes occur when the reader understands the information in a text and appropriately and meaningfully interprets it (Grabe & Stoller, 2002).

Graves, Connie, and Bonnie (1998) explain that reading strategies are conscious and flexible plans that readers apply and adapt to a variety of texts. Reading strategies indicate how readers understand a task, what textual clues they attend to, how they make sense of what they have read, and what they do when they do not understand the reading texts (Block, 1992). In order to help students to comprehend reading texts, it is necessary

for the teachers to teach reading strategies in the English classrooms. That is, the teachers need to teach reading strategies with the proper steps.

According to Cohen (1998), the effective reading process is divided into three stages: (a) pre-reading, (b) while-reading, and (c) post-reading. These steps of the reading process help students systematically practice reading strategies (Cohen, 1998).

To begin with, in pre-reading, the readers need to apply specific strategies, including scanning and guessing, to survey the type of text they are going to read and to recognize its difficulties. They then read the title, link it to their schemata, and predict the content. These strategies help them create a narrow picture of the text and check whether their prediction is right or wrong (Cohen, 1998; Mejang, 2004).

In the while-reading stage, the learners also need strategies such as self-questioning, self-monitoring, and problem-solving (Allen, 2003; Cohen, 1998). Therefore, students should be trained in questioning skills so that they can ask themselves questions on the salient points of a text. For example, they can ask a question about the main idea, the supporting details, or the conclusion. Self-monitoring is a strategy that readers use to check their comprehension (Allen, 2003; Cohen, 1998). It is an ongoing activity which involves two components: evaluation and regulation (Wenden, 1999). Evaluation refers to the readers' realization of a comprehension failure and to their assessment of comprehension progress, whereas regulation relates to the strategies used to remedy any comprehension breakdown (Zabucky & Ratner, 1992). Additionally, Cohen (1998) suggests the teacher should teach the useful strategies of summarizing, clarifying, rereading, and guessing so that the students possess a model of reading to solve the problems while reading. These strategies help the students find solutions to their difficulties when they are confronted with reading problems.

Finally, in the post-reading stage, readers need to evaluate the strategies they used and the quality of their comprehension, and they need to respond to this self-evaluation by asking themselves what they try to do, how they plan to do it, and how well they can do it. All of these questions help them evaluate whether their course of action is effective or not (Alderson, 2000).

However, less proficient readers with insufficient knowledge of cognitive strategies cannot make sense of a text they have read because they fail to control or monitor their own reading process (Baker & Brown, 1984). Proficient readers, on the other hand, can apply appropriate cognitive reading strategies to facilitate their comprehension. They are also aware of their own reading process through which they apply regulatory mechanisms, the so-called metacognitive strategies proposed by Baker and Brown (1984), to control and monitor their reading behavior, in order to facilitate effectively the reading process (Baker & Brown, 1984). Accordingly, to achieve reading comprehension, the readers need linguistic knowledge, the ability to understand or comprehend a text by applying both cognitive and metacognitive strategies, and an interactive relation between their prior knowledge and the information presented in the text. That is, reading comprehension occurs when skilled readers balance and coordinate many abilities in a very complex way to make comprehension proceed smoothly and more rapidly (Grabe & Stoller, 2002).

Apparently, reading in the first language (L1) is significantly different from reading in the second language (L2). According to the system of communication, second languages differ from first languages in their way of creating meaning and in their writing systems, so L2 reading, which involves two languages, is more complex than L1 reading (Grabe & Stoller, 2002). Phakiti (2003) points out that L2 reading comprehension is highly complex, dynamic, multi-componential, and multi-dimensional. He further argues

that L2 reading comprehension involves multiple interactions among readers.

Additionally, L2 readers perform the same functions as L1 readers, but their reading process could be slower and less successful. Similarly, Grabe and Stoller (2002) maintain that reading proficiency in L2 does not develop as completely or as “easily” as it apparently does in one’s first language since many components are involved.

As reviewed earlier, the reading process is not passive, but highly interactive, and reading comprehension does not occur automatically. Good readers are active readers who construct meaning through the integration of prior knowledge and new knowledge, and the use of a variety of strategies to control, regulate, and monitor their own reading comprehension (Paris & Myers, 1981). Therefore, the development of English reading abilities for ESL/EFL learners can be highly demanding. Besides acquiring linguistic knowledge, the goal of reading instruction is to turn those ESL/EFL students, including Thai students, into interactive readers, proficient readers, by developing in them a conscious control or metacognitive awareness of their cognitive reading strategies and by teaching them to apply these to any reading text.

Several studies investigating reading in L1 and L2 have been conducted to improve students’ reading comprehension by teaching them metacognitive strategies and cognitive reading strategies (Carrell, 1989; Carrell, Pharis, & Liberto, 1989; Cotteral, 1990; and Palincsar & Brown, 1984). These studies indicated that metacognitive and reading strategies can be taught to students. Their results also showed that concentrating on cognitive reading strategies and comprehension monitoring strategies helped students increase their comprehension and helped less proficient readers to self-regulate or self-monitor their reading strategies. However, little research related to the training of metacognitive and reading strategies in Thai classrooms has been conducted, particularly

at high-school level. Therefore, it is beneficial to investigate the effects of metacognitive strategy instruction on Thai students in a high-school classroom.

Reciprocal Teaching and its Theoretical Framework

The reciprocal teaching method is one of the effective approaches that teach learners to become responsible for their reading and employ metacognitive reading strategies over cognitive reading strategies (Cohen, 1998). Palincsar and Brown initiated it in the early 1980s in English classrooms of native speakers. Since then, it has gained more attention and has also been recognized as a valuable teaching method by many researchers, reading teachers, and educators because it is a form of systematic training in strategies that help less efficient readers improve their reading comprehension and become independent readers (Adunyarittigun & Grant, 2005; Paris, Cross & Lipson, 1984; Duffy, 2002; Kelly, Moore & Tuck, 1994; Palincsar & Brown, 1984; Soonthornmanee, 2002; and Speece & Hart, 1998).

Theoretically, reciprocal teaching is based on Vygotsky's Zone of Proximal Development (1978) and the proleptic model of teaching (Wood, Bruner & Ross, 1976, as cited in Manning & Payne, 1996). According to Vygotsky's concept, children can develop their learning to reach a level of actual development by independently solving problems, and another level of potential development under adult guidance or expert scaffolding and in collaboration with more capable peers. For language teachers, it is then necessary to provide the learners the scaffolding or tools that include effective intervention and language learning strategies, and then gradually remove these as the learners use them on their own.

The goal of reciprocal teaching is to instruct students with specific strategies that they can apply to new texts. According to Palincsar and Brown (1984), reciprocal

teaching is an instructional approach that can be best characterized by three main features: (a) the scaffolding and explicit instruction which a teacher uses and which include guided practice and modeling of comprehension-fostering strategies, (b) the four main reading strategies of predicting, generating questions, clarifying, and summarizing, and (c) social interaction which provides opportunities for learners to improve their cognitive, metacognitive and affective strategies and offers them chances to share ideas, increase confidence, and learn from their more capable friends. These three features help improve the students' ability to resolve comprehension difficulties, reach a higher level of thinking, build metacognition, and increase motivation. As a result, students create new knowledge from what they internalize and develop their reading potential. From these three features, students promote their metacognitive awareness: planning before they read, comprehension-monitoring or control of their own reading process while reading, and self-evaluation while reading and after reading, and if their self-evaluation points to any difficulties, effective readers fix those problems using the same process: planning, controlling, and evaluating.

Related Research on Reciprocal Teaching

In first language (L1) classrooms, research on reciprocal teaching and its effects on the reading abilities of different levels and groups of students has been extensively conducted: with primary and college students (Fillenworth, 1995; Palincsar & Brown, 1986; Palincsar & David, 1990), and with students with learning disabilities (Lederer, 2000). The results of these studies showed the positive effects of reciprocal teaching on the participants' reading comprehension abilities.

In Thailand, few studies have been conducted on reciprocal teaching. Adunyarittigun (2004), Ratanakul (1998), and Soonthornmanee (2002) studied the effects of reciprocal teaching on the reading comprehension of university students. The results showed that it had a positive effect on the participants' self-perception and reading performances. Konpan (2006) compared the effects of the reciprocal and communicative language teaching techniques on twelfth-grade students' reading comprehension. The results of this study revealed that the English reading comprehension of the reciprocal teaching group was significantly higher than that of the communicative language teaching group. The results of the studies on reciprocal teaching in Thailand have also showed that it has positive effects on students' reading comprehension.

Statement of the Problem

As mentioned above, most studies on the reciprocal teaching approach have been conducted in L1 language classrooms. Though some studies have been carried in EFL universities or college classrooms in Thailand, few of them have been conducted on the effects of the reciprocal teaching approach on Thai EFL high-school learners (Soonthornmanee, 2002). Moreover, the reciprocal teaching approach showed positive results in L1 for all age groups and in EFL mostly in universities or college classrooms and might be applied effectively to Thai high-school classrooms. The researcher was interested in adapting Palincsar and Brown's reciprocal teaching approach to teach Thai high-school students to improve their reading proficiency by using metacognitive reading strategies.

Purposes of the Study

The main purpose of this experimental study was to investigate the effects of reciprocal teaching on the English reading comprehension and reading strategies of students in Thai high-school classrooms. More specifically, it aimed to:

1. investigate the effects of reciprocal teaching on the English reading comprehension of 12th-grade students at Watnuannordit School.
2. investigate whether reciprocal teaching enhances the English reading ability of both proficient and less proficient students.
3. investigate whether the increase in English reading ability of the experimental group is significantly higher than the increase of the students in the control group.
4. examine the metacognitive reading strategies the 12th grade students in the experimental group employed prior to and after reciprocal teaching.

Research Questions

This study addressed the following research questions:

1. Do the 12th-grade students at Watnuannordit School improve their reading comprehension after reciprocal teaching?
2. Does reciprocal teaching enhance the English reading ability of proficient and less proficient students?
3. Is the increase in English reading ability of the students in the experimental group significantly higher than the increase in English reading ability of the students in the control group?
4. Do students in the experimental group increase their use of metacognitive reading strategies after reciprocal teaching?

Significance of the Study

This study aims to investigate whether reading strategy instruction based on the reciprocal teaching approach assists Thai high-school students in understanding reading texts. The significance of the study lies in terms of its attempt to find a suitable instructional method to aid Thai high-school students in developing their reading skills. If it is found that the reciprocal teaching enhances students' reading comprehension and metacognitive reading awareness, this research intends to assist them in their realization of the benefits of using reading strategies, of the kind of strategies available to them, and of the way to use them. Consequently, reciprocal teaching proposes to support more effective reading and to facilitate students' independent reading through a refined control of their own reading process.

As for the teachers, the findings of this study might help them define clearer guidelines and, thus, gain better skills at adapting the reciprocal teaching approach to their own English classrooms in a way that facilitates their students' goal of becoming better readers.

Scope of the Study

1. This study confined itself to investigating the 12th-grade students at Watnuannordit School, in Bangkok, Thailand. In total, it counted 66 participants: 30 students forming the experimental group and 36 students in the control group. At the time of the investigation, they were all students of the English Reading Course in the academic year 2007.

2. The reading materials were selected from five reading textbooks. Both groups of participants studied the same materials and the researcher herself instructed both groups. In order to control threats of internal validity, the researcher used the same reading materials, activities, length of time, environment in the classrooms, and midterm and final examinations.

Definition of Terms

1. *Reciprocal teaching* refers to the reading instruction originally developed by Palincsar and Brown (1984). It consists of four main strategies: predicting, questioning, clarifying, and summarizing. It occurs in the form of dialogues between teachers and students. At first, the students learn the four key strategies and practice them. Second, the teacher models the entire process step by step using structured dialogues. Third, the teacher gives the students a chance to get involved and coaches them on how to ask appropriate questions, write adequate summaries, and so on. Gradually, the teacher's role as a leader decreases. Finally, the students take on greater responsibility to carry out the whole process. In this study, reciprocal teaching is modeled on the same teaching procedures as the ones found in Palincsar and Brown, as mentioned above.

2. *Skill-based teaching* refers to the reading instruction that focuses on reading comprehension skills, vocabulary skills, sentence structure, finding the main idea of a paragraph, finding the details and facts of a reading text, finding the references, drawing inferences, and explaining the grammar and structure of a passage. Students use these reading skills while reading with the teacher's help (Soonthornmanee, 2002).

3. *Reading comprehension* refers to the ability to understand the texts the students read and what the writers try to convey to them. In this study, the researcher used the reading part of the National English Entrance Examination of 2004 as both a pretest and a posttest to assess the participants' reading comprehension. All participants of both groups took the reading part of the National English Entrance Examination 2004 as a pretest before receiving the instruction and as a posttest after the instruction. The mean scores of both tests showed whether the participants' reading comprehension improved or not.

4. *Reading comprehension strategies* refers to the conscious and flexible plan that students apply and adapt to a text when they face problems while reading. Readers use reading comprehension strategies, both cognitive and metacognitive, to better understand reading texts and in order to learn to read independently (Allen 2003).

5. *Cognitive strategies* refers to the mental processes and behaviour which learners use to help improve their ability to learn, particularly those which they use with specific classroom tasks and activities. These cognitive strategies include: predicting, using background knowledge, guessing the meaning from context, summarizing, and creating visual images, or taking notes to help them learn new information (Oxford, 1990).

6. *Metacognitive strategies* refers to the set of reading tactics through which learners are capable of becoming aware of their mental process. It involves thinking about the mental operation used in the learning process, monitoring or controlling learning while it is taking place, solving problems, and evaluating learning after it has occurred. The metacognitive strategies the learners may use when they read include: planning the task and content sequence; focusing on key words, phrases, and ideas; asking questions to clarify meaning; deciding which strategy to use to solve the reading problems; checking

whether the predictions/guesses are correct; and evaluating their own progress and whether the goal is met (Oxford, 1990).

CHAPTER II

REVIEW OF RELATED LITERATURE

This study, conducted at Watnuannordit School, Bangkok, aims at investigating the effects of the reciprocal teaching approach on the English reading comprehension of Thai high-school students. In order to provide background information on reciprocal teaching, this chapter discusses the literature related to this research, and is comprised of the following sections: a summary of the theories and models of reading, a description of the cognitive and metacognitive strategies, an explanation of the role of metacognition in reading and its components, a detailing of reciprocal teaching and its theoretical framework, and an overview of the studies related to reciprocal teaching.

Theories of Reading

Reading is a skill that a reader uses to search for world knowledge, understanding and entertainment (Chandavimol, 1998). Moreover, reading is a matter of an interaction that involves the reader, the text, and the actual interaction between the reader and text (Aebersold & Field, 1997; Rumelhart, 1977).

While reading, readers use their past experiences, called background knowledge. In turn, from doing this and from the text they read, they construct new experiences and acquire new knowledge. Readers have different schema and ways to apply their experiences to what they read, and these differences in experiences make some readers comprehend a text quicker and better than others.

The text itself is another factor in the reading process. There are various types of texts, and each one has a different style of writing, organization, pattern, syntax and

grammar, vocabulary, cohesion, and purpose. It is the readers' responsibility to know the differences between different texts in order to understand what the writer tries to convey to them.

The text and the reader are two factors that are essential to the reading process. The reader reads the text to comprehend it. Therefore, the interaction between the text and the reader is, by itself, another vital factor in this process. Different readers may get different meanings from the same text. These differences are due to the differences in the readers' background knowledge, reading ability, aptitude, personal interest, classroom environment, and so on.

To sum up, it could be said that ESL/EFL reading is an interactive process that involves constructing the meaning of a text. Readers interact with a text to derive the meaning from it, relying on different reading models. Therefore, knowing these models will help understand how readers work out the meaning from a text.

Models of the Reading Process

Reading is a cognitive process that consists of a reader, a text, and the interaction between the reader and the text. There exist three main models for the description of the second-language reading process: the bottom-up model, the top-down model, and the interactive model.

The Bottom-up Model

This reading model focuses on the smaller units of a text such as its letters, words, phrases and sentences. Then, a syntactic and semantic processing occurs during which

reading reaches the final meaning. In this model, the reader reads all of the words in a phrase, or a sentence before being able to understand.

According to Carrell (1989), the bottom-up reading process begins with decoding the smallest linguistic units, especially phonemes, graphemes, and words, and ultimately constructs meaning from the smallest to the largest units. While doing this, the readers apply their background knowledge to the information they find in the texts. This bottom-up method is also called data-driven and text-based reading.

However, the disadvantage of this model is that the readers will only be successful in reading if they accurately decode the linguistic units and recognize the relationship between words. However, it is impossible for the readers to store in their memory the meaning of every word in a passage. Moreover, it is difficult to relate one word to the other words.

From the above information, it could be said that there are some arguments against the bottom-up model. In the reading process, the readers understand that what they have read is the result of their own constructions, not the result of the transmission of graphic symbols to their understanding, and that without their background knowledge, they cannot comprehend the texts.

The Top-down Model

The top-down model was first introduced by Goodman (1967). He proposed the idea of reading as a “psycholinguistic guessing game” in which the reader uses his background (prior) knowledge or textual schemata to connect with a text and to relate these to new or unexpected information found in the text in order to understand it. This model focuses on linguistic guesswork rather than graphic textual information. Moreover, the readers do not need to read every word of a text, but rather, they concentrate on

predicting the next group of words. They concern themselves with guessing the meaning of the words or phrases.

Nuttall (1996) stated that readers might start predicting from the title of the reading text, something that allows them to limit the scope of their reading. Additionally, while reading, they may hypothesize the message the writer wants to convey and modify their hypotheses according to what they read in the text. Comprehension begins with higher levels of processing (making hypotheses), and proceeds to the use of the lower levels.

The Interactive model

This model is built on the interaction of the bottom-up and top-down models. Nunan (1990), Rumelhart (1977), and Grabe (1991) argue that efficient and effective reading requires both top-down and bottom-up decoding. L2 readers, for example, may use top-down reading to compensate for deficiencies in bottom-up reading. To achieve meaning, they use their schemata to compensate for the lack of bottom-up knowledge (Grabe, 1991).

Stanovich (1980) argued that the interactive model is a process based on information from several sources such as orthographic, lexical, syntactic, semantic knowledge, and schemata. While reading, decoding processes can support one another in a compensatory way. If, when reading word by word, readers with good bottom-up skills do not comprehend the texts, they need to use their prior knowledge (schemata) to assist them. Alternatively, readers who rely on the top-down model use textual clues and guess wildly at the meaning, but they need to compensate for deficits such as weaknesses in word recognition and lack of effective bottom-up processing.

These three models of the reading process help explain how readers construct meaning and how they compensate for their comprehension deficits. Successful readers usually alter their model based on the need of a particular text and situation. The interactive model, which is the combination of the bottom-up and top-down processes, leads to the most efficient processing of texts. Knowing that the interactive model can help L2 readers in achieving successful reading, teachers should find reading instructions based on this model to promote L2 readers' abilities.

The reciprocal teaching approach is a type of reading instruction that is based on the interactive model. It covers four main reading strategies. In order to understand more about reading strategy instruction, the aspects of language learning strategies and reading strategies will be discussed.

Language Learning Strategies

Learning strategies are processes used by learners to help them facilitate the acquisition, storage, retrieval, and use of information (Oxford, 1990). They help learners make the learning process easier and more successful. Learning strategies for second language learners are of two vital kinds, the cognitive and the metacognitive strategies (Oxford, 1990). Cognitive strategies are mental processes used in learning and problem-solving, and metacognitive strategies involve the process by which learners are aware of cognitive and regulatory processes such as planning, setting goals, monitoring or control learning, self-management, and self-evaluation of learning (O'Malley & Chamot, 1987; Wenden, 1999).

In the second language reading class, readers try to use strategies that help them comprehend the texts or facilitate their learning when they face reading problems. To comprehend a reading text, cognitive strategies, metacognitive strategies, and reading for comprehension must be performed (Anderson, 2003).

Cognitive and Metacognitive Strategies and Reading Comprehension

Reading comprehension is a constructive process by which readers use both cognitive and metacognitive strategies to build their understanding of a text (Dole et al., 1991). Cognitive strategies directly involve the target language and include different methods such as summarizing and deductive reasoning, predicting, using organization, taking notes on the main points, using prior knowledge, and guessing meaning from the context (Oxford, 1990). Metacognitive strategies are actions that allow readers to control their own reading; in other words, they are strategies based on “thinking about thinking.” That is, the readers know when and how to use these strategies and adapt them to suit their reading purposes. Metacognitive strategies consist of planning, evaluating, and regulating one’s own skills. These include such skills as determining the reading task, evaluating the predictions, focusing on important information, relating important information, ignoring unimportant new words, checking the effectiveness of guessing meaning, re-reading relevant information when failure in understanding, and checking the effectiveness of achieving the whole reading task (Oxford, 1990).

Many researchers on reading strategy instruction (Duffy, 2002; Palincsar & Brown, 1980; Salataci & Akyel, 2002) confirm that metacognitive strategy training improves students’ reading comprehension. It gives students a chance to plan before reading, control their reading process, organize their own rules, and evaluate themselves.

Metacognitive strategy training shapes the students to become independent readers which is the goal of reading. Therefore, in the reading classrooms, students should be trained to use metacognitive strategies to help them comprehend texts.

Allen (2003), Cotterall (1990), and Palincsar and Brown (1984) suggest that the reciprocal teaching approach is one of the reading instruction methods which covers both cognitive and metacognitive strategies and helps students improve their reading comprehension and thus become independent readers. In this approach, the teachers guide their students towards the right strategies to be used and instruct when and how to use them. Following this, the students will construct their own knowledge and make their own rules while reading texts. In the end, they will be able to apply these strategies and, from their application within cooperative groups, to perform reading tasks without any help from others.

Metacognition and its Components

Before discussing metacognition, it is necessary to understand the cognitive and affective states of which it is composed. The cognitive states involve knowledge of the world, one's own knowledge and capabilities, and knowledge of strategies. The affective states are knowledge of emotions, motivations, and attitudes.

This being said, metacognition is explained as the higher level of mental process that learners learn and which they use to control their thoughts or knowledge. It consists of metacognitive knowledge and metacognitive experience (Flavell, 1987).

Metacognitive knowledge relates to an awareness of one's knowing about cognitive states and affective states, and one's control of this knowledge to reach a goal. This metacognitive knowledge is declarative, procedural, and conditional (Brown, 1980).

Declarative knowledge involves knowledge of what one knows about cognitive stages and activities and affective states (Brown, 1980; Flavell, 1987); procedural knowledge refers to the way these cognitive states and activities and affective states are used; and conditional knowledge refers to the reason and the appropriate time to apply this knowledge and evaluate the effectiveness of the application of these kinds of knowledge.

For their part, metacognitive experiences involve the awareness of one's own cognitive and affective processes (Flavell, 1979). These experiences can change learners' thought processes; they can integrate and justify their current experience with the new metacognitive knowledge experience (Hacker, 1998).

In conclusion, metacognition includes two components, knowledge and experiences. Metacognitive knowledge is declarative (what one knows about one's cognitive states and activities and one's affective states), procedural (how to apply those types of knowledge), and conditional (when and why to apply those types of knowledge). Metacognitive experiences refer to the way one controls and regulates this kind of knowledge through planning, monitoring, problem solving, and evaluating. Knowledge and experiences that are repeatedly used and proven effective will be stored and used in the future, whereas ineffective knowledge and experiences will be rejected.

Role of Metacognition in Reading

Metacognition is thinking applied to one's own thinking. It appears to be the key for thoughtful and active reading and plays an important role in reading comprehension. Duffy (2002) states that metacognition is a core strategic behavior and leads to control over one's own reading. Not only do successful readers know the reading strategies, but they monitor and control their use. That is, they know what strategies to use, when, and

why to apply them, and they adapt them to fit their purpose. Metacognitive readers plan, monitor, evaluate, and regulate their own skills (Block, 1992; Salataci & Akyel, 2002).

There are three foundational parts to metacognition: developing a plan, monitoring and controlling the plan, and evaluating the plan (Cohen, 1998; Pressley, 2002). Additionally, through these three fundamental parts, readers have a chance to solve the reading problems they face. They use their background knowledge and interact with the text in order to solve problems and learn new experiences.

Effective readers develop a plan before actually reading a text. They organize what they have to do in a pre-reading stage, a while-reading stage and a post-reading stage (Cohen, 1998). In pre-reading, they develop a plan, organizing all the steps of their reading task (Billingsley & Wildman, 1988; Cohen, 1998). While they are reading, they control those steps. Moreover, they perform a conscious reading of the texts to increase their awareness of the problems they face and of what they need to do to solve them, such as choosing the right reading strategies and when and how to use them. Finally, they evaluate the effectiveness of their planning, checking, for example, whether the reading strategies they chose solved the problems or whether they need other strategies to resolve any misunderstanding (Cohen, 1998).

Metacognition relates to the ability to apply reading strategies to solve problems when readers face difficulties in reading texts. Metacognition leads readers into thinking about their learning process, supports them in their development of a plan of action, helps them monitor their own learning in order to construct their own knowledge, and teaches them how to evaluate their own learning process (Borokowski et al., 1990; O'Malley & Chamot, 1990). Metacognition facilitates the readers' improvement of their reading ability and helps them to reach the ultimate goal which is to become independent readers (Danuwong, 2006).

The next section will focus on the reading instruction approach called reciprocal teaching, consisting of multiple metacognitive reading strategies, which promotes metacognition and which shows positive results in improving the English reading comprehension of native speakers of English.

Reciprocal Teaching

Definition of Reciprocal Teaching

Reciprocal teaching has been defined in many different ways. According to Rosenshine and Meister (1994), reciprocal teaching is an instructional strategy that directly teaches students to apply metacognitive thinking as they make meaning from a text.

Carter (1997) defined reciprocal teaching as the following:

Reciprocal teaching parallels the new definition of reading that describes the process of reading as an interactive one, in which readers interact with the text as their prior experience is activated.

Using prior experience as a channel, readers learn new information, main ideas and arguments.

Most important, readers construct meaning from the text by relying on prior experience to parallel, contrast or affirm what the author suggests. All excellent readers do this construction. Otherwise, the content would be meaningless, alphabetic scribbles on the page. Without meaning construction, learning does not take place. Reciprocal teaching is a model of constructivist learning. (pp. 65-66)

Klingner and Vaughn (1996, p. 275) reported the following definition of reciprocal teaching defined by Lysynchuck et al. (1990): “The reciprocal teaching model has been used to improve comprehension for students who can decode but have difficulty comprehending text.” Palincsar and Brown (1984) added in an article reported by Hacker and Tenent (2002) “Reciprocal teaching is an instructional procedure in which small

groups of students learn to improve their reading comprehension through scaffold instruction of comprehension-monitoring strategies” (p. 669).

From the definitions above, it can be concluded that reciprocal teaching is a scaffolded discussion method that is based on reading comprehension strategies, scaffolding and modeling, and social interaction. This instruction allows a teacher to model and give the students enough practice on those four main strategies to construct the meaning of a text in a social setting. The students monitor their own thinking through the reading process. Reciprocal teaching develops reading comprehension and promotes readers to be better in reading and helps them reach the most important goal of reciprocal teaching, becoming independent readers.

Reciprocal Teaching and Reading Comprehension

Palincsar and Brown (1984) explained that the purpose of reciprocal teaching is to promote the readers’ ability to construct meaning from texts and facilitate the monitoring of their path to comprehension. It is based on a sociocultural method through which readers are modeled, explained, and guided in acquiring strategies within a social, supportive environment. Moreover, the four main strategies of predicting, questioning, clarifying, and summarizing promote and enhance reading comprehension (Dole et al., 1991). Baker and Brown (1984) and Palincsar and Brown (1985) stated that those four main strategies were based on the following criteria: 1) the successful readers employ these strategies; 2) these strategies support both comprehension monitoring and comprehension fostering; 3) each strategy is applied when there is a problem in reading a text; 4) these strategies are regarded as metacognitive strategies.

For these reasons, the readers who are taught through reciprocal teaching are more aware of their own thinking and reading process. Indeed, they build effective reading

plans such as setting a purpose to the reading, hypothesizing on what is being read, and drawing and testing hypotheses, interpretations, and predictions; they monitor and control their thinking process and check whether they understand; and they evaluate their own reading process, problem solving skills, and comprehension. Reciprocal teaching builds in the readers a metacognitive awareness of the active nature of reading, of task demands, and of self-regulating, in order to succeed in reading comprehension.

In conclusion, reciprocal teaching is a method providing vital reading strategy instruction that emphasizes on metacognitive awareness. Its goal is to improve readers' reading comprehension and to facilitate their becoming independent readers. It offers three features: scaffolding and direct instruction, practice of the four main strategies, and social interaction. It has been influenced by Vygotsky's developmental theory.

In order to understand the background of reciprocal teaching, its theoretical framework will now be presented.

Reciprocal Teaching and its Theoretical Framework

The reciprocal teaching approach is a model originally developed by Annemarie Palincsar and Ann Brown during the mid-1980s. It is one of the reading instruction methods which cover the necessary reading strategies: predicting, generating questions, clarifying, and summarizing. It helps students improve their reading comprehension, and thus become better readers. The goal of reciprocal teaching is to use discussion to improve students' reading comprehension, develop self-regulatory and monitoring skills, and achieve overall improvement in motivation (Allen, 2003; Borkowski et al., 1990). Its theoretical framework is based on three sociocultural theories namely, the zone of proximal development, proleptic teaching, and expert scaffolding (Brown & Palincsar, 1984).

The zone of proximal development refers to a learner's potential ability to learn with help from an expert or a more capable partner. It is Vygotsky (1978) who pointed out that all learners have two levels of thinking development: an actual development level and a potential development level. The actual development refers to the thinking level at which children are able to solve problems by themselves, and the potential development refers to the thinking level at which learners need help from an expert or a more capable partner. The zone of proximal development (ZPD) is the distance between the actual development and the potential development (see Figure 2.1 below). Learners can push themselves from the actual development level to the potential level or learn beyond their actual development level with explicit scaffolding through social interaction until they internalize the strategies (Rosenshine & Meister, 1994).

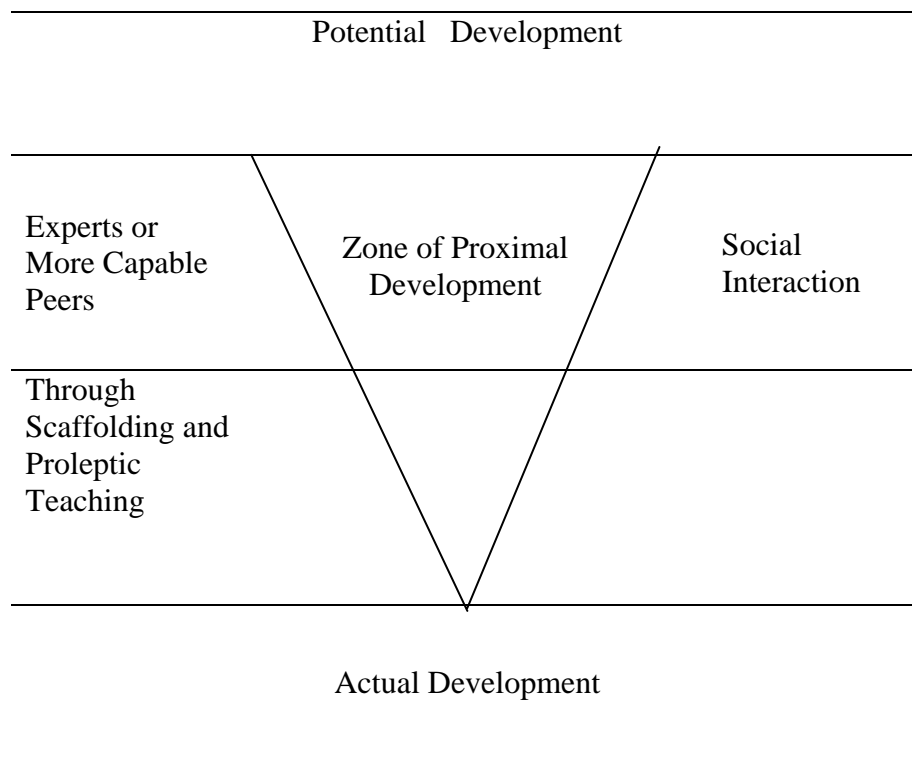


Figure 1 Vygotsky's Model of Zone of Proximal Development

The second concept that forms the theoretical ground of the reciprocal teaching is called proleptic teaching and refers to procedures most often found during apprenticeship instruction in which a teacher shapes a student until he or she is ready to perform the task independently (Palincsar & Brown, 1984). The important feature of proleptic teaching is the transfer of responsibility from teacher to students. The teacher explains and models the process for solving problems, and while decreasing his or her role, transfers the responsibility of solving problems to the students (Rogoff & Garner, 1984).

The last concept is called expert scaffolding. The expert acts as a guide, shaping the learning efforts of the students and providing support for the learning until the students do not need it (Rosenshine & Meister, 1994). Scaffolding procedures include limiting the tasks to make them manageable, motivating students, pointing out critical features, and demonstrating solutions to problems and explaining them to the students (Palincsar & Brown, 1984). These procedures help students to learn how to perform a task, how to solve problems, and they support them in their attempt to learn until they can perform the task independently. According to Greenfield (1984), scaffolding teaching is adapted to the learners' current learning state; when the learners' skills are developed, the teacher's scaffolding is decreased, and if the text is difficult, greater assistance and feedback are given to the students in order to shape their understanding. However, the teacher acts as a facilitator after the students do not need much help. Scaffolding is eventually internalized and thus promotes the independent performance of reading skills.

These approaches provided the background theories to reciprocal teaching (Adunyarittigun & Grant, 2005) in which: (a) the teacher guides the students into the right use of the four key strategies and gives them a chance to practice them; (b) the teacher acting as an expert models the whole process of the reciprocal teaching approach for the students' benefit; (c) the students, supported by expert peers, work in cooperative groups

as the teacher decreases support in order for the learners to develop independent reading competence.

The Three Features of Reciprocal Teaching

The theory of reciprocal teaching presents three key features: scaffolding and explicit instruction, four main strategies, and social interaction.

Scaffolding and explicit instruction.

The concept of scaffolding is grounded in Vygotsky's social constructivist learning. According to Vygotsky (1978), every mental function in a child's development first appears in collaboration with an adult or expert. This collaboration occurs in the zone of proximal development, an area that stands between what children can do by themselves and what they need assistance to do. With enough practice, children internalize this collaborative form in their mental process and can work alone in new contexts. Graves & Graves (2003), Pearson and Fielding (1991), Pressley (2002), and Rogoff (1990) have defined scaffolding as an effective way to assist students in reaching their higher ability by supporting their accomplishment of a task they could not complete by themselves. Once this level of performance is reached, the teacher decreases his or her responsibility whereas the students take more responsibility in their reading tasks until they become fully independent readers (Mallock, 2002). The teachers should provide enough support so that the learners do not give up on the task, but at the same time they should not overly scaffold in a way that the learners are not offered enough opportunities to work actively by themselves.

Clark and Graves (2005) review three aspects of scaffolding and its effectiveness: Scaffolding is flexible and supports students in their acquisition of basic skills and higher thinking. It allows for explicit instruction, and allows teachers to teach students of diverse needs.

Reciprocal teaching provides scaffolding through explicit instruction involving the modeling and explanation of the four main strategies, guided practice, independent practice, and the application of the strategies by the students themselves. Rosenshine and Meister (1994) stated that it is easy to memorize strategies, but it is difficult to transfer or apply independent strategic thinking. Teachers need to show their students how to do this through explicit instruction that includes limiting tasks to make them manageable, motivating the learners, pointing out critical features, and demonstrating solutions to problems.

The four main strategies of reciprocal teaching.

The reciprocal teaching approach concentrates on four key reading strategies: predicting, generating questions, clarifying, and summarizing. Each strategy is useful for students to comprehend a reading text and can be used separately or combined according to the situations, problems, and reading purposes the readers face (Wiseman, 1992).

Predicting

Predicting involves finding comprehensive clues by using a reader's own background knowledge and personal experiences. The purpose of this strategy is to link what the reader already knows about the topic with the knowledge she or he is about to acquire through reading. In other words, predicting keeps the readers actively thinking on the text while reading (Duffy, 2002).

Prediction requires readers to formulate and check their hypotheses about the text. The more readers predict what a particular text is about, the more likely they are to read it with understanding. If the original prediction is incorrect, a new prediction can be made and tested through reading the text.

To achieve this, readers are required to activate their prior knowledge and relate it to the knowledge found in the text. Readers are also encouraged by the teacher to use text structures such as the titles, the subtitles, and the illustrations (Bruce & Robinson, 2004), all of which are clues to help predict what a text is about. Prediction is an important strategy that helps students to set a goal before reading.

Clarifying

Clarifying is the strategy that readers use while monitoring comprehension (King & Johnson, 1999). It occurs when the readers meet with comprehension breakdowns or confusion and when they attempt to restore meaning, when, for example, the reference terms are unclear and the vocabulary is difficult or unfamiliar. Readers monitor their reading comprehension when they try to clarify what they have read (Lederer, 2002). Clarifying enables readers to identify and question any unfamiliar, unnecessary, or ambiguous information in the text. The questioning, discussion, and reflection that take place both during and after reading is an opportunity for clarifying. Therefore, clarifying is an important part of monitoring comprehension.

Questioning

Generating questions requires readers to identify information in the text they are reading. Questions are constructed to ask about the main idea or important information. The purpose of this strategy is to test whether the readers understand the text and to help her or him identify important information. In addition, encouraging readers to generate questions related to the content of a text has a positive effect on the development of their

reading comprehension (Andre & Anderson, 1979). Moreover, questioning can frame and solve comprehension inadequacies, assisting the readers in monitoring their own comprehension.

Rosenshine, Meister, and Chapman (1996) stated that when readers create questions, they pay more attention to the content. This makes reading an active process and focuses the readers' attention on the text. When readers generate questions, they may generate answers that they expect to be correct. If a different answer is offered by a peer, a comprehension failure occurs, and the readers need re-thinking to find the right answer.

Rosenshine et al. (1996) also described how students need to use their text to search for information and formulate questions in order to help them understand what they read. This also enables them to become more involved when they are reading (Rosenshine, Meister & Chapman, 1996). Some useful question words are who, what, when, where, why, and how, such as in the questions "What is happening?" and "Why is this happening?" Overall, teaching students to generate questions during the reading process fosters comprehension and improves reading comprehension.

Summarizing

In summarizing, readers are required to identify the key idea of each paragraph. A good summary does not include details that are not important. Readers are encouraged to make use of headings, sub-headings, and main ideas in each paragraph to summarize the text they are reading. The readers should think of what a paragraph or a text is mostly about, find a topic sentence, and construct a sentence that reflects the most important information in the paragraph. Summarizing the main idea in each paragraph of a text helps readers not only to connect what they already know to the present piece of reading, but also to predict what might happen in the next paragraph to check the accuracy of their prediction (Greenway, 2002).

Summarization is used to help readers grasp the main idea of a text in order to comprehend the whole picture and to guide them through further reading. It improves reading skills by focusing the awareness on the important information in a text and ignoring the unimportant information (Lysynchuck & Pressley, 1990).

Social interaction.

Social interaction is based on the zone of proximal development (ZPD) developed by Vygotsky (1978). Through it, students are able to learn or solve harder problems, or reach a more complete development of their potential through some guidance from an adult (teacher or expert) or learning activities such as discussion, brainstorming, and group work.

Group work offers four movements of social interaction (Gavalek & Raphael, 1996). First, students in a group learn with the members of their group by sharing, discussing, and peer tutoring. Second, they internalize this knowledge. In reciprocal teaching, students learn the four main strategies through the teacher's modeling and, later, working in cooperative groups, they think of the four main strategies they have learned, what strategies to use, and when and how to use them, and why to use them. Third, the students build their own understanding and reading process on the basis of what they have learnt from the social setting and thus engage in a process of transformation. Finally, they share their understanding and thinking with the group. In this stage, the students' thoughts are shaped through group discussion (Wilensky, 1990). In reciprocal teaching, each participant in a group has a chance to be a leader and manages group work by discussion through the four main strategies.

Social interaction is important because it promotes social learning (Dewitz, Carr & Patbery, 1987). In the reading classroom, working in a group provides opportunities for

students to improve their cognitive, metacognitive, and affective strategies. Social interaction improves the students' ability to resolve comprehension difficulties, improves their higher thinking or metacognition, and increases their motivation. Finally, students create new knowledge from what they internalize in order to reach a higher development of their potential (Stevens, Slavin & Farnish, 1991).

In brief, through scaffolding and explicit instruction, reciprocal teaching provides four key reading strategies for students to comprehend a text better. These strategies encourage students to be actively and consciously involved with a text. Moreover, the expert-novice interaction between the teacher and the student or between peer and peer helps the students to regulate their own rules. This gradually assists them in their becoming independent readers. The following figure is the summary of the reciprocal teaching theoretical framework (Mallock, 2002).

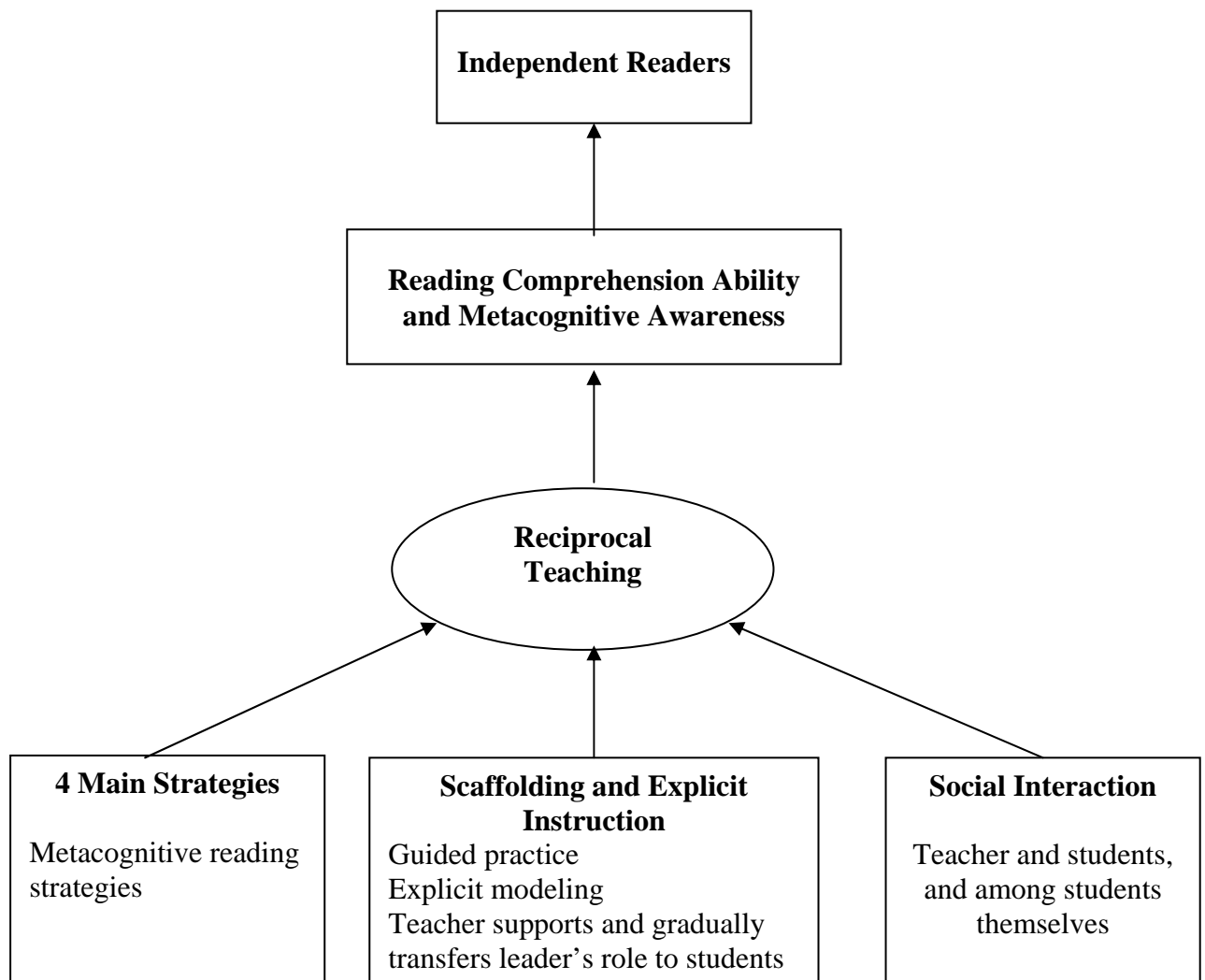


Figure 2 The Reciprocal Teaching Theoretical Framework

The following studies support the notion that reciprocal teaching increases reading comprehension.

Studies Related to Reciprocal Teaching

Palincsar and Brown's Research

Palincsar and Brown (1984) developed reciprocal teaching to help 7th-grade poor readers to improve the reading comprehension. Two studies were conducted to test the effectiveness of reciprocal teaching. In the first one, reciprocal teaching was compared to a traditional teaching method. The results showed that reciprocal teaching produced

greater gains than the traditional method. In the second study, the experimental group interventions were conducted by volunteer teachers (not the experimenters). The results were very similar to the ones in the first study.

Later, Brown and Palincsar (1986) compared the effectiveness of four instructional procedures to teach the four strategies of predicting, questioning, clarifying, and summarizing. The subjects were average 5th- and 6th-graders.

The first of the four instructional procedures was the reciprocal teaching approach through which students received training on the four strategies. The students first practiced using the four strategies as they interacted with the teacher. Then they worked in groups in which they were given more responsibility to initiate and sustain the dialogue while the teacher acted as a facilitator, providing them with clues and feedback. In the second instructional procedure, explicit instruction, the teacher modeled and discussed each strategy. The students were then asked to perform exercises applying the four strategies. In the third type of instruction, the students practiced by working in groups with no help from the teacher. They were given worksheet activities on the four strategies. And in the last instructional procedure, the students received the same training and procedures as group one, but they worked in groups on the 5th day of the six-day instruction period. The findings showed that the reciprocal teaching group gained the highest scores in reading comprehension. The group given explicit instruction and the group with scripted intervention showed better gains than the group in which the participants practiced by themselves.

The studies showed positive results for the use of reciprocal teaching on L1 students. Reciprocal teaching as conducted by Palincsar and Brown was effective with different age groups (5th, 6th, and 7th graders), and with readers of their own language. Moreover, the findings suggest that the components of reciprocal teaching are needed to

work in the zone of proximal development; these components are the use of a scaffolded and proleptic approach (transfer of learning responsibility from teacher to students working in cooperative groups), and of the step-by-step training on the four reading strategies (what they are, and when and how to use them).

Reciprocal Teaching in First Language (L1) Context

Primary school level.

Johnson and Catherine (1998) investigated 59 students (3rd through 5th grade) for ten weeks. The students were assigned into three groups: a reciprocal teaching (RT) group, a visualizing /verbalizing (V/V) group, and an untreated control group. The RT group studied through reciprocal teaching and the four main strategies and the V/V group studied how to create images of texts while reading. The results showed that the students in the trained groups showed significantly better performance than the untreated control group. The RT group answered more text questions than the V/V group. It can also be noted that there was no significant difference between the V/V group and the RT group in reading strategies.

King and Parent (1999) investigated the four strategies of the reciprocal teaching approach with 5th-grade teachers who conducted reciprocal teaching in an L1 classroom. It was found that when the teacher consistently and clearly modeled all four strategies, the students effectively monitored their reading comprehension and gained deeper insight of the text at hand.

Hess (2004) attempted to investigate and describe the implementation and evaluation of metacognitive reading comprehension strategies taught in the *Reading Wings* program. Five teachers of 4th- and 5th-grade classrooms at an elementary school in Northern California, and with limited experience in the program *Reading Wings* were

sampled from a Literacy Orientation Survey (LOS) – a survey of their beliefs and practices in their teaching of reading. Then they were interviewed individually on reading instruction and practices. During their reading class, they were observed instructing students in reading comprehension using two reading strategies, clarification and summarization. The findings revealed that all five teachers' teaching style, beliefs, and practices were improved. In addition, the students were also observed using metacognitive reading strategies, particularly clarification and summarization. The results showed that the students also improved the quality of their discussion, used more questions at a higher critical level of thinking, and achieved higher scores on the comprehension test.

Bruce and Robinson (2004) assessed the effectiveness of the metacognitive and reciprocal teaching approach for improving word identification and reading comprehension skills of upper primary readers experiencing difficulty in a regular classroom situation. To improve word identification skills, the subjects in the main training condition were given metacognitive training in the analysis and monitoring of word identification strategies. Reciprocal teaching procedures, incorporating the above word identification strategies, were used for comprehension training. The subjects were divided into three groups. The first group received a combined metacognitive word identification and reciprocal teaching program. The second group received traditional classroom word identification and comprehension activities. And the third group received reciprocal teaching of comprehension combined with traditional methods for identifying unfamiliar words. Measures on the improvement in word identification, metacognitive awareness of word identification strategies, and comprehension were applied during the study, which took place over an 8-month period in a school year. The results indicated that the combination of metacognitive word identification strategies and

reciprocal teaching for comprehension was clearly more effective than traditional classroom word identification and comprehension activities or than reciprocal teaching for comprehension with traditional methods of word identification.

Diehl (2005) also studied the effect of reciprocal teaching on strategy acquisition of 4th-grade struggling readers who could adequately decode words but poorly comprehend a text. A pretest and a posttest were used to determine the effects of this instruction. Additionally, sessions were taped, transcribed, and analyzed in search of trends in the dialogues relative to strategy use. The results indicated that reciprocal teaching had positive effects on strategy acquisition of these readers and led them to improve their reading comprehension.

Todd and Tracey (2006) investigated how reciprocal teaching affected vocabulary acquisition and reading comprehension in four at-risk students in a 4th-grade inclusion classroom. A single subject research method was used. After determining a baseline, two interventions were applied during a six-week period: reciprocal teaching and guided reading. The key findings indicated that three of the four students increased both their vocabulary acquisition and reading comprehension skills. However, no differences were found when both interventions were used on one student. But all students gained benefits from reciprocal teaching.

In brief, most studies on reciprocal teaching in first language (L1) context at the primary school level revealed positive results. They showed that students who learned through reciprocal teaching improved their vocabulary acquisition and the quality of their discussion. Moreover, they used more questions at a higher critical level of thinking, and achieved higher scores on the comprehension test.

High-school level.

Rosenshine and Meister (1994) conducted 19 studies that used reciprocal teaching to help students with their reading ability. The review found that (1) when provided before reciprocal teaching, explicit instruction in the four strategies was more effective than when reciprocal teaching only was used; (2) the results were mostly non-significant when all students in a group were below average, but significant when groups included students with mixed abilities; (3) the results were usually significant when the tests were developed by the experimenter, while usually non-significant when standardized tests were used.

Cotterall (1990) used reciprocal teaching with adult students who were poor in English and attending evening classes at the University of Victoria in Canada. The participants were required to clarify what seemed to be unclear in a text, identify the main idea and summarize what had been read, and predict the next sections of the text. It was found that reciprocal teaching was involved with active problem solving and that this teaching approach made learners more conscious of their reading style.

Weedman (2003) conducted a study at a high school in Kentucky, in the United States, to examine the effects of a reading program using reciprocal teaching strategies on the reading comprehension of 9th-grade students divided in four groups: a group who received instruction in the four reciprocal teaching strategies, a group who received no instruction in reciprocal teaching strategies, a group who received only the summarization strategy, and a group who received only the generating question strategy. The four reciprocal teaching strategies were compared with the results of the same reading comprehension test given to a group of students who received no instruction in reciprocal teaching. Moreover, the reading comprehension scores from the two groups of students who received only one of the reciprocal strategies were compared with the scores from

the group who had received full strategy instruction. No significant difference was found among any of the groups' pretest and posttest results. However, the test scores of the group that received instruction on all four key strategies were higher than the group that received instruction on only one strategy.

Clark (2003) studied the efficacy of reciprocal teaching with adult high school students on reading comprehension. Fifteen students of mixed abilities and ethnicities, aged sixteen to fifty, participated in the 5-week study. The instruments in this study consisted of written assignments, group discussions, and surveys of the students' opinions on reciprocal teaching. Group discussions and written assignments were analyzed. The results from the surveys showed that 90% of the students reported benefits from using reciprocal teaching and preferred it to traditional instruction; 40% of them stated that reciprocal teaching improved their reading comprehension.

In conclusion, most studies on reciprocal teaching in first language (L1) context at high school level also showed positive effects. The students improved their reading ability significantly in groups of mixed abilities. In addition, students who received explicit instruction on the four strategies before reciprocal teaching were having a better performance than when reciprocal teaching only was used. Finally, students showed a more positive attitude on reciprocal teaching than on traditional teaching.

University level.

Hart and Speece (1998) investigated the effects of reciprocal teaching on postsecondary students at risk for academic failure. The sample consisted of 50 students in a community college in Maryland, in the United States, who were divided into two groups: an experimental group and a control group. The results showed that the reciprocal teaching group performed significantly better than the general teaching group on reading

comprehension and strategy acquisition. However, there were no differences on perception of study skills. In secondary analyses, poorer readers in the reciprocal teaching group benefited more on both reading comprehension and strategy acquisition than poorer readers in the control group.

In conclusion, the results from the studies on reciprocal teaching in L1 context were positive for all age groups. In primary schooling, students could decode words adequately, but comprehend text poorly. In high schools and universities, students had problems in reading comprehension. After receiving reciprocal teaching, their scores on reading comprehension tests were significantly better than the ones in the control group. Additionally, the general results from these studies point to the fact that using reciprocal teaching with the four main strategies combined with explicit instruction was the most successful method to help students improve their reading comprehension.

Reciprocal Teaching in ESL and EFL Context

Primary school level.

Russell (1998) studied the effects of reciprocal teaching on reading and oral language proficiency. Forty-eight 6th-grade students were randomly assigned to an experimental and a control group, respectively 25 and 23 in each group. The experimental group received 20 days of reciprocal teaching treatment while the control group received traditional ESL reading instruction. Both groups used the same materials. The instruments in this study consisted of the Language Assessment Scales (LAS) Standardized Reading Test, the oral language proficiency (LAS - O) test, and the Self-Perception Scale (RSPS). Each instrument was administered as pre- and posttests. This study extended the positive effects of reciprocal teaching on reading comprehension and it was additionally found

that reciprocal teaching had a significant positive impact on oral language proficiency and reader self-perception.

High-school level.

Smith (1998) investigated the efficacy of reciprocal teaching by replicating the Lysynchuk, Pressley, and Vye's study (1989). Fifty-four ESL students in a junior secondary school (9th grade) in Ghana, West Africa, participated in the 20 sessions of reading. The experimental group received reciprocal teaching whereas the students in the control group received no training. The two groups practiced with the same materials. The results of the study indicated that on the reading comprehension part of the Ghana Junior Secondary School Certificate Examination the students in the training group performed significantly better than the ones in the control group. Moreover, they gained the same results eight weeks after the training. The students at all levels of reading ability benefited from reciprocal teaching. Finally, they performed better in generalizing the use of the four main strategies in a social studies class.

Konpan (2006) compared the reciprocal teaching approach with the communicating language teaching technique on 12th-grade students' reading comprehension in Thailand. The results of this study revealed that the English reading comprehension of the group who was taught with the reciprocal teaching technique was significantly different, that is, it was higher than the one of the group instructed through the communicative language teaching technique at 0.05 level.

University level.

Hansan (1994) compared the effects of the reciprocal teaching approach to the translation technique on university ESL students at Kuwait University. The results showed that the students learning through reciprocal teaching had better reading performances than those who had been exposed to traditional teaching. Moreover, the researcher found that the participants in the reciprocal teaching group had the opportunity to use English as a communication tool.

However Adunyarittigun (2004) found that there were no significant differences in reading comprehension between the students in an experimental reciprocal teaching group and those in a group instructed through regular teaching, though reciprocal teaching had positive effects on the students' self-perception and attitude.

Ratanakul (1998) compared the effects of the reciprocal teaching approach with the translation technique on university EFL learners in Thailand. The subjects of this study were 60 1st-year students of the Faculty of Nursing at Mahidol University. They were divided into a control group and an experimental group, in a two-group, pretest-posttest design. The control group was instructed through the translation technique while the experimental group was taught through the reciprocal teaching approach. The results of the study showed that the students in the experimental group reached higher scores in reading achievement than those in the control group. Moreover, the learners in the experimental group expressed a more positive attitude towards the reciprocal teaching approach than those of the control group did toward the translation technique.

Song (1998) investigated whether reciprocal teaching enhanced the reading ability of EFL college students in Taiwan, as well as the effectiveness of reciprocal teaching related to the students' reading proficiency, and what types of questions are affected by reciprocal teaching. The results showed that this technique improved the EFL students'

reading ability and proficiency. In addition, the less proficient participants benefited more from reciprocal teaching than the more able readers. Finally, the study revealed that the types of questions the students used in relation to the main ideas and to making inferences were significantly improved.

Soonthornmanee (2002) studied whether the reciprocal teaching approach helped EFL Thai university students learning at Chulalongkorn University in Bangkok with text comprehension. The subjects were eighty-four political science students divided into an experimental group instructed through reciprocal teaching and a control group taught through skill-based teaching (a reading instruction that focuses on specific skills such as finding the main idea, finding and inferring details and facts, drawing inferences, and explaining the grammar and structure of a reading passage). The findings showed that the students in the reciprocal teaching group had greater gains than the ones instructed through the skill-based teaching method. Both skilled and less-skilled learners in the reciprocal teaching group benefited from the approach and the participants in this group had a positive attitude toward reciprocal teaching, indicating that it has a significant positive influence on Thai students' reading comprehension at university level.

Wisaijorn (2003) also examined the effects of reciprocal teaching on reading comprehension. The research was conducted with a one-group experimental design. The participants were thirty-four 1st-year university students of English for Academic Purposes in the northeastern part of Thailand. The researcher used both quantitative and qualitative methods: a pretest, a posttest, and a follow-up reading comprehension test; a pre-questionnaire, a post-questionnaire, and a follow-up questionnaire; checklists; and journals. The results showed that reciprocal teaching improved the students' reading ability. Moreover the students exhibited further gains in reading comprehension in the follow-up test compared to the results from the post-test completed at the end of the

training, pointing to the fact that the four strategies in reciprocal teaching were still used by the students in their reading even after the training.

The studies on reciprocal teaching in ESL and EFL contexts are mostly focused on university level because students at that higher level can decode words adequately. Few studies exist on reciprocal teaching at high school level. However, the results from most of the studies are positive. The students who received reciprocal teaching were significantly better in reading comprehension than those instructed through other methods. In addition, those who were part of reciprocal teaching groups showed a positive attitude toward reciprocal teaching.

CHAPTER III

RESEARCH METHODOLOGY

This study investigated the effects of reciprocal teaching on the English reading comprehension of 12th-grade students at Watnuannordit School. It also examined whether reciprocal teaching enhanced the proficient and less proficient students' English reading ability.

The research methodology used in this study consisted of a mixed method approach that combined both the quantitative and qualitative data collection and analysis. The quantitative part of this experimental study was designed to examine the effects of reciprocal teaching on high school students' English reading comprehension, and the exploratory study was used to investigate the students' use of metacognitive reading strategies in reading English texts. For its part, the qualitative aspect of this study analyzed the data collected from the transcriptions of dialogues performed during the reciprocal teaching, a Reading Think Aloud Sheet, and the interviews. This chapter then describes the research design, the participants, and the setting of the study and its variables. It also describes the instruments used for collecting the data and the procedures for the collection of the data, including the reciprocal teaching method and the skill-based teaching method. The data analysis together with the statistical procedure is also discussed at the end of this chapter.

Research Design

This study used a mixed-method approach combining quantitative and qualitative data collection and analysis. The participants of this study consisted of 66 12th-grade

students from two classes at Watnuannordit School who were randomly assigned into two groups: an experimental group and a control group.

A model of reciprocal teaching for reading instruction was constructed to investigate its effects on the participants' reading comprehension. Before the actual implementation of this reciprocal teaching model, the reading section of the National English Entrance Examination 2004 was used as a reading pretest and administered to the participants of both groups to examine their English reading proficiency.

Following this, the experimental group was instructed to read through reciprocal teaching, while the control group was taught by skill-based teaching. The researcher instructed the students of both groups for 14 weeks. During this period, the qualitative data, the transcriptions of dialogues between the teacher and the participants and the participants and their peers, were collected through a Reading Think Aloud Sheet.

After reciprocal teaching, a posttest – the reading section of the National English Entrance Examination 2004 – was administered to both groups to investigate whether the participants had improved their reading comprehension and to investigate whether reciprocal instruction enhanced the proficient and less proficient students' reading ability.

To investigate the metacognitive reading strategies the participants in the experimental group used before and after reciprocal teaching, a Reading Strategies Questionnaire was administered to them prior to and after receiving instruction on reciprocal teaching. Also, all the participants in the experimental group were interviewed after completing the questionnaires. The data obtained from the participants' self-report in the Reading Strategies Questionnaire were then triangulated with the data found in the retrospective interviews. All the data obtained from the above-mentioned research instruments were analyzed both quantitatively and qualitatively in relation to the research questions.

Context of the study

The researcher conveniently selected Watnuannordit School in Bangkok as the study site after exploring the English curricula of many schools in Bangkok and finding out that this school provides English reading courses for 12th-grade students. Permission was asked from the school administrators to conduct the research by sending them formal letters that included the research proposal to be considered. The school administrative committee officially granted this permission and allowed the research to be conducted in the second semester of the academic year 2007.

Target Population

The target population of this study was formed of Thai high school students in the expanding level (grades 10-12) taking the course *Reading for Further Study* (ENG 40201), which is an elective course according to the standard National English Curriculum (2001).

Participants

The participants of this study were formed by two full classes chosen from five classes composed of 12th-grade students enrolled in the elective course *Reading for Further Study* (ENG 40201) in the second semester of the academic year 2007 at Watnuannordit School in Bangkok. They were all native Thai speakers of both genders and, according to their scores on the placement test for grade 9, of mixed abilities.

Sampling Procedure

At the time of the study, the school counted five classes of *Reading for Further Study* (ENG 40201). The students in these five classes received a pretest formed of the reading part of the National English Entrance Examination and two classes were purposively selected as the experimental and the control groups according to the similarity of their mean scores. Therefore, before receiving the instruction the English reading proficiency of the participants in both groups was similar. From these two classes, one was randomly selected as an experimental group, and the other as a control group. The experimental group consisted of 30 students and 36 students formed the control group; thus, 66 students participated in this study.

The students were informed that they were selected to participate in a research, and they agreed to do so. They also allowed the data and the scores from the reading test to be used anonymously. The participants in the experimental group were taught to read through the Reciprocal Teaching Model for Reading Comprehension, whereas the control group was instructed through skill-based teaching.

The experimental group was divided into sub-groups of six participants according to their final scores to the English Reading Course of the first semester of the academic year 2007. The students' scores on this course ranged from the highest to the lowest and the first fifteen students were defined as proficient readers and the sixteenth to the thirtieth students as the less proficient ones. So each sub-group consisted of three proficient readers and three less proficient readers.

Confidentiality of the Participants and of their Responses

The participants were asked to use their identification numbers rather than their names to identify themselves on the tests and on the questionnaires. The researcher corrected the tests, the scores were sent directly to the participants, and their personal information was destroyed immediately after completion of the study.

Research Procedures

Research Instrumentation

The research instruments used to collect the data consisted of the reading section of the National English Entrance Examination 2004, the Reading Strategies Questionnaire (RSQ), the Reading Think Aloud Sheet, and the interview questions.

What follows is a detailed description of these research instruments.

The National English Entrance Examination 2004.

The National English Entrance Examination is a national examination used for high-school students who apply to the state-run universities all over the country.

The purpose of this test is to assess Thai high-school students' English ability, and to succeed on this test they have to meet the requirements determined by the board of the Commission on Higher Education, which includes performing well in the English examination, the National English Test, since English is one of the important subjects they have to take.

The National English Entrance Examination is divided in four parts: situational dialogues (25 items), cloze letter questions (10 items), cloze passages (25 items), and reading comprehension (40 items). The allotted time to complete the test is 120 minutes

for 100 items. Consequently, the test time for the reading part is approximately 50 minutes (Commission on Higher Education, 2006). In this study, to investigate the participants' reading ability, only the English reading comprehension part of the National English Entrance Examination 2004 was used as both the pretest and posttest (see Appendix A).

The reading section of the National English Entrance Examination 2004 aimed to assess the reading comprehension of high-school students. Although the test was distributed online, no answer key was available. In addition, the entrance examination system has changed since 2005, and most 12th-grade students prepared themselves for the new entrance examination system. The new procedure consists of the admission system in which the O-NET (Ordinary National Education Test) and A-NET (ADVANCED National Education Test).

Reading Strategies Questionnaire (RSQ).

The purpose of the Reading Strategies Questionnaire was to investigate the metacognitive reading strategies the participants employed in reading. The researcher developed and adapted the RSQ from Anderson's questionnaire (2003) and Phakiti's questionnaire (2003). Phakiti's original questionnaire consisted of 40 items and was used to investigate the reading strategies students used while taking exams. Anderson's original questionnaire, on the other hand, counted 15 items and was used to investigate students' cognitive and metacognitive reading strategies. The three main metacognitive reading processes of planning, monitoring, and evaluating, were the 20 strategies that students used in English reading texts, as presented below in Table 3.1. The questionnaire

was also used to examine students' reading strategies in the three main stages of reading: pre-reading, while-reading and post-reading.

To develop the RSQ, the researcher selected only the strategies that were related to the four main strategies of reciprocal teaching: predicting, clarifying, questioning, and summarizing. Therefore, the questionnaire was applicable to the present study which aimed to explore the use of the metacognitive reading strategies through reciprocal teaching.

The RSQ consisted of 20 items and was divided into three parts. The first part of the questionnaire intended to obtain information about the reading strategies the students used before reading texts; the second part aimed at eliciting the reading strategies they used in the while-reading stage; and the last part investigated the reading strategies they used in the post-reading stage.

This questionnaire used a five-point rating scale (1-5) built according to the frequency of use of the metacognitive reading strategies by the participants. It was administered to the experimental group before and after the implementation of reciprocal teaching (see appendix A).

Following the three main metacognitive processes of planning, monitoring, and evaluating, the 20 reading strategies that the students used can be organized into 10 metacognitive strategies in three processes of metacognitive, as presented below:

Table 1 *Description of the Metacognitive Strategies and Number of Related Items in the Reading Strategies Questionnaire*

Metacognitive Process	Metacognitive Reading Strategies	Description	Item(s)
1) Planning	Prediction	Anticipate the information to prepare for and give direction to the task.	1, 2, 4
	Background Activation	Think about and use what is already known to help perform the task.	6, 7
	Self-management	Arrange for conditions that help reading.	8
	Goal setting	Develop personal objectives; identify the purpose of reading.	18, 3
2) Monitoring	Note-taking	Write down important words and concepts.	15
	Inferring	Make guesses based on previous knowledge, using logic or contextual clues.	10
	Selective attention	Choose to focus on specific aspects of situational details that will help with the reading task.	9, 11, 12, 17, 20

Table 1 (Continued)

Metacognitive Process	Metacognitive Reading Strategies	Description	Item(s)
3) Evaluating	Verifying predictions	Confirm the predictions/guesses are correct.	5
	Self-evaluation	Judge how well the materials were understood and evaluate the reading strategies used.	14, 19

(Adapted from Chamot, Robbins, El-Dinary, & Barnhard, 1999; Flavell, 1979; and Wenden, 1991)

This questionnaire was constructed based on the specific strategies of the reciprocal teaching approach. The research advisors and three experienced teachers in English reading examined it for any ambiguous wordings, the appropriateness of its content, and whether the content of each item was related to the purpose of the research. To establish its validity and reliability, the RSQ was piloted with 30 12th-grade students at Thonbureeworataepeepalaruk School who did not take part in this study.

Reading Think Aloud Sheet.

The Reading Think Aloud Sheet was constructed by the researcher on the basis of the reading process using the four main strategies of reciprocal teaching. It consisted of a worksheet that helped the participants write down the reading strategies they used and what they did while reading, such as their predictions from the title or for the next paragraph, the main ideas of each paragraph, the questions they asked on the content of a paragraph, the words or phrases and references that they clarified, and a brief summary of

what they had read. The correctness and appropriateness of the Reading Think Aloud Sheet was verified by English experts and the research advisors (see Appendix C).

Interviews.

Interviews of the experimental group were used after reciprocal instruction in order to confirm the quantitative information collected from the previous tools. The interviews were to help the researcher retrieve the information from the analysis of the participants' answers on their use of the four metacognitive reading strategies of reciprocal teaching when reading. The interview questions were piloted and reviewed for the validity of their content by native speakers of English who were also professors in a Thai university. The questions were then revised based on these experts' comments (see Appendix D). The interviews were conducted in Thai so that the participants would not have difficulties understanding and answering the questions.

The Construction of the Research Instruments

The validity and reliability of the research instruments used in this study (the National English Entrance Examination 2004, the Reading Strategies Questionnaire (RSQ), the Reading Think around Sheet, and the interview) were verified before these instruments were used in the actual study in the second semester of 2007. Following this, the whole process of reciprocal teaching for reading comprehension was piloted.

The content validity check.

All four research instruments were verified for their validity by the research advisors, three experienced English reading teachers, and one native experienced professor in a Thai university. They examined the instruments for any ambiguous

wordings, the appropriateness of their content, and whether the content of each instrument was related to the purpose of the research.

Verification of the reliability.

The reliability of the reading part of The National English Entrance Examination 2004 and the Reading Strategies Questionnaire (RSQ) were verified for their reliability by the researcher on 12th-grade students who did not take part in this study.

Verification of the reliability of the National English Entrance Examination

The Commission on Higher Education did not provide a reliability coefficient for this test. Therefore, the researcher performed a pilot study on the reading part of the entrance examination 2004 with 59 students in 12th grade studying at Chinorodwittayalai School, none of which participated in this study. In addition, the purpose of the pilot study was to establish the reliability of the test and to determine its difficulty values and the discrimination values. The results from this pilot study revealed that the mean scores for the reading part of the students were 16.02 out of 40, which is less than 50 percent of the total scores. Additionally, the data were analyzed for the difficulty and the discrimination values. Fraenkel and Wallen (2000) stated that the satisfactory criterion for difficulty values range between 0.20 and 0.80, and that acceptable values for discrimination are more than 0.20. The difficulty values as collected from the pilot study ranged from 0.20 to 0.50, and the discrimination values stood at more than 0.20. From these results, it can be concluded that the students were not familiar with this examination and that it was an appropriate tool to discriminate good readers from poor ones. The results from the pilot study also showed that five items out of forty could not be used to classify the students' reading ability, so they were excluded from the test.

As for the test reliability, Fraenkel and Wallen (2000) state that the reliability coefficient of the reading part of the test should be at least 0.70. In this pilot study, the reliability of the test stood at 0.80. This indicated that the English reading section of the National English Entrance Examination 2004 was reliable according to the Kuder-Richardson Formula 20.

In this study, all the participants in the experimental and the control groups were submitted to a pretest on the first week of the course. In order to control the internal validity, the length of time between the pretest and posttest was 14 weeks, a period long enough to prevent the participants from remembering the pretest.

Verification of the reliability of the Reading Strategies Questionnaire (RSQ)

The Reading Strategies Questionnaire (RSQ) was piloted with 30 12th-grade students at Thonbureworataepeeplaruk School who did not take part in this study. Fraenkel and Wallen (2000) stated that the criterion for coefficients of acceptable coefficients should be at least 0.70. The results from the pilot study showed that the reliability coefficient of the RSQ reached 0.72. This indicated that the Reading Strategies Questionnaire was reliable according to the Kuder-Richardson Formula 20.

Lesson Plans and Teaching Materials

Lesson plans.

The lesson plans for both the experimental and the control groups were created based on the objectives and goals of the course *Reading for Further Study* (ENG 40201) of the Foreign Language division at Watnuannordit School. The instruction for both groups was divided in three stages: pre-reading, while-reading, and post-reading (see Appendix E).

Teaching materials.

The teaching materials consisted of 14 lesson plans and 12 reading passages which were adapted to meet the purpose of the study. English reading experts and the research advisors evaluated them for any ambiguous wording and inappropriateness. The reading materials were taken from the four following reading books sanctioned by the Ministry of Education: *Opportunities Intermediate* (Harris, Mower & Sikorzyn'ska, 2005) and *Weaving It Together*, books 1 to 3 (Broukal, 2004). Additionally, the researcher selected 12 passages from reading books for Thai high-school students based on the participants' level of English and interests, and from various fields. They consisted of ten passages for reading in the classroom and two passages for assignments. The following is a description of these 12 reading passages:

- Reading 1 Can We Ever Communicate?
- Reading 2 How Can Animals Communicate?
- Reading 3 Robots
- Reading 4 The World's Most Unusual Millionaire
- Reading 5 Celebrating Fifteen
- Reading 6 Many Faces, One Body
- Reading 7 The Knight's Tale
- Reading 8 Zoo
- Reading 9 Killer Bees
- Reading 10 GM Food
- Assignment 1 Earth a Living Planet
- Assignment 2 Frankenstein

Teaching Procedures

The researcher instructed both the experimental and the control groups for two periods (110 minutes) per week, over a 14-week period, using ten reading passages for in-class tasks and two reading assignments to be worked at home (see Appendix K).

In order to prevent any threats to the internal validity of the research, the researcher used the same reading materials, the same activities, the same length of teaching time, the same classroom environment, and the same examination. However, the two groups were instructed through different teaching techniques. But even so, the researcher made clear to both groups that the instructions used in this study were both efficient teaching techniques that had been designed to improve English reading.

The experimental group was instructed through reciprocal teaching, whereas the control group was taught through skill-based teaching. In reading classes at Watnuannordit School, the teachers generally use skill-based teaching. In this study, the researcher compared the effects of reciprocal teaching to those of skill-based teaching, this last the usual method applied in Thai reading classrooms.

The Reciprocal Teaching Model for Reading Comprehension

In this study, the teaching procedures for the reciprocal teaching instruction to the experimental group consisted of four stages: the preparation, the modeling, the participation, and the cooperative stages. The following is a more detailed description of these four stages.

Stage 1. The preparation stage

The students were taught what the four main strategies were and how to use them. They practiced each strategy through the worksheets provided by the teacher.

Stage 2. The model stage

Here, the teacher modeled the whole process of the reciprocal approach (weeks 3 and 4), while the students learnt what strategies to use, and when and how to use each of them.

Stage 3. The participation stage

At this point, the teacher acted as the reading leader for the first paragraph of a passage. Following this, the students worked in small groups, read the next paragraph, and a volunteer came out and acted as the leader in front of the class (weeks 5 and 6).

Stage 4. The cooperative stage

The students worked in groups organizing the whole process of reading by using the reciprocal teaching approach. At this stage (weeks 8-12), each of the cooperative groups followed these steps:

- 1) One student acted as the leader and asked the group members to try to predict the content of the passage from its title, subtitles, or pictures.
- 2) The leader asked the group to read a paragraph silently.
- 3) The leader asked questions on the important information of the paragraph.
- 4) The leader might have clarified or asked the members to clarify difficulties with vocabulary, references, and confusing sentences or phrases.
- 5) The group leader asked the members to locate the main idea of the first paragraph or told what this main idea was, and summarized it.
- 6) The group leader asked the members to predict the likely content of the next paragraph.
- 7) The leader asked for a new volunteer leader for the next paragraph.
- 8) The new group leader performed the same process, from step 2 to step 7.

9) After the last paragraph, the last group leader asked the members to summarize the whole text and to do the exercises.

All throughout this last stage, the teacher acted as a facilitator, helping the students who needed it. Moreover, the students had a chance to read and practice on their own by working on three assignments, two of them provided by the teacher and the other selected by themselves (see Figure 3.1 below for the conceptual framework of this study).

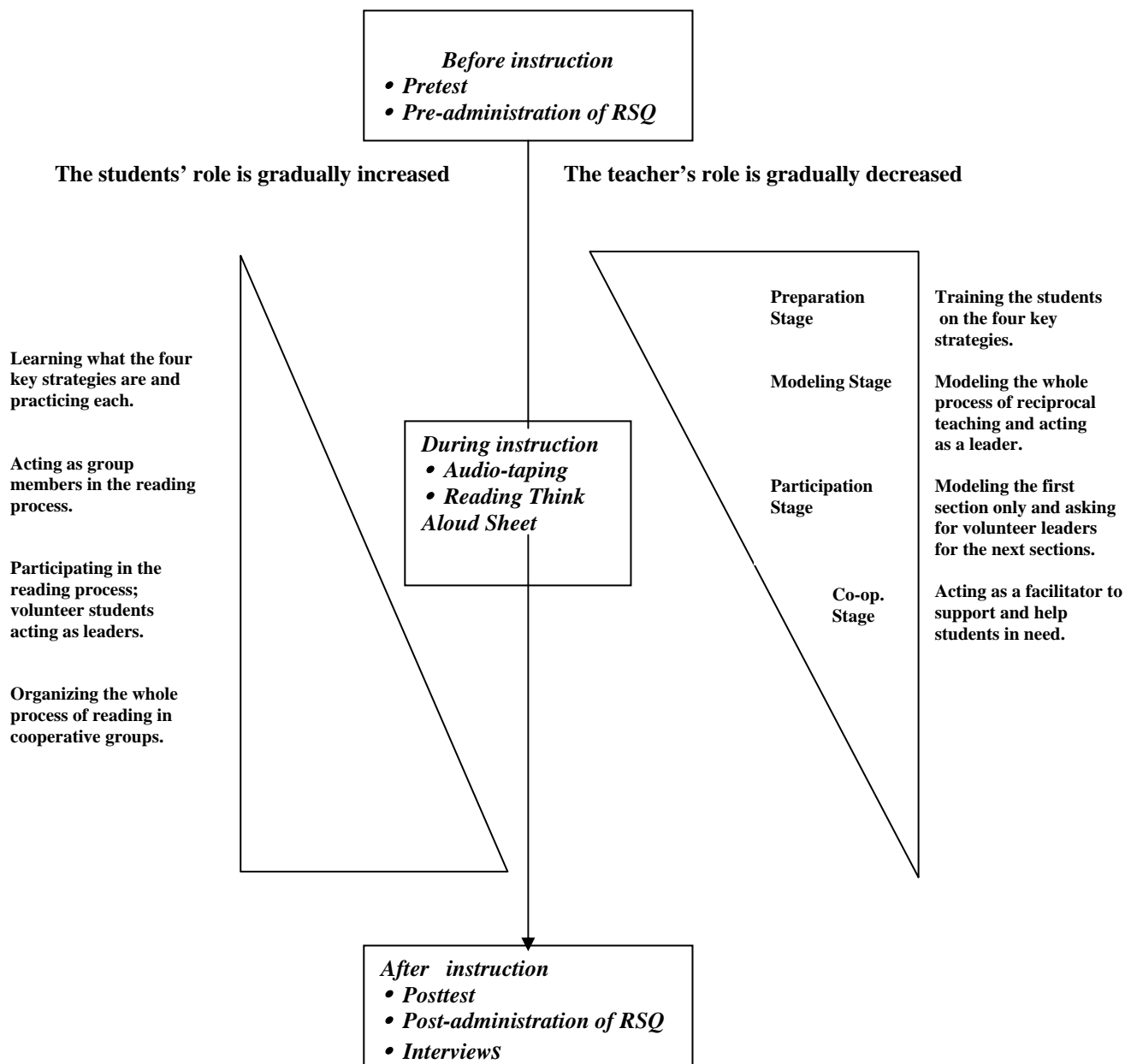


Figure 3 The Reciprocal Teaching Model for Reading Comprehension

Skill-based Teaching for Reading Comprehension

The control group was instructed to read using the skill-based approach. There are three stages in skill-based teaching: the pre-reading stage, the while-reading stage, and the post-reading stage. In each of them, the participants practiced using the following skills useful in increasing their reading abilities: finding the topic, finding the main idea, finding and inferring details and facts, drawing inferences, explaining vocabulary, and explaining sentence structures and grammar points.

In the pre-reading stage, the teacher explained the background information related to the text. The unknown key words and a few grammar points and structures were explained and reviewed with the students.

In the while-reading stage, the teacher told the students to read the text on their own. The readers were encouraged to find the main idea, to find and infer details and facts, and to draw inferences. If they met with difficulties, the teacher assisted them in comprehending the text by explaining the contentious points.

In the post-reading stage, the teacher asked the students to answer questions and guided the learners into the activities or exercises accompanying the materials.

In conclusion, reciprocal teaching and skill-based teaching both have a reading process that includes the three steps of pre-, while-, and post-reading (see Table 3.3, page 64). In addition, in both reciprocal and skill-based teaching in this study, the students were asked to find the main idea and the important content of a passage, to clarify the difficult words, phrases, and references, and to complete the exercises after reading. However, the role of the teacher and the stages of reading in both groups were different. In skill-based teaching, the teacher organized the whole reading class for the entire semester and acted as a lecturer. On the other hand, in reciprocal teaching, the teacher gave the students guided practice, direct modeling, and explicit instruction, and then

transferred the leading role to the students, acting as a guide and assistant giving the students a chance to participate in the reading process. In the end, the students read a passage by themselves through the three steps of reading. The teacher acted as a facilitator giving the students feedback and helping them as required. The following Table 3.2 details the summary of the elements of the reciprocal teaching and of the skill-based teaching.

Table 2 Summary of Elements of Reciprocal Teaching and Skill-based Teaching in this Study

Reciprocal Teaching	Skill-based Teaching
1. Goal	1. Goal
Increase reading comprehension	Increase reading comprehension
Increase metacognitive awareness	Increase reading skills
2. Text	2. Text
Expository	Expository
3. Time	3. Time
14 weeks	14 weeks
4. Instruction	4. Instruction
Stage 1 – Preparation	
Stage 2 – Modeling	
Stage 3 – Participation (pre-, while-, and post-reading)	
Stage 4 – Cooperation (pre-, while-, and post-reading)	

Table 2 (Continued)

Reciprocal Teaching	Skill-based Teaching
<i>4.1 Pre-reading</i>	<i>4.1 Pre-reading</i>
A leader asks the group members to predict the text from the title, subtitles, and pictures.	The teacher explains the background information, key words, and grammar points of the text.
<i>4.2 While-reading</i>	<i>4.2 While-reading</i>
The leader then asks the group to read a paragraph, asks questions or encourages friends to ask questions on the content, to clarify the difficult words, references, and structures, to predict the next paragraph, and to check the accuracy of their predictions.	The students are encouraged to find the main idea; to find and infer details and facts; and to draw inferences on the text.
<i>4.3 Post-reading</i>	<i>4.3 Post-reading</i>
The participants summarize the text and do the exercises in groups.	The students do the activities or exercises accompanying the text.
<i>5. Teacher's role</i>	<i>5. Teacher's role</i>
Guidance, assistance, and facilitation	Lecture

Pilot Study

To verify the whole process of the reciprocal teaching model for reading comprehension, a pilot study was carried out in the first semester of the academic year 2006 with seventy 12th-grade students enrolled in the elective course *Reading for Further Study* (ENG 40201) in the second semester of the academic year 2006 at Watnuannordit School. They were randomly assigned into experimental and control groups. The participants in the control group were instructed through skill-based teaching, while the participants in the experimental group were taught through the reciprocal teaching model for reading comprehension. Both groups used the same reading materials.

Before the instruction, the two groups were both required to take the reading section of The National English Entrance Examination 2004 as a pretest to measure their English reading ability. Following this, only the participants in the experimental group were asked to answer the questionnaire. While working in their cooperative group, the participants in the experimental group recorded on The Reading Think Aloud Sheet the four main strategies they used while completing the reading task. At the end of the semester, all the participants were required to take the same reading section of The National English Entrance Examination as a posttest in order to measure their level of achievement in English reading comprehension and to highlight any significant difference in their English reading performance. The participants in the experimental group were asked to answer the questionnaire and ten of them were interviewed.

The findings derived from the comparison of the mean scores obtained in the reading section of The National English Entrance Examination between the two treatment groups indicated that the experimental group, who experienced the reciprocal teaching model for reading comprehension, obtained a higher score than the control group, who received skill-based teaching. Moreover, the results from the questionnaire show that the

participants of the experimental group, who were taught through the reciprocal teaching model for reading comprehension, employed more metacognitive reading strategies after the treatment.

Studying the results of this pilot study, the researcher found some points which needed to be improved: the amount of time in introducing and practicing the four main strategies, the interview questions, and the Reading Think Aloud Sheet.

From the observation, the researcher found that the participants needed more time in introducing and practicing the four main strategies. Thus, the time to do so was increased from one period to two periods.

As for the interview questions, the researcher found that the answers to these questions focused only on reciprocal teaching, not on the four main metacognitive reading strategies or the group interaction. In order to support the quantitative results obtained in this study, the researcher strongly concentrated on how the participants used the four main metacognitive reading strategies and on their social interaction. Thus, the researcher adapted the interview questions, not only focusing them on the reciprocal teaching process, but focusing them also on the four main metacognitive reading strategies and on the participants' social interaction within their working groups.

Finally, it was found that the Reading Think Aloud Sheet needed to be separated from the reading text in order to grasp the whole picture of each strategy. Moreover, this way was thought easier for the participants to summarize the whole text from the main idea of each paragraph. Accordingly, the Reading Think Aloud Sheet was separated from the reading text. In addition, the researcher provided the participants with instructions on how to record the strategies they used.

Data Collection Procedure

Collection of Quantitative Data

The procedures for the collection of the quantitative data were collected according to the research questions. They were presented as follows:

Research question 1: Do the 12th-grade students at Watnuannordit School improve their reading comprehension after reciprocal teaching?

The data collected to answer research question 1 was formed of the scores obtained from the pretest and the posttest. It was collected from the English reading comprehension part of the National English Entrance Examination 2004, which was administered to the experimental group before and after instruction.

Research question 2: Does reciprocal teaching enhance the English reading ability of proficient and less proficient students?

The data to investigate whether reciprocal teaching enhances both proficient and less proficient students' reading ability was collected from the results of the pretest and posttest administration of the English reading comprehension part of the National English Entrance Examination 2004 to the proficient and less proficient participants of the experimental group.

Research question 3: Is the increase in English reading ability of the students in the experimental group significantly higher than the increase in English reading ability of the students in the control group?

The data collected to answer research question 3 consisted of the posttest scores collected from the English reading comprehension part of the National English Entrance Examination 2004, which was administered to both the experimental group and the control group after instruction.

Research question 4: Do the 12th-grade students at Watnuannordit School increase their use of metacognitive reading strategies after reciprocal teaching?

The answers to the Reading Strategies Questionnaire as it was applied before and after instruction were used to collect the data to answer this question. Before instruction, the participants in the experimental group were asked to complete the RSQ to explore the metacognitive reading strategies they employed before reciprocal teaching. At the end of the course, they were asked once more to answer the RSQ to explore whether they increased their use of the metacognitive reading strategies after the implementation of the reciprocal teaching model.

Collection of Qualitative Data

During the instruction, the students in the experimental group recorded on the Reading Think Aloud Sheet how they applied the four main strategies. In addition, audio-taping was used to record the interaction between the teacher and the students and between the group leaders and their peers during group work.

At the end of the instruction, and following the posttest, all students from the experimental group (instructed through reciprocal teaching), five proficient and five less proficient students, all chosen at random, were interviewed.

The qualitative data gathered from the Reading Think Aloud Sheet, dialogues, and interviews supported the quantitative data collected from the pretest and posttest scores of the English reading comprehension part of the National English Entrance Examination 2004. In addition, the qualitative data gave support to the investigation on the manner in which reciprocal teaching enhanced the proficient and less proficient students' reading comprehension, as well as to the investigation on the increase in the students' use of the

metacognitive reading strategies in reading the English texts in the Reading Strategies Questionnaire.

The instruments for collecting qualitative data were formed of the Reading Think Aloud Sheet, the interviews, and audio-taping. Following is a detailed description of each of these instruments.

Reading Think Aloud Sheet.

The participants in the experimental group recorded on the Reading Think Aloud Sheet the four main reading strategies they employed while completing their reading tasks in their cooperative group (see Appendix C). Before reading, they recorded what their prediction about the reading passage was. While reading, they recorded the four main strategies they employed. They wrote what references and vocabulary they clarified, what questions they asked about the content of the passage, and the main idea of each paragraph. After they finished reading, they summarized the whole passage.

Interview.

Ten interview questions were asked to all participants in the experimental group. They were related to the four main reading strategies of reciprocal teaching the participants employed while completing the reading tasks, how they used each strategy, their opinion on each strategy, and their opinion on working in groups (see Appendix D).

Audio-taping.

From week 8 to week 12, the participants in the experimental group were in the cooperative stage. They were working in cooperative groups performing the whole process of reciprocal teaching on their own, using the reading passages 6 to 10. The

dialogues as they interacted with one another were recorded in order to investigate the differences in the usage of the four main reading strategies between the proficient and less proficient students and to study their social interaction while working together.

Data Analysis

The data collected through the above instruments were analyzed both quantitatively and qualitatively. The data from the pretest and posttest were analyzed quantitatively, whereas the data from the questionnaire, the Reading Think Aloud Sheet, and the interviews were analyzed qualitatively.

Quantitative Data Analyses

To answer research question 1, the data from the pretest and posttest scores collected from the English reading part of the National English Entrance Examination 2004 were analyzed as follows:

1. To investigate whether the participants' reading comprehension improved after instruction through reciprocal teaching, the pretest and posttest mean scores of the students in the experimental group were compared to observe any significant difference using the dependent t-test from the statistical software SPSS for WINDOWS.

To answer research question 2, the data were analyzed as follows:

2. The proficient students' pretest and posttest mean scores collected from the English reading part of the National English Entrance Examination 2004 were calculated using the dependent t-test to determine the presence of any significant difference within the group.

The less proficient students' pretest and posttest mean scores collected from the English reading part of the National English Entrance Examination 2004 were compared using the paired t-test to determine the presence of any significant difference within the experimental group.

To answer research question 3, the data were analyzed as follows:

3. The posttest mean scores of the participants in the experimental group and the control group were calculated using the independent t-test to determine the presence of any significant difference.

To answer research question 4, the data from the pre- and post-administration of the RSQ was analyzed as follows:

4. The data obtained from the pre- and post-administration of the RSQ to the experimental group were analyzed by descriptive statistics using the software SPSS for WINDOWS to determine the mean scores and standard deviation (SD) for every metacognitive reading strategy employed by these participants before and after instruction through reciprocal teaching, in order to highlight any difference between the mean scores of the students' ratings from the pre- and post-administration of the RSQ.

The findings were to demonstrate the difference between the reading strategies the experimental group employed prior to and after receiving instruction through reciprocal teaching. According to Oxford (1990), the scale value and its interpretation of the frequency of use for each reading strategy offer five levels: a) a very high level is demonstrated by mean scores between 4.50 and 5.00, b) a high level is defined by mean scores ranging between 3.50 and 4.49, c) a medium level is obtained by mean scores between 2.50 and 3.49, d) a low level is defined by mean scores between 1.50 and 2.49, and e) a very low level is characterized by mean scores between 1.00 and 1.49.

Qualitative Data Analyses

The data obtained from the Reading Think Aloud Sheet, dialogues, and interviews were analyzed qualitatively. The results undoubtedly indicated whether reciprocal teaching enhanced both the proficient and less proficient students' reading ability.

Reading Think Aloud Sheet.

The data from the Reading Think Aloud Sheet were analyzed to note the development of the proficient and less proficient students in using the four main reading strategies of reciprocal teaching. The written results were analyzed on the differences of the four main reading strategies the participants employed in the early stage of working in groups (Reading 6) compared to the 4th week of working in groups (Reading 9).

Interview.

All the participants in the experimental group were interviewed on the four main reading strategies of reciprocal teaching they employed and their opinion on group work while completing the reading tasks. The participants' answers were transcribed and categorized in order to compare the differences of usage of the main reading strategies between the proficient and the less proficient students.

Audio-taping.

The dialogues between the participants as they were working in cooperative groups were recorded. Then the tapescripts were transcribed into dialogues. Following this, the descriptive data were analyzed to investigate the difference in the use of the four main reading strategies between the proficient and less proficient students, while working on Reading 6 and Reading 9.

Data and Variables

The data of this study were formed of the scores obtained from the reading pretest and posttest, the metacognitive reading strategies, the transcriptions of the dialogues, the retrospective interviews, and the written think-aloud notes. These data were of two kinds: numerical and descriptive. The independent variable of this study was reciprocal teaching, and the dependent variables were formed of the students' reading ability and the metacognitive reading strategies. The following are the conceptual framework of this study and the summary of the elements of reciprocal teaching and of skill-based teaching as used in this study.

CHAPTER IV

RESULTS OF THE STUDY

This study was conducted with the purpose of investigating the effects of reciprocal teaching on the English reading comprehension and reading strategies of students in Thai high-school classrooms. It was conducted to answer the following research questions: 1) Do the 12th-grade students at Watnuannordit School improve their reading comprehension after reciprocal teaching? 2) Does reciprocal teaching enhance the English reading ability of proficient and less proficient students? 3) Is the increase in English reading ability of the students in the experimental group significantly higher than the increase in English reading ability of the students in the control group? 4) Do the 12th-grade students at Watnuannordit School increase their use of metacognitive reading strategies after reciprocal teaching?

The data serving as the basis for this study were of two kinds: quantitative and qualitative. The statistical data consisted of a) the pretest and posttest scores of the reading comprehension section of the National English Entrance Examination 2004, and of b) a list of the metacognitive reading strategies the participants employed as collected from their answers to the *Reading Strategies Questionnaire* administered before and after instruction.

Both the control and the experimental groups took a pretest before and a posttest after the instruction, but only the experimental group answered the *Reading Strategies Questionnaire*, also before and after the instruction. The qualitative data consisted of the written records of the *Reading Think Aloud Sheet*, the transcriptions of the dialogues, and the interviews. While working in groups, the participants in the experimental group

completed the Reading Think Aloud Sheet to give details on the four keys strategies they employed in their reading tasks. Their group interaction was tape-recorded as well.

Finally, all of them were interviewed on the four main strategies they used to complete their reading tasks and on their group experience.

Quantitative Results of the Study

The data from the pretest and posttest were analyzed to answer research questions 1, 2, and 3. The findings were based on the mean scores of these tests for both the control and the experimental groups. The pretest and posttest mean scores and standard deviations of the participants in the reciprocal teaching group are shown in Table 4.1. Table 4.2 shows the mean scores in reading comprehension and the standard deviations of the proficient and less proficient students in the reciprocal teaching group. Table 4.3 details the posttest mean scores and standard deviations of the reciprocal and skill-based groups for reading comprehension.

Results of English Reading Comprehension for the Experimental Group

To investigate whether the participants in the experimental group improved their reading ability after receiving instruction through reciprocal teaching, the mean scores of their results on the pre- and post-administration of the English reading comprehension section of the National English Entrance Examination 2004 were calculated using the dependent t-test to determine whether there was a significant difference before and after the instruction. The results are presented below.

Table 3 Reading Comprehension Mean Scores and Standard Deviations (SD) of the Participants in the Reciprocal Teaching Group

Teaching method	Experimental Group				<i>t</i>	<i>p</i>
	Before training		After training			
	Mean	SD	Mean	SD		
Reciprocal Teaching	14.73	5.55	17.70	5.56	5.783	.000**

***p* < 0.01

As shown in Table 4.1, the posttest mean score of the participants instructed through the reciprocal teaching method (the experimental group) was significantly different from their pretest mean score, at a level of 0.01. Since, in this study, the level indicating a significant difference in results had been set at 0.05, it can thus be concluded that the level of 0.01 is pointing to a significant difference in reading comprehension before and after instruction through reciprocal teaching. This result strongly supports the fact that the participants instructed through reciprocal teaching developed better metacognitive reading awareness, self-regulation, and reading comprehension.

English Reading Ability of Proficient and Less Proficient Students of the Experimental Group

To find out whether reciprocal teaching enhanced the English reading ability of the proficient and less proficient students in the experimental group, the pretest and posttest mean scores of all reading abilities were compared using the independent t-test to determine whether there was a significant difference before and after instruction. The results are presented below.

Table 4 Reading Comprehension Mean Scores and Standard Deviations (SD) of the Proficient and Less Proficient Students in the Reciprocal Teaching Group

Students' Ability	Pretest		Posttest		<i>t</i>	<i>p</i>
	Mean	SD	Mean	SD		
Proficient students (N = 15)	21.00	2.32	23.80	3.45	3.698	.034*
Less proficient students (N = 15)	9.50	4.13	13.10	4.14	3.959	.003*

* $p < 0.05$

As shown in Table 4.2, both proficient and less proficient students in the experimental group gained a significantly higher mean score in the posttest compared with the pretest score. The difference between the two tests stands at 0.05 level for the proficient students and at 0.01 level for the less proficient students. This indicates that reciprocal teaching enhanced the English reading ability of both proficient and less proficient students.

Comparison of English Reading Ability Results between the Experimental Group and the Control Group

In order to find out which of the two groups, the one instructed through reciprocal teaching and the one instructed through skill-based teaching, showed greater gain in English reading ability, the posttest mean scores of both were compared using the independent t-test to determine the presence of a significant difference. The results are presented below.

Table 5 Reading Comprehension Mean Scores and Standard Deviations (SD) of the Participants in the Reciprocal Teaching and Skill-based Teaching Groups

Teaching Method	Pretest Mean Score	Posttest Mean Score	SD	<i>t</i>	<i>p</i>
Reciprocal teaching	14.22	17.73	5.62	4.537	0.026*
Skill-based teaching	14.02	14.86	4.07		

* $p < 0.05$

The data in Table 4.3 point to significant differences between the posttest mean scores of the experimental group and of the control group, at 0.05 level. The students in the reciprocal teaching group (the experimental group) achieved a higher mean score than those in the skill-based teaching group (the control group). Thus, it can be concluded that reciprocal teaching better assisted the students in enhancing their English reading ability than skill-based teaching did.

Comparison of the Metacognitive Reading Strategies Used before and after Reciprocal Teaching

To compare the metacognitive reading strategies the 12th-grade students at Watnuannordit School employed before and after reciprocal teaching, all the data from the pre-questionnaires and post-questionnaires were analyzed using the paired t-test to determine the presence of a significant difference in the frequency of use of the metacognitive strategies. The results are presented in Tables 4.4, 4.5, 4.6, and 4.7. Table 4.4 shows the average profile of the sub-metacognitive reading strategies used by the 12th- grade students at Watnuannordit School before and after reciprocal teaching. Table 4.5 presents the comparison of the metacognitive strategies these students employed before and after receiving instruction with the reciprocal teaching approach. Table 4.6 presents the comparison of the metacognitive strategy processes the students employed

before and after reciprocal teaching. And finally, the metacognitive strategies the students used before and after the treatment in each step of reading are shown in Table 4.7.

Table 6 *The Comparison of the Metacognitive Reading Strategies Students Employed before and after Reciprocal Teaching*

Item	Description	Experimental Group						<i>t</i>	<i>p</i>
		Before training			After training				
		Mean	SD	Level	Mean	SD	Level		
1	Prediction	3.40	0.96	M	4.03	0.73	H	5.117	.000**
2	Prediction	3.70	0.87	H	4.40	0.81	H	4.826	.000**
3	Goal Setting	3.43	1.00	M	4.03	0.85	H	4.871	.000**
4	Prediction	3.00	0.94	M	3.53	0.77	H	4.287	.000**
5	Verification Prediction	3.36	0.06	M	4.06	0.78	H	5.114	.000**
6	Background Activation	3.70	1.10	H	4.23	0.77	H	3.395	.000**
7	Background Activation	3.66	1.00	H	4.16	0.87	H	4.014	.000**
8	Self-management	3.00	0.90	M	3.56	0.72	H	3.616	.001**
9	Selective Attention	3.66	0.99	H	4.13	0.77	H	3.751	.001**
10	Inferences	3.40	1.00	M	4.00	0.74	H	3.525	.001**
11	Selective Attention	2.46	0.86	L	2.80	0.92	L	3.340	.000**
12	Selective Attention	3.50	0.82	H	3.76	0.72	H	1.861	.073
13	Summarization	3.50	0.93	H	4.10	0.71	H	4.039	.000**
14	Self-evaluation	4.06	0.94	H	4.46	0.68	H	3.520	.001**

Table 6 (Continued)

Item	Description	Experimental Group						<i>t</i>	<i>p</i>
		Before training			After training				
		Mean	SD	Level	Mean	SD	Level		
15	Note Taking	3.10	1.10	M	3.90	0.96	H	4.878	.000**
16	Summarization	3.06	0.90	M	3.73	0.73	H	3.818	.001**
17	Selective attention	3.70	0.70	H	4.06	0.58	H	3.266	.003**
18	Goal Setting	3.26	0.90	M	3.90	0.84	H	4.289	.000**
19	Self-evaluation	3.66	0.88	H	4.23	0.81	H	4.011	.000**
20	Selective Attention	3.80	0.92	H	4.26	0.69	H	2.841	.008**

**p <0 .01 *p <0 .05

Students' use of the metacognitive strategies before reciprocal teaching.

Table 4.4 shows the metacognitive reading strategies the students of the experimental group used before and after reciprocal teaching as collected from the questionnaire and according to ten metacognitive reading strategies (see Table 3.1 and Appendix B). It can be seen that before the participants were instructed through reciprocal teaching, an average of ten sub-metacognitive reading strategies from 2, 6, 7, 9, 12, 13, 14, 17, 19, and 20 stand above 3.5, which is within the range of the high frequency (3.5-5) defined by Oxford (1990). These results indicate that these ten sub-metacognitive reading strategies were the most popular amongst the participants before instruction through reciprocal teaching. Item 14 (*Self-evaluation*) with a mean score of 4.06 was reported to be the most frequently used by the students, followed by item 20 (*Selective Attention*) with a mean score of 3.80, items 2, 6, and 17, which all present the same mean score (3.70) and are followed by items 7 and 19 with a mean score of 3.66 each. The last two popular metacognitive strategies were items 12 and 13 (respectively *Selective*

Attention and Summarization) with both a mean score of 3.50. The least used metacognitive strategy was item 11 (*Selective Attention*), with a mean score of 2.47.

Students' use of the metacognitive strategies after reciprocal teaching.

From Table 4.4, we can see that after reciprocal teaching the average of most reading strategies stood above 3.5, except the ones for item 11 and item 12 which are in selective attention metacognitive reading strategy. Item 11 was the least used metacognitive strategy by the participants after they received instruction through reciprocal teaching. Its mean score was 2.80 and its paired difference mean was 0.33. However, it shows a significant difference at 0.05. Item 12 is the strategy that improved the least, showed by its paired difference mean which stood at 0.26. Moreover, it does not show a significant difference at 0.05 level.

Comparison of the Ten Types of Metacognitive Strategies Students Employed before and after Reciprocal Teaching

The metacognitive strategies from the questionnaire can be classified into ten types (see Table 3.1, Unit 3). Table 4.5 reveals the ten types of metacognitive strategies the students in the experimental group employed before and after reciprocal teaching.

Table 7 Mean, Standard Deviation, and Level of Use of Metacognitive Strategies*Employed before and after the Instruction of Reciprocal Teaching:*

Metacognitive Strategies	Experimental Group (N = 30)						<i>t</i>	<i>P</i>
	Before training			After training				
	Mean	SD	Level	Mean	SD	Level		
Prediction	3.37	.70	M	4.02	.57	H	-7.197	.000**
Background Activation	3.37	.97	M	4.20	.75	H	-4.209	.000**
Verification Prediction	3.37	1.0	M	4.07	.78	H	-4.826	.000**
Self-management	3.00	.91	M	3.57	.73	H	-3.616	.001**
Goal Setting	3.40	.79	M	3.97	.70	H	-7.223	.000**
Note Taking	3.10	1.1	M	3.97	.69	H	-4.878	.000**
Inferences	3.70	1.0	H	4.00	.74	H	-3.525	.048*
Selective Attention	3.40	.56	M	3.80	.50	H	-5.425	.001*
Summarization	3.30	.69	M	3.90	.57	H	-6.238	.000**
Self-evaluation	3.90	.76	H	4.40	.67	H	-5.298	.000**

***p* < 0.01 **p* < 0.05

Table 4.5 shows the mean scores, mean differences, and level of the use of the metacognitive strategies before and after they were taught through reciprocal teaching.

Before training, the participants made good use of *Inferences* and *Self-evaluation*, with mean scores of 3.7 and 3.9 respectively. The rest of the strategies (*Self-management*, *Note Taking*, *Prediction*, *Background Activation*, *Verification of Prediction*, *Summarization*, *Goal Setting*, and *Selective Attention*) were used at a medium level, their mean scores ranging between 3.0 and 3.4.

The metacognitive strategy most used by the students after reciprocal training was *Self-evaluation*. Significance differences at the 0.05 level and the 0.01 level were found with *Inferences*, *Self-management*, *Note Taking*, *Prediction*, *Background Activation*, *Verification of Prediction*, *Summarization*, *Goal Setting*, and *Selective Attention*. Though the sub-metacognitive strategy item 12 (I selected relevant information to help me understand the texts) (see Table 4.4, page 80) shows no significant differences, the overall

result shows significant differences at level the 0.05 level ($p < 0.05$) when it is classified under the metacognitive strategy *Selective Attention*.

Comparison of the Metacognitive Strategy Processes the Students Employed before and after Reciprocal Teaching

Table 4.6 shows the metacognitive strategy processes (planning, monitoring, and evaluating) the students employed before and after reciprocal teaching.

Table 8 Comparison of the Metacognitive Processes the Students Employed Before and After Reciprocal Teaching

Metacognitive Strategy Processes	Experimental Group (N = 30)						T
	Before training			After training			
	Mean	SD	Level	Mean	SD	Level	
Planning	3.39	0.65	M	3.99	0.51	H	9.049*
Monitoring	3.37	0.56	M	3.85	0.42	H	7.926*
Evaluating	3.53	0.64	H	4.12	0.52	H	10.503*

** $p < 0.01$

From Table 4.6, it can be seen that before receiving instructions on the reading strategy, the students moderately planned and monitored, below a mean score of 3.5. Concerning the process of planning, they employed four metacognitive reading strategies: *Prediction* (items 1, 2, 4), *Goal Setting* (items 3, 18), *Background Activation* (items 6, 7), and *Self-management* (item 8), with a mean score of 3.39. For monitoring, they employed three metacognitive reading strategies: *Inferences* (item 10), *Selective Attention* (items 9, 11, 12, 17, 20), and *Note Taking* (item 15), with a mean score of 3.37.

However, this table shows that the students employed the process of evaluating at the mean score of 3.53, which is above the moderate level. In this process, they employed

three metacognitive strategies: *Verification of Prediction*, *Summarization*, and *Self-evaluation*.

The students' metacognitive awareness after reciprocal teaching was significantly higher than that of before, at 0.05. They planned, monitored, and evaluated their reading to complete the task above the mean score of 3.5.

Table 9 Comparison of the Metacognitive Strategies the Students Employed in Each Reading Step before and after Reciprocal Teaching

Reading Step	Experimental Group						<i>t</i>	<i>p</i>
	Before training			After training				
	Mean	SD	Level	Mean	SD	Level		
Pre-reading	3.51	0.75	H	4.18	0.59	H	6.584	.000**
While-reading	3.36	0.59	M	3.90	0.46	H	9.016	.000**
Post-reading	3.57	0.82	H	4.13	0.68	H	4.591	.000**

** $p < 0.01$

As shown in Table 4.7, the participants in reciprocal teaching employed a high level of metacognitive strategies in the *Pre-reading* and *Post-reading* stages before training (at the mean scores of 3.51 and 3.57 respectively). The use of metacognitive strategies was at a medium level in the *While-reading* stage (with a mean score of 3.36). However, the highest difference of usage before and after the training was obvious during the *While-reading* stage. After training, the participants also employed a high level of metacognitive strategies in the *Pre-reading* and *Post-reading* steps (with mean scores of 4.18 and 4.13 respectively). Significant differences at 0.05 level ($p < 0.05$) were found in all three steps of reading.

In conclusion, from the quantitative analyses it can be seen that the 12th-grade students at Watnuannordit School receiving reciprocal instruction improved their English reading ability and their use of the metacognitive strategies through the metacognitive

process and reading steps. Reciprocal teaching also enhanced the English reading ability of both the proficient and less proficient students in the reciprocal teaching group. In addition, it was found that after the instruction, the students in the reciprocal group obtained significantly higher posttest mean scores than the students in the skill-based group did.

Qualitative Results

During instruction, the students in the experimental group, which were taught through reciprocal teaching, recorded on the Reading Think Aloud Sheet the way they applied the four main strategies. In addition, audio-taping was used to record the interaction between the student leader and the other members of each cooperative group.

At the end of the instruction, ten students from the experimental group, five proficient readers and five less proficient readers, were interviewed.

The qualitative data was collected through the Reading Think Aloud Sheet, dialogues, and interviews. The results from this data supported the quantitative data collected from the pretest and posttest scores of the English reading comprehension part of the National English Entrance Examination 2004. Moreover, the results from the qualitative data gave support to the fact that reciprocal teaching enhanced the proficient and less proficient students' reading comprehension, and increased their use of the metacognitive reading strategies in the English texts from the Reading Strategies Questionnaire.

The Written Record from the Reading Think Aloud Sheet

In this study, the participants recorded how they used the four key strategies to complete their reading task. This qualitative data consisted of the information found on the Reading Think Aloud Sheets of the proficient and less proficient students of the

experimental group, which they logged while working in groups and during two different periods of learning: a first one, early in the training, as they were working on Reading 6 and a second one, three weeks later, on Reading 9 (see Appendix H). The qualitative results revealed a significant improvement in the participants' use of the four key strategies. These results are presented below.

Predicting.

The proficient students used their background knowledge to predict the content of the passages in the early section. For example,

The story may be about dupery or a hypocritical person or about the people that wear many masks.

They used the meaning of the words found the title and from their own experience to help them predict the text in the later section, which was the same as the early section.

For example,

This story may be concerned with the bees or another type of bees.

The less proficient students in the early period of learning guessed the content of the reading texts from the topic of the passage. For example, as quoted by one of them:

The story may be about the person or the people that wear so many masks.

In the later section of learning, they had more details on the meaning of the words in the titles.

They used their background knowledge to predict the content of the reading texts. For example,

I think the killer bee breeds with the male bees. The male bee dies after it breeds.

At the end of each paragraph, the students in both groups predicted the next paragraph from an analysis of the previous paragraph.

In conclusion, the less proficient students improved their predicting strategy more than the proficient ones did. The less proficient students used only their background knowledge in the early section to predict the content of the texts. Then in the later section, they improved it by using the form of the words found in the title as well as using their schemata. However, the proficient students already used both word forms and their background to help them predict the content of the passages in the early stage. Therefore, there was not much difference between these two stages.

Questioning.

In the early section (Reading 6), the proficient students asked questions that focused on the main idea and asked more than one question per paragraph. For example,

What personality do most people have? How many personalities do people have?

Similar to the early section, they asked more than one question in the later section and they were also focused on the main idea. For example,

What are the similarities and differences between the killer bees and the honey bees?

What people should do to protect themselves from the killer bees?

On the other hand, the less proficient students asked only one question per paragraph. In addition, the question did not focus on the main idea of a paragraph. For example,

What do most people have?

In the later section, their questions were mostly on the main idea of the paragraph. They also asked more questions than in the early section. For example,

Why do scientists breed bees? What is an accident?

In conclusion, the proficient students already asked more than one questions focusing on the main idea in the early stage. They only improved on the number of questions (asked more questions) in the later stage. In contrast, in the early stage, the less proficient

students asked only one question that did not focus on the main idea. But after three weeks working in groups, they improved their questioning strategy. They asked more than one question which focused also on the main idea in the later stage.

Clarifying.

During the early section of learning, the proficient students clarified the unknown words by using word formation and some references in the context. In the later section, they did not only use word formation, context clues, and dictionaries, but they also asked their friends in their group. Moreover, the words they clarified were important words in the paragraph and both the proficient and less proficient students improved their usage of the clarifying strategy (see Appendix H).

The less proficient students clarified the words and references they did not know, although they realized that it was not important to know every word to understand the main idea of the paragraph. However, they improved the way of clarifying in the later section when they clarified the more important words and references by using their background knowledge, context clues, and dictionaries (see Appendix H).

Summarizing.

In the early section, both the proficient and less proficient students connected the main idea of each paragraph in order to summarize. The sentences they wrote were copied from the content of the text and their summaries were inadequate or too detailed. But overtime, their summaries improved. The less proficient students summarized an important point of the content and used most of their words even if they did not use grammatically correct sentences. The summaries of the proficient students became more complete. They used most of their own words and based their writing on the main point of the text (see Appendix H).

In summary, the qualitative data collected from the Reading Think Aloud Sheet showed significant improvement of the proficient and less proficient participants' use of the four key strategies.

Interview Results

The finding from the interviews supports the results of the statistical analysis.

Table 10 *Examples of Answers to the Interview Questions of Two Proficient and Two Less Proficient Students*

Four main Metacognitive Reading Strategies	Proficient Students	Less Proficient Students
Prediction	Analyze the title of the text and use background knowledge to guess about the text. First, look at the title to guess what the text is about.	Predict the text from the title Before reading, I will predict what the text will be about from the title.
Four main Metacognitive Reading Strategies	Proficient Students	Less Proficient Students
Clarifying	I use word formation such as root, prefix, suffix, and part of speech to help me clarify the unknown words. The more we know the meaning of words, the more we comprehend the passage. I clarify the words or references from the sentences or context clues.	Knowing the meaning of the words helps me to understand the text. I guess the meaning of unknown words from context clues or my background knowledge. Clarifying helps me understand the passage. I guess the meaning of the words from the words I know and I sometimes look at a sentence structure to see the relation of the sentence to the unknown words.

Table 10 (Continued)

Four main Metacognitive Reading Strategies	Proficient Students	Less Proficient Students
Questioning	Asking question is useful for understanding the next content in the paragraph.	It helps us see different aspects of the text. The questions can also be asked for the content that I do not understand.
	Questioning helps me revise and understand the content of the text.	The questions help me improve my reading. The questions should relate to the content and lead readers to analyze.
Summarizing	I summarize from the main points of the passage and ask myself what the writer wants to convey to the readers.	I summarize from the main points of the passage and ask myself what the writer wants to convey to the readers.
	I understand more by summarizing. I summarize the main points of the passage, which connect with each other.	I summarize the whole passage in a concise way and a way easy to understand.

Before reading, the students in the reciprocal group planned to find the main idea of each paragraph, starting from predicting and then questioning, clarifying, and ending with summarizing. Some students viewed that if the reading text was followed by questions, they would read the questions first in order to view the scope of the text. Besides the questions, they predicted the text from the title. The following are some examples of their views:

- *Set the goal of reading such as finding the main idea, clarifying, and drawing a conclusion.*
- *Check the reading passage. If there are questions or exercises, I will read them first and then plan to read the passage to find out the answers.*
- *Planning to find the main idea of the paragraph, first predict the text from the title and then check the prediction by reading for the main idea and then for important details.*
- *Predict and analyze the title by using background knowledge.*

Regarding the while-reading stage, the students indicated that they planned what to do while reading and worked to reach their plans. All of them knew that finding the main idea was the main purpose of their reading each paragraph. Moreover, they knew that to find the main idea, they had to ask questions about the content of the paragraph. They asked questions related to the main point. When they had problems with key words or references, they clarified them. Moreover, they knew how to clarify the unknown words by using context clues and word formation. They evaluated their understanding. If they did not understand the text, they reread it. All this means that they planned, controlled, and evaluated themselves while they were reading a text. The following quotes are a few examples of some of the participants' views while they were reading the passages:

- *While reading, I planned to find out the main idea of the paragraph by using predicting, questioning, clarifying, and summarizing.*
- *While reading, I read the whole passage to find out the main idea.*
- *I reread the passage if I didn't understand it.*
- *Questioning helps me to understand each paragraph and to find the main idea.*

- *Clarifying helps me a lot in reading. If I didn't know the words, I used context clues and my own knowledge.*
- *Summarizing helps me comprehend the text better. I summarized by connecting each main idea.*

Regarding the after-reading stage, all students agreed that summarizing was important for reading because by doing so, they could see the whole picture of a reading passage. Moreover, they evaluated their understanding. Additionally, when they did the exercises and could not answer the questions, they went back to the part of the passage that related to the questions to find out the answers.

The answers to interview question 11 show that the students had positive views on reciprocal teaching and on working in groups. They learnt to act as leaders from the teacher's explicit teaching and from their friends who previously acted as leaders. They enjoyed working with their friends and helping each other as they could reflect and share their ideas with others. They experienced the leader role and also worked as a member of the group. Moreover, they felt relaxed to work with their friends. They improved their use of the four key strategies from working in cooperative groups. The following are examples of some participants' views.

- *We could help each other when in groups. It was enjoyable and I felt relaxed. We worked together to complete our task. Working in groups also helped my weak friends to comprehend the text.*
- *Working in a group helped me to be a leader and to know what I should do while being a leader. I was eager to act like a teacher and prepared myself to help my friends understand the passage. After being a leader, I reached a conclusion or asked my friends to draw it in order to evaluate their understanding.*

In conclusion, the results from the interviews show that the students in the reciprocal group, both the proficient and less proficient ones, had similar metacognitive awareness. They planned before reading a text and the next paragraph. They monitored themselves while reading in their group to comprehend the text and they evaluated their results according to their planning. They enjoyed working in cooperative groups and having a chance to be a leader. They shared and learned from their friends. Finally, they had positive views on reciprocal teaching and commented that they had never had a chance to study reading through a reading strategy instruction like reciprocal teaching. In the end, they suggested that it is necessary for the next groups of students who will attend the reading course to learn through reciprocal teaching, as they did, because it was worth it for them to know what strategies to use, and when and how to use them to comprehend a reading text. As mentioned in the interviews, the students in the reciprocal teaching group developed their reading skill by using the four main reading strategies consciously when their reading comprehension broke down.

Audio-taping Results

To investigate whether the students in the reciprocal teaching group improved their reading comprehension after receiving instruction, a discussion on the students' interaction was necessary. The results revealed significant improvement in the quality of the students' reading process using the four main strategies through metacognitive awareness and social interaction.

In this study, the results from the audio-taping are presented into 2 different time frames: an early period in the working groups and a later period (see Appendix I).

In the early period, the text was titled "*Many Faces, One Body*" and counted four paragraphs. In their respective group, the students who were the leaders tended to ask

their friends to translate the meaning of each sentence. However, the leaders also asked their friends to clarify the words and the references they did not know. They translated almost word by word not focusing on the meaning across the text. The leaders asked a few questions related to the main idea. Moreover, the less proficient students did not interact much with their friends. However, when they were leaders, they concentrated on their responsibilities.

In the later period, the title of the text was "*Killer Bees*", and students asked more questions on the main idea, but they still wanted to know some unimportant words. They improved the use of the four key strategies through metacognitive process or awareness. In other words, they planned, monitored, and evaluated their work while completing the reading task. In addition, the less proficient students interacted more while reading. They were encouraged from their friends to share their ideas.

Findings from the quantitative data suggested that the students in the reciprocal teaching group developed their metacognitive awareness (planning, monitoring, and evaluating) when they read a passage. After the teacher modeled the procedure of the reciprocal approach, they organized their own thoughts in their cooperative group. Everyone in the group had a chance to be a leader, something that reflected directly on their own and the other participants' performances. The stages of the reciprocal approach guided them towards achieving an understanding of the meaning of the reading passage in order to improve their reading ability.

CHAPTER V

DISCUSSION AND CONCLUSION

The purpose of this study was to investigate the effects of reciprocal teaching on English reading comprehension in a Thai high-school 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 12th-grade students, and whether reciprocal teaching enhanced both the proficient and less proficient participants' reading ability, the pretest and posttest mean scores of the reading part of the National Entrance Examination 2004 were analyzed using the dependent t-test. To find out whether reciprocal teaching had 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 66 students in 12th grade at Watnuannordit School who 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 *Reading for Further Study* (ENG 40201) in the second semester of the academic year 2007.

This study performed a triangulation of the data collected from the Reading Think Aloud Sheet and the audio-taping of the participants in the experimental group working in co-operative 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.

Discussion of the findings

The results indicated that reciprocal teaching had a significantly positive effect on the English reading comprehension and metacognitive reading strategies of high-school 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 the 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 Thai high-school 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 Thai 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). This may be because most of the instruction in Thai high-school reading classes consists of translation. 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 J, 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 J, 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 I and Appendix J, 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 improve 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 teacher discussed what the four key strategies are and why they are important. Following this, she demonstrated how and when to use them. Then, the students practiced each of them as the teacher 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. She 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 (see Appendix I). 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 (see Appendix I).

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 "Many Faces One Body" from the title (from Appendix I, page 1).

S₁: Let's look at the title. What do you think it is about?

S₂: Many faces.

S₃: Um... The personality of different people.

S₂: One person with many personalities.

S₁: 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 help 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 J, 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. As is evident from what the participants themselves mentioned in the audio-taped dialogues (see Appendix I), 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. According to what has been said during the interviews, the participants realized that “questioning helps me understand the content of the text.” (from Appendix J, Question 5). In another example from the Reading Think Aloud Sheet (see Appendix H), it can be seen that the participants improved their asking questions. This is confirmed from the transcripts of the audio-taping in which it can be noticed that they asked more questions focusing on the main idea (see Appendix I).

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 (see Appendix H). As an example, here is a dialogue from the audio-taping:

S₁: *“Multiple personality”, what is its meaning? What do you think “multiple personality” mean? As we know “main personality” means “one personality”.*

S₂: *Many.*

S₃: *You see the words “multiple” or “many”, that is “multiple” means “many”.*

S₁: *Thus, “multiple” means “many”.*

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 J, 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 (see

Appendix H, Week 6). 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 (see Appendix H, Week 9). 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 are 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.

Implications

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 Thai high-school classrooms or in any EFL classroom to help students improve their English reading comprehension and metacognitive awareness.

Methodological Implications of the Study

This study used both quantitative and qualitative data collection. The data from the Reading Think Aloud Sheet, audio-taping, 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, the Reading Think Aloud Sheet, and the audio-taping helped explain why and how the quantitative data pointed to these specific results.

In short, using 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.

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 Thai students. To teach Thai students 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 (Thai) in order to make sure that they understand and know these process and procedure. 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 and audio-taping 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 not only improved their reading comprehension, they also improved 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, schooling 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.

Recommendations for Further Studies

This study investigated the effects of reciprocal teaching on the English reading comprehension and usage of metacognitive strategies of students in a Thai high-school classroom. Through the analysis of its results, reciprocal teaching was 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 number of participants was rather small, further studies on a greater number of participants should be pursued.

2. Other studies should be conducted with participants from different levels of learning such as students from primary or junior-high schools, gifted 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 Thai 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 Thai 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 to monitor the correlation between their role and their learners' improvement.

REFERENCES

References

- Adunyarittigun, D. (2004). The effects of reciprocal teaching procedure on Thai EFL students reading performance and self-perception as readers. Published doctoral dissertation, University of Maryland, United States of America.
- Adunyarittigun, D., & Grant, R. (2005). Empowering students through reciprocal teaching. *Thai TESOL BULLETIN*, 18 (1), 1–13.
- Aebersold, J.A., & Field, M.L. (1997). *From reader to reading teacher*. Cambridge: Cambridge University Press.
- Alderson, J.C. (2000). *Assessing reading*. Cambridge: Cambridge University Press.
- Allen, S. (2003). An analytic comparison of three models of reading strategy instruction. *IRAL*, 41, 319–338.
- Andre, M.E., & Anderson, T.H. (1979). The development and evaluation of a self-questioning study technique. *Reading Research Quarterly*, 14 (4), 605–623.
- Anderson, N.J. (2003). Scrolling, clicking, and reading English: Online reading strategies in a second/foreign language. *The Reading Matrix*, 3 (3), retrieved May 16, 2006, from <http://www.lib.uni.com/dissertations/fullcit/3073547>.
- Armbruster, B., Anderson, T., & Ostertag, J. (1987). Does text structure/ summarization instruction facilitate learning from expository text? *Reading Research Quarterly*, 22 (3), 331–346.
- Baker, L., & Brown, A.L. (1984). Metacognitive skill and reading. In R. Barr, M.L. Kamil & P. Mosenthal (Eds.). *Handbook of reading research* (vol 2, pp. 353–364). NY: Longman.

- Billingsley, B.S., & Wildman, T.M. (1988). The Effects of Pre-reading Activities on the Comprehension Monitoring of Learning Disabled Adolescents. *Learning Disabilities Research, 4* (1), 36–44.
- Block, E.L. (1992). See how they read: Comprehension monitoring readers. *TESOL Quarterly, 26*, 319–343.
- Borokowski, J.G., Carr, M., Rellinger, L., & Pressley, M. (1990). Self regulated cognition: Interdependence of metacognition, attributions and self esteem. In B.J. Jones & L. Idol (Eds.). *Dimensions of thinking and cognitive instruction* (pp. 53-92). Hillsdale, NJ: Erlbaum.
- Brown, A.L. (1980). Metacognitive development and reading. In R. Spiro, B. Bruce & W. Brewer (Eds.). *Theoretical issue in reading comprehension*. Hillsdale, NJ: Erlbaum.
- Bruce, M.E., & Robinson, G.L. (2004). Clever kids: a metacognitive and reciprocal teaching program to improve both word identification and comprehension for upper primary readers experiencing difficulty. *Australian Journal of Learning Disabilities, 9* (3), 19–33.
- Carrell, P.L. (1989). Metacognitive awareness and second language reading. *Modern Language Journal, 73*, 120–133.
- Carrell, P., Pharis, B.G., & Liberto, J.C. (1989). Metacognitive strategy training for ESL reading. *TESOL Quarterly, 23* (4), 646–678.
- Carter, C. (1997). Why reciprocal teaching? *Educational Leadership, 54* (6), 64-71.
- Chandavimon, M. (1998). Reading Comprehension: An active Engagement or a Passive Experience? *PASAA, 28*, 31–42.

- Clark, L. (2003). *Reciprocal teaching strategy and adult high school students*.
Published master research, Kean University, United States. Retrieved
September 10, 2006, from <http://www.eric.ed.gov>.
- Clark, F.K., & Graves, F.M. (2005). Scaffolding students' comprehension of text.
The Reading Teacher, 58 (6), 570–581. Retrieved April 2007 from
<http://www.proquest.umi.com.library.ecu.edu.au>.
- Cohen, A.D. (1998). *Strategies in learning and using a second language*. Essex:
Longman.
- Cotterall, S. (1990). Developing reading strategies through small-group interaction.
RELC Journal, 21, 55–69.
- Danuwong, C. (2006). *The role of metacognitive strategies in promoting learning
English as a foreign language independently*. Ph. D. Dissertation unpublished,
Edith Cowan University, Perth, Western Australia.
- Dewitz, P., Carr, E.M., & Patbery, J.P. (1987). Effects of inference training on
comprehension and comprehension monitoring. *Reading Research Quarterly*,
12 (1), 99–119.
- Diehl, H.L. (2005). *The effects of the reciprocal teaching struggling readers*.
Published dissertation, West Virginia University, West Virginia, United
States. Retrieved December 6, 2006, from
<http://proquest.umi.com/pgdweb?did=913513241>.
- Dole, J.A., Duffy, G.G., Roehler, L.R., & Pearson, P.D. (1991). Moving from the old to
the new: Research on reading comprehension instruction. *Review of Educational
Research*, 61 (2), 239–264.

- Duffy, G. (2002). The case for direct explanation of strategies. In C. Block & M. Pressley (Eds.). *Comprehension instruction: Research-based best practices* (pp. 28–41). New York: Guilford Press.
- Fillenworth, L. (1995). Using reciprocal teaching to help at-risk college freshmen study and read. Unpublished doctoral dissertation, University of Minnesota.
- Flavell, J.H. (1987). Speculation about the nature and development of metacognition. In F.E. Weinert & R.T. Kluwe (Eds.). *Metacognition, motivation and understanding* (pp. 21–29). London: Lawrence Erlbaum Associates, Inc.
- Fraenkel, J., & Wallen, N. (2000). *How to design and evaluate research in education*. San Francisco: McGraw-Hill.
- Gavalek, J.R., & Raphael, T.E. (1996). Changing talk about text: New roles for teachers and students. *Language Arts*, 73, 182–192.
- Goodman, K. (1967). Reading: A psycholinguistic guessing game. *Journal of the Reading Specialist*, 6 (1), 126-135.
- Grabe, W. (1991). Current developments in second language reading research. *TESOL Quarterly*, 25 (3), 375–406.
- Grabe, W., & Stoller, F.L. (2002). *Teaching and researching reading*. Harlow: Pearson Education.
- Graves, M.F., Connie J., & Bonnie G. (1998). *Teaching reading in the 21st century*. Boston, MA: Allyn and Bacon.
- Graves, M.F., & Graves, B.B. (2003). *Scaffolding reading experiences: Designs for Students' success*. Norwood, MA: Christopher–Gordon.

- Greenfield, P.M. (1984). A theory of the teacher in the learning activities of every life. In B. Rogff & J. Lave(Eds.), *Every day cognition: Its development in social context* (pp. 117-138). Cambridge, MA: Harvard University Press.
- Greenway, C. (2002). The process, pitfalls and benefits of implementing a reciprocal teaching intervention to improve reading comprehension of a group of year 6 pupils. *Educational Psychology in Practice*, 18 (2), 113–138.
- Hacker, D.J. (1998). Definitions and empirical foundations. In D.J. Hacker, J. Dunlosky, & A.C. Graesser (Eds.). *Metacognition in educational theory and Practice* (pp. 277–304).
- Hacker, D.J., & Tenent, A. (2002). Implementing Reciprocal teaching in the classroom: overcoming obstacles and making modifications. *Journal Psychology*, 94 (4), 699–718.
- Hart, E.R., & Speece, D.L. (1998). Reciprocal teaching goes to college: Effects for postsecondary students at risk for academic failure. *Journal of Educational Psychology*, 90 (4), 670–681.
- Hasan, B. (1994). *The effects of the reciprocal teaching of comprehension strategies on the abilities of EFL students at Kuwait University*. Unpublished doctoral dissertation, University of Colorado.
- Hess, P.M. (2004). *A study of teachers' selection and implementation of metacognitive reading strategies for fourth/fifth grade reading comprehension from a success For All reading program perspective: Moving beyond the fundamentals*. Published Ph.D. dissertation, University of Pacific. Retrieved April 23, 2007, from <http://0-proquest.umi.com.library.ecu.edu.au/pgd.web?did=775166531>.

- Johnson, G., & Catherine, M. (1998). *Strategy training for poor reading comprehenders: Strengthening the visual code with visualizing/verbalizing versus strengthening the verbal code with reciprocal teaching*. Published Ph.D. dissertation, University of Colorado, Boulder, Colorado, United States. Retrieved April 23, 2007, from <http://0-proquest.umi.com.library.ecu.edu.au/pgd.web?did=733067551>.
- Kelly, M., Moore, D.W., & Tuck, B.F. (1994). Reciprocal teaching in a regular primary school classroom. *Journal of Educational Research*, 88, 53–61.
- Kern, R. (1989). Second language reading strategies instruction: Its effects on comprehension and word inference ability. *Modern Language Journal*, 73, 135–149.
- King, C.M., & Parent, L.M. (1999). Constructing meaning via reciprocal teaching. *Reading Research and Instruction*, 38, 169–186.
- Klingner, J., & Vaughn, S. (1996). Reciprocal teaching of reading comprehension strategies for students with learning disabilities who use English as a second language. *Elementary School Journal*, 96 (3), 275–293.
- Konpan, T. (2006). *A comparison of reciprocal teaching technique and communicative teaching technique in developing Mattayom Suksa 4 Students' Reading Comprehension*. Unpublished master dissertation, Srinakarinwirot University, Thailand.
- Lederer, J. (2000). Reciprocal teaching of social studies in inclusive elementary classrooms. *Journal of Learning Disabilities*, 33 (1), 99–107.
- Lysynchuck, L., Pressley, M., & Vye, N. (1990). Reciprocal teaching improves standardized reading comprehension performance in poor comprehenders. *Elementary School Journal*, 90 (5), 469–484.

- Malock, B. (2002). Scaffolding student talk: One teacher's role in literature discussion groups. *Reading Research Quarterly*, 37 (1), 94–112.
- Manning, H.B., & Payne, D.B. (1996). *Self talk for teacher and students*. MA: Allyn & Bacon.
- Mejang, A. (2004). *The development of an English reading strategy instruction model based on collaborative learning principles for enhancing reading learning outcomes of university students*. Unpublished doctoral dissertation, Chulalongkorn University, Thailand.
- Miller, L.D., & Perkins, K. (1990). ESL reading comprehension instruction. *RELC Journal*, 21 (1), 31–42.
- Nunan, D. (1990). *Second Language Teaching and Learning*. Boston: Heinle & Heinle Publisher.
- Nuttall, C. (1996). *Teaching reading skills in a foreign language*. Heinemann.
- O'Malley, J.M., & Chamot, A.U. (1987). The effects of training in the use of learning strategies on learning English as a second language. In A. Wenden and J. Rubin (Eds.), *Learner Strategies in Language Learning*, pp. 133–144. New York: Prentice–Hall.
- O'Malley, J.M., & Chamot, A.U. (1990). *Learning strategies in second language acquisition*. Cambridge, NY: Cambridge University Press.
- Oxford, R. (1990). Language learning strategies: a synthesis of studies with implications for strategy training. *Systems*, 17 (2), 235–257.
- Palincsar, A.S., & Brown, A.L. (1984). Reciprocal teaching of comprehension–fostering and comprehension–monitoring activities. *Cognition and instruction*, 1, 117–175.

- Palincsar, A.S., & Brown, A.L. (1985). Reciprocal teaching: Activities to promote “reading with your mind.” In T.L. Harris & E.J. Cooper (Eds.). *Reading, thinking, and concept development* (pp.147–159). New York: The collage board.
- Palincsar, A.S., & Brown, A.L. (1986). Interactive teaching to promote independent learning from text. *The Reading teacher*, 39 (8), 771–777.
- Palincsar, A.S., Brown, A.L., & Campione, J. (1989). Structured dialogues among communities of first grade learners. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California. Retrieved April 2007 from <http://www.proquest.umi.com.library.ecu.edu.au>.
- Palincsar, A.S., & David, Y.M. (1990). *Learning Dialogues for Comprehension and Knowledge Acquisition*. Paper presented at the annual meeting of the Council for Exceptional Children, Toronto.
- Paris, S.G., Cross, D.R., & Lipson, M.Y. (1984). Informed strategies for learning: a program to improve children’s reading awareness and comprehension. *Journal of Educational Psychology*, 76 (6), 1239–1252.
- Paris, S.G., & Myers, M. (1981). Comprehension monitoring, memory, and study strategies of good and poor readers. *Journal of Reading Behavior*, 13, 5–22.
- Pearson, P.D., & Fielding, L. (1991). Comprehension instruction. In R. Barr, M.L. Kamil, P. Mosenthal, & P.D. Pearson (Eds.), *Handbook of reading research* (Vol. 11, pp. 815–860). Mahwah, NJ: Erlbaum.
- Phakiti, A. (2003). A closer look at gender and strategy use in L2 reading. *Language Learning*, 53, 649–702.

- Piyanukool, S. (2001). Effects of teaching reading through discussion of text structures. *UMI Pro Quest Digital Dissertations*. Retrieved May 16, 2006, from <http://www.lib.uni.com/dissertations/fullcit/3073547>.
- Pressley, M. (2002). Metacognition and self-regulated comprehension. In A.E. Farstrup, & S. Samuels (Eds.), *What research has to say about read instruction* (pp. 291–304). Newark, DE: International Reading Association. Retrieved January 15, 2006, from <http://www.reading.org>.
- Pullella, A. (1990). *Reciprocal teaching of reading comprehension: Implementation, teaching induction, and appraisal*. Unpublished thesis, Murdoch University, Perth, Australia.
- Ratanakul, S. (1998). *An experimental study of the use of the reciprocal teaching technique in teaching English reading comprehension*. Unpublished master dissertation, Faculty of Graduate Studies, Mahidol University, Thailand.
- Roehler, L.R., & Duffy, G.G. (1991). Teachers' instructional actions. In R. Barr, M.L. Kamil, P.B. Mosenthal, & P.D. Pearson (Eds.), *Handbook of reading research 2*, 861–884.
- Rogoff, B. (1990). *Apprenticeship in thinking*. New York: Oxford University Press.
- Rogoff, B., & Gardner, W.P. (1984). Adult guidance of cognitive development. In B. Rogoff, & J. Lave (Eds.), *Everyday cognition: Its development in social context* (pp. 134–157). NY: Cambridge University Press.
- Rosenshine, B., & Meister, C. (1994). Reciprocal teaching: A review of the research. *Review of Educational Research*, 64 (4), 479–530.
- Rosenshine, B., Meister, C., & Chapman, S. (1996). Teaching students to generate questions: A review of the intervention studies. *Review of Educational Research*, 66 (2), 181–221.

- Rumelhart, D.E. (1977). Toward an interactive model of reading. In Dornic, S. (Ed.), *Attention and Performance, V.1*, 573–603. New York. Academic Press.
- Russell, V.M. (1998). *Effects of reciprocal teaching on reading and oral language proficiency and reader self-perception of six-grade ESL students*. Unpublished Ph.D. dissertation, Fordham University, New York, United States.
- Retrieved April 23, 2007, from <http://www.proquest.umi.com.library.ecu.au/pgdweb?did=736654861>.
- Salataci, R., & Akyel, A. (2002). Possible effects of strategy instruction on L₁ and L₂ reading. *Reading in a Foreign Language*, 14 (1), April. Retrieved April 2006, from <http://www.proquest.umi.com.library.ecu.edu.au>.
- Smith, W.E. (1998). *Reciprocal teaching of comprehension fostering and monitoring strategies in a ESL setting in Ghana*. Unpublished Ph.D. dissertation, Ohio University, Ohio, United States. Retrieved April 10, 2007, from <http://www.proquest.umi.com.library.ecu.edu.au/pgdweb?did=736847171>.
- Song, M.J. (1998). Teaching reading strategies in an ongoing EFL university reading classroom. *Asia Journal of English Language Teaching*, 8, 41–54.
- Soonthornmanee, R. (2002). The effect of the reciprocal teaching approach on the reading comprehension of EFL students. *RELC*, 33 (2), 125–141.
- Soranastaporn, S., & Ratanakul, S. (2000). An experimental study of the use of grammar translation and the reciprocal teaching technique in teaching English reading comprehension. *SLLA Studies in Language and Language teaching*, 9, 1–17.
- Speece, D.L., & Hart, E.R. (1998). Reciprocal teaching goes to college: Effects for postsecondary students at risk for academic failure. *Journal of Educational Psychology*, 90, 670–681.

- Stanovich, K. (1980). Concept of Developmental theories of reading skills: Cognitive resources, automaticity, and modularity. *Developmental Review, 10*, 72-100.
- Stevens, R.J., Slavin, R.E., & Farnish, A.M. (1991). The effect of cooperative learning and direct instruction in reading comprehension strategies on main idea identification. *Journal of Educational Psychology, 83*, 8–16.
- Todd, R.B., & Tracey, C.H. (2006). *Reciprocal teaching and comprehension: A single subject research study*. Published master Thesis, Kean University, United States. Retrieved April 15, 2007, from <http://www.eric.ed.gov>.
- Vacca, R.T., & Vacca, J.A.L. (1989). *Content area reading* (3rd ed.) (pp. 216–255). Glenview, IL: Scott, Foresman.
- Vygotsky, L.S. (1978). *Mind in Society: The development of the higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wang, D.Q. (2003). Metacognitive Strategy Training and Learner Autonomy. *Teaching English in China, 26*, 43–46.
- Weedman, D.L. (2003). *Reciprocal teaching effects upon reading comprehension levels on students in 9th grade*. Published dissertation, Spalding University, Kentucky, United States. Retrieved April 20, 2007, from <http://proquest.umi.com.library.ecu.au/pgdweb?did=765181531>.
- Wenden, A.L. (1999). An introduction to metacognitive knowledge and beliefs in language learning: beyond the basics. *Systems, 27*, 43–441.
- Westera, J., & Moore, D. (1995). Reciprocal teaching of reading comprehension in a New Zealand high school. *Psychology in the Schools, 32* (3), 225–232.
- Wilensky, W.W. (1990). *Teaching and Learning through discussion*. NY: Charles C. Thomas, Publisher.

- Wisaijorn, P. (2003). *Teaching reading comprehension to Thai EFL students: Reciprocal Teaching Procedure*. Unpublished thesis, University of Canberra, Canberra, Australia. Retrieved April 21, 2007, from <http://adt.caul.edu.au/homesearch/find/?recordid=131086>.
- Wiseman, D.L. (1992). *Learning to Read with Literature*. NY: Allyn and Bacon.
- Zabrucky, K., & Ratner, H.H. (1992). Effects on reading ability on children's comprehension evaluation and regulation. *Journal of Reading Behavior*, 21 (1), 69–83.

APPENDIX

**Appendix A The International English Entrance
Examination 2004 (Pretest and Posttest)**

PRETEST POSTTEST

READING COMPREHENSION TEST ITEMS: 35 TIMES: 50

Direction: Read the following passages and choose the best alternative to answer each question.

PASSAGE 1

Two men were arrested by the police after they had sold a stolen painting to an art gallery in Guildford. The owner of the gallery claimed that he had bought the painting in good faith, unaware that it had been stolen. The painting, a portrait of a young woman in a wide brimmed straw hat sitting under a tree, was owned by Marie Gilles, aged 84. She claimed that the painting had been given to one of her ancestors by the artist. She had owned it since 1950 when it was given to her by an aunt as a wedding present. The painting had been stolen from her house two weeks previous to the arrest of the two men.

1. From the information given in the text, we know that Marie Gilles _____ .
 - a. had been married
 - b. knew the owner of the gallery
 - c. was grateful to the police
 - d. did not value the painting highly
2. The owner of the art gallery said that he bought the painting _____ .
 - a. because he was related to the artist
 - b. because he knew the woman in the painting
 - c. not knowing it had been stolen
 - d. not knowing its true value
3. The young woman in the painting was _____ .
 - a. Marie Gilles as a young woman
 - b. an ancestor of Marie Gilles
 - c. an unknown person
 - d. about to get married
4. The passage tells us that the painting is _____ .
 - a. very famous
 - b. very valuable
 - c. an oil painting
 - d. a portrait

PASSAGE 2

As soon as I got to the closed door of the barn, I realized that something was wrong. Instead of the chewing noise of the dairy herd that at night sheltered there during the winter months, there was silence. I undid the lock that kept the huge doors firmly shut, pulled them open and shone my flashlight into the cavernous interior. Apart from some bales of hay, it was empty.

5. Which of the following words used in the text indicates the size of the barn?
 - a. interior
 - b. sheltered
 - c. empty
 - d. cavernous
6. From the text we learn that at night in winter _____ .
 - a. the barn is usually empty
 - b. cows are usually kept in the barn
 - c. all the farm animals shelter in the barn
 - d. a light is kept on in the barn
7. From the information given, it is implied that the barn doors _____ .
 - a. open outwards
 - b. open inwards
 - c. open automatically
 - d. are kept open
8. From writer realized that the situation was not normal when he _____ .
 - a. unlocked the door
 - b. shone his flashlight into the barn
 - c. saw the bales of hay
 - d. was outside the barn
9. The writer expected to hear the noise of animal's _____.
 - a. fighting
 - b. sleeping
 - c. running
 - d. eating

PASSAGE 3

Do you love to sleep late on the weekends? Don't touch that snooze button. "Sleeping late on weekends and during vacations is one of the most common causes of headaches." says Jams Dexter, M.D., professor at the University of Missouri-Columbia School of Medicine. "The body gets used to a certain circadian rhythm, and just the slightest change can throw things off and cause a headache." You're better off going to bed and awakening at the same time every day."

Just try to get up at the same time that you would on a weekday morning. You might feel groggier throughout the day, but at least you'll stay pain free. If you go to bed at your usual time that night and rise at the usual time, you should feel like your old self again.

For confirmed coffee drinkers, sleeping late on weekends can pack a double punch: You'll get too much sleep and delay your first cup of coffee (a headache is a common symptom of caffeine withdrawal). Of course, doctors advise you to give up the caffeine altogether, particularly if you tend to get headaches. But if you have to hit the java, at least make sure that you do it around the same time each day.

Some women are actually awakened in the middle of the night by headaches. Nocturnal headaches often occur during the brain's passage from slow-wave sleep to its most active REM (Rapid Eye Movement) sleep. Serotonin levels are thought to drop during this transition period, and in some people, it's believed that this change brings on the pain. Certain medications that interrupt slow-wave sleep and decrease REM sleep will also clear up distress.

"At least fifty percent of people with sleep-associated headaches can find relief without using medication," says Dr. Dexter. "In addition to regulating your sleep schedule and avoiding alcohol and caffeine, make sure you practice good sleep habits: Don't eat or exercise less than two hours before bedtime; remove anything noisy - - TV, radio - from the bedroom and sleep in a dark, cool room."

10. The best advice for avoiding a headache on weekends is _____ .
 - a. staying up late and going out dancing on weekends
 - b. enjoying yourself at night after working hard all day
 - c. getting up and going to bed at the same time as weekdays
 - d. getting and staying up late on weekends
11. If you are a caffeine-addict, you could avoid getting a morning headache by ____ .
 - a. skipping your first cup of coffee
 - b. drinking coffee at your usual time
 - c. drinking coffee as soon as you get up
 - d. sleep disorders

12. The word “groggy” (paragraph 2) Means _____ .
 a. happy b. lively c. moody d. sleepy

PASSAGE 4

As far as naturalists are concerned, the great value of wildflowers is in perpetuating the species, in contributing their very presence to the environment in which they play an integral part, though their particular function may not be well understood, even by botanists where certain habitats have been disturbed by the construction of dams or human habitations or by the cultivation of land farms and forestry, some flowers altogether. It is important, therefore, for amateur naturalists to leave such plants where they are, rather than to pick them or attempt to transplant them to their own gardens. Some wildflowers make lovely garden plants and are easy to grow -- daisies, violets, and buttercups are especially popular and are not all endangered in the wild -- and a pretty wildflower garden can turn any backyard into a showplace. But it is always best to purchase the seeds from a commercial nursery or seed catalog company rather than try to collect flowers from nature. It is not always easy to reproduce growing conditions in which the plant will feel at home, and it would be a shame to risk the loss of a wildflower in this experimental way.

A popular pastime for flower lovers in the days before wildflower was considered a natural treasure was to collect and press them. Some enthusiasts would fill entire albums or create handsome dried collages or arrangements, and even today such objects are admired for their beauty. But again, because of the rarity of some flowers and the simple fact that living flowers are always more beautiful than dead ones, collecting them is not recommended. The best ways to bring wildflowers home are through your own photographs or by sketching or painting them on the spot and then displaying your artwork.

13. According to the passage, one knows _____ , the specific role that Wildflowers play in the environment.
 a. immensely b. precisely c. vaguely d. thoroughly

14. What one can conclude from the passage is that _____ .
- a. daisies are not an endangered species since they are also garden plants
 - b. the presence of wildflowers in their environment help improve the wild.
 - c. wildflower seeds, as well as their flowers, can be purchased from a commercial nursery
 - d. some wildflowers become endangered species or even extinct because of man.
15. This passage is aimed largely at _____ .
- a. artists
 - b. botanists
 - c. homemakers
 - d. flower lovers
16. The message the writer gives about wildflower is _____ .
- a. move them but don't plant them
 - b. paint them but don't pick them
 - c. press them but don't sketch them
 - d. grow them but don't buy them

PASSAGE 5

Ever wished you could decide what to dream at night? A Japanese toymaker says it has a new gadget that can help you do just that.

Tokyo-based Takara Company says that its “Dream Workshop” and – shaped like an oversized cellular phone dock and about 14 inches tall – can be programmed to help sleepers choose what to dream.

While preparing for bed, the user mounts a photograph on the device of who should appear in the dream, selects music appropriate to the mood – fantasy, comedy, romantic story, nostalgia – and records key word prompts, such as the name of a romantic crush.

Placed near the bedside, the dream – maker emits a special white light, relaxing music and a fragrance to help the person nod off.

Several hours later, it plays back the recorded word prompts, timed to coincide with the part of the sleep cycle when dreams most often occur. It then helps coax the sleeper gently out of sleep with more light and music so that the dreams are not forgotten.

The device targets sleep – deprived businessmen, a company official said. “There are many businessmen today who say they don’t sleep because they are too busy. This gadget can be used to help them dream a good dream,” said Takara spokeswoman Mayuko Hasumi.

In a study conducted on a group of men and women between the ages of 20 – 40, the device had a success rate of 22 percent in inducing dreams in which one of the prompt words appeared.

17. What is the main idea of this passage?
 - a. to report success in controlling a human’s mind
 - b. to show how a new gadget help us select our dreams
 - c. to reveal that technology can help solve the business dilemma
 - d. to point out that technology can do anything beyond imagination
18. What is the most suitable headline for this article?
 - a. No More Insomnia
 - b. The Dream – Maker Device
 - c. The Wonder of Technology
 - d. Technology Can Serve All our Needs
19. What did Takara Company call its new gadget?

a. Dream Catcher	c. Dream Machine
b. Dream Chooser	d. Dream Workshop
20. What does the user have to do with a photograph in order to operate the device?

a. press it on	c. present it on
b. attach it on	d. click it on
21. What mode should a person who wants an alien to appear in his-her dream select?

a. fantasy	c. western
b. comedy	d. romance
22. What would be the target group of the new device?

a. teenagers	c. businessmen
b. toymakers	d. company officials

Part of music's power comes from its ability to relieve anxiety, which can suppress immune defenses as well as intensify the experience of pain. Music, especially singing, takes a person's mind off the suffering and soothes tension. "By helping patients relax, music eases pain and may even speed recovery," says Richard Fratianne, Professor of Surgery at Case Western Reserve University.

26. What would be the best title for this article?
- a. A Beautiful Song
 - b. The Healing Power of Music
 - c. The Music that A Child Loves
 - d. The Problems of Autistic children
27. According to the article, which groups of people have been treated with music-therapy?
- a. Burn victims
 - b. People with sleep problems
 - c. Heart-disease patients
 - d. Children with hearing problems
28. Which of the following describes Adam?
- a. Enjoying talking alone
 - b. Having difficulties with speaking
 - c. Getting along well with other people
 - d. Feeling depressed and sad most of the time
29. What is the effect of music-therapy on cancer patients?
- a. Fewer cancer cells
 - b. Longer recovery period
 - c. Better hormones
 - d. Stronger immune systems
30. Which of the following can be concluded from the passage?
- a. Music can keep you in good health.
 - b. Music therapy is the most effective treatment.
 - c. Music can be used as an alternative treatment.
 - d. It is necessary for doctors to study music therapy.
31. Which technique was used to help Adam speak?
- a. Plying with him.
 - b. Allowing him to self-study.
 - c. Encouraging him to join in activities
 - d. Mixing music with conversation for him.

32. How did the author feel when he said, "Believe me, that's music to my ears."?
- a. sad b. angry c. happy d. indifferent
33. According to Richard Fratianne, how can music help people in pain?
- a. It affects people's mind.
b. It affects people's way of life.
c. It affects people's appearance.
d. It affects people's physical conditions.
34. What happened to Adam after he tried music-therapy?
- a. He was afraid of strangers. b. He barely spoke with anyone.
c. He became a talkative child. d. He started to speak to people
35. Which of the following helps patients with anxiety the most?
- a. singing b. playing instruments
c. beating out rhythms on drums d. looking at strangers in the eyes

Appendix B Reading Strategies Questionnaire

(RSQ)

Reading Strategies Questionnaire

Direction: Respond to the following statements about your reading strategies you employ on your reading by ticking (✓) in the appropriate number (s). There is no right or wrong answers: answer honestly in terms of your own reading experiences.

1. What did you do before reading?

No	Before reading	1	2	3	4	5
1	I used titles and subtitles (if any) to predict the content of the text.					
2	I used pictures (if any) to predict the content of the text.					
3	I determined what the reading instruction or exercise questions required me to do.					

2. What did you do while reading?

No	While reading	1	2	3	4	5
4	I predicted what would happen next while I was reading.					
5	I checked whether my prediction about the text were right or not					
6	I used my own English structure knowledge to comprehend the text.					
7	I used my personal experience (what I have already known) to help me understand the text.					
8	I was aware of which strategy to use and how to use it when I faced the problems in reading.					

No	After reading	1	2	3	4	5
9	I tried to find topic and main ideas by skimming.					
10	I guessed the meaning of the important new words from the context by reading on or looking back.					
11	I ignored the meaning of the unimportant new words from the context.					
12	I selected relevant information to help me understand the texts.					
13	I related important points in text to one another to understand the text as a whole.					
14	I re-read the relevant information if I do not understand the passage.					
15	I underlined the main ideas or make notes for important points..					
16	I made a mental or written summary of information presented in the reading text.					
17	I tried to find the information for reading comprehension by scanning.					

3. What did you do after reading ?

No	After reading	1	2	3	4	5
18	When I started to complete the exercise, I planned how to do it and follow the plan.					
19	I checked whether I had achieved the reading task successfully by reading some parts of the text again.					
20	I used all the relevant information to help me answer the questions.					

(Adapted from reading strategies Questionnaire by Phakiti, 2003 & Anderson, 2003)

Appendix C Reading Think Aloud Sheet

Reading Think Aloud Sheet

Name: _____

Title: _____

<p>Prediction: Before you begin to read the selection, look at the title or cover, scan the pages to read the major heading, and look at any illustrations. Write down your prediction (S).</p>	
<p>Prediction:</p>	<p>Support:</p>
<p>Main Ideas: As you finish reading each paragraph or key section of text, identify the main idea of that paragraph section.</p>	<p>Questions: For each main idea listed, writ down at lest one question.</p>
<p>Main Ideas 1:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Question for paragraph 1:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Main Ideas 2:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Question for paragraph 2:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Main Ideas 3:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Question for paragraph 3:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Main Ideas 4:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Question for paragraph 4:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Main Ideas 5:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Question for paragraph 5:</p> <p>_____</p> <p>_____</p> <p>_____</p>

<p>Main Ideas 6:</p> <hr/> <hr/> <hr/>	<p>Question for paragraph 6:</p> <hr/> <hr/> <hr/>
<p>Main Ideas 7:</p> <hr/> <hr/> <hr/>	<p>Question for paragraph 7:</p> <hr/> <hr/> <hr/>
<p>Main Ideas 8:</p> <hr/> <hr/> <hr/>	<p>Question for paragraph 8:</p> <hr/> <hr/> <hr/>
<p>Main Ideas 9:</p> <hr/> <hr/> <hr/>	<p>Question for paragraph 9:</p> <hr/> <hr/> <hr/>
<p>Main Ideas 10:</p> <hr/> <hr/> <hr/>	<p>Question for paragraph 10:</p> <hr/> <hr/> <hr/>
<p>Main Ideas 11:</p> <hr/> <hr/> <hr/>	<p>Question for paragraph 11:</p> <hr/> <hr/> <hr/>
<p>Summarize: Write a brief summary of what you read.</p>	

<p>Clarify: Copy down words, phrases, sentences, or references in the passage that are unclear. Then explain how you clarified your understanding.</p>	
<p>Word or Phrase of Reference;</p>	<p>How to clarify:</p>

Reading Think Aloud Sheet

Name / Class / Number _____

Title: _____

<p>Prediction: Before you begin to read the selection, look at the title or cover, scan the pages to read the major heading, and look at any illustrations. Write down your prediction (S).</p>	
<p>Prediction:</p>	<p>Support:</p>
<p>Main Ideas: As you finish reading each paragraph or key section of text, identify the main idea of that paragraph section.</p>	<p>Questions: For each main idea listed, writ down at lest one question.</p>
<p>Main Ideas 1:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Question for paragraph 1:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Main Ideas 2:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Question for paragraph 2:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Main Ideas 3:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Question for paragraph 3:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Main Ideas 4:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Question for paragraph 4:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Main Ideas 5:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Question for paragraph 5:</p> <p>_____</p> <p>_____</p> <p>_____</p>

Summarize: Write a brief summary of what you read.	
Clarify: Copy down words, phrases, sentences, or references in the passage that are unclear. Then explain how you clarified your understanding.	
Word or Phrase of Reference;	How to clarify:

Appendix D Interview Questions

Interview Questions

1. What is your planning before you read?
2. Do you think predicting can help you improve your reading? Why?
3. While you are reading, what do you plan to do?
4. What are more important the main idea or supporting details? How do you find it?
5. Do you think questioning can help you improve your reading?
How do you use questioning strategy?
6. Do you think clarifying strategy can help you improve your reading? How do you use clarifying strategy?
7. While you are reading, do you have other approach to help you besides predicting, questioning, and clarifying?
8. While reading, do you evaluate yourself? How?
9. When you do not understand the passage, what will you do?
10. After reading, do you think summarizing help you comprehend the passage?

How do you summarize the passage you have read?

**Appendix E Sample of Lesson Plans of the Experimental
Group and the Control Group**

LESSON PLAN 1
(Experimental Group)

OBJECTIVE

Students will be able to describe what the four key strategies are and how to use them.

CONTENT

- 1 The reciprocal teaching approach consists of two main features. The first feature includes four strategies (summarizing, generating questions, predicting, and clarifying) that help readers develop their reading comprehension. The second feature of the reciprocal approach is called scaffolding. Scaffolding is an instructional process in which a teacher acts as a model of reading to help students read. That is, before students are ready to read, will be taught to what the four strategies are and they will also participate using these four strategies.
- 2 There are four key strategies that readers use when they meet with problems while reading. These four key strategies are summarizing, clarifying, questioning and predicting. In the summarizing process, students will be taught to identify the most important ideas or the main idea of a text. In the generating questions process, students will be taught to construct questions related to the main idea or the important information of a text. This process will help readers check their understanding of the text being read. In the process of making predictions, students will be taught to link their background knowledge (schemata) to the new information or the knowledge found in the text, and will be taught to find some clues in the text to predict what it is about. In the clarification process, students will be taught to restore meaning by using context clues when there is comprehension breakdown or confusion.

MATERIALS:

1. Handout on “*Four Key Strategies*”
2. Reading No. 1, “*Can We Ever Communicate*”

INSTRUCTIONAL ACTIVITIES**Procedures****Pre-instruction stage****Min Step**

- 5 1. Ask students what reading strategies they use when they have reading problems. Students discuss and share their ideas.
- 5 2. Lead the students to four key strategies of reciprocal approach: predicting, questioning, clarifying and summarizing. Ask students roughly what they know on each strategy.

Instruction stage**Prediction Strategy****Min Step**

- 5 1. Students read the first strategy on Handout2 silently. Ask them what prediction is, what they should do to help them predict what the text is about, and what they use to help them make a prediction of the text. Then the teacher make a conclusion.
- 15 2. Students practice prediction on exercise: predicting from the picture, predicting form the title, and predicting from the main point. Then check the answers. If there are some problems on the answers, students discuss with the teacher’s help.
- 5 3. Students read tip of prediction and make a conclusion the steps of prediction.

Questioning Strategy**Min Step**

- 5 1. Students read and find out what questioning is, the purpose of questioning, and how to make questions. Then students discuss to share their ideas and make conclusion by teacher’s guide.
- 5 2. Students practice asking questions on the content on example. The teacher reads the text and asks student what questions they can ask.

T : What do they in sentence 2 refer to?
 Ss : Camels.

T : What can camels do?
 Ss : They can carry goods and people.

T : How long it may take for camels to cross desert?

Ss : About two months.

- 5 3. Students discuss and conclude the technique to make the questions.
 5 4. Students work in pair or small group and practice making question on Reading 1 “Can We Ever Communicate?” paragraph by paragraph. Then check the answers.

Clarifying Strategy

Min Step

- 5 1. Students read “clarification” and discuss. Then the teacher makes a conclusion.
 5 2. Explain the students how to clarify the references. Then students do the example with the teacher’s help from 1.1 – 1.7.
 10 3. Explain the students how to clarify vocabulary by using context clues and word formation. Then students practice clarifying vocabulary on example 1 – 3 with the teacher’s help.

Summarizing Strategy

Min Step

- 5 1. Read and discuss what “summarizing” is, how to find main ideas, and how to write summarizing.
 5 8. Practice how to find main ideas from the passage on exercise 1.
 10 9. Practice how to find main ideas and write summarization on exercise 2.

Post-instruction stage

Min Step

- 10 10. Review what has been studied.

Assignments

Make a conclusion (either in Thai or English) of the four key strategies.

FOUR KEY STRATEGIES

Prediction

Prediction involves finding clues by using your own background knowledge and personal experiences. The purpose is to link between what you have already known about the topic and the new knowledge you are about to acquire through reading and to keep the reader actively thinking and on task reader is reading. Title and graphic are the clues to start predicting what the texts about. As reading proceeds, find clues in the text to make predictions. There are three ways for predicting: predicting from the picture, predicting from the title, and predicting from the main points.

I Predicting from the picture



Look at the picture and then answer some questions to help you predict the ideas that could be introduced the passage.

- 1) Why do you go here?
- 2) How do you go?
- 3) What will you do during the day?
- 4) What will you do in the evening?
- 5) How will you feel when you are back home?

II Predicting from the title

Look at the title from a magazine article, which of the following ideas would you find in this article. Then discuss with your friends on the answers.

Perth: A Good Place to Study

- _____ 1. Perth is a dangerous place
- _____ 2. There are good universities in Perth.
- _____ 3. The education system in Perth is very bad.
- _____ 4. People are friendly in Perth.
- _____ 5. People like to walk and jog in the city parks.

III Predicting from the main points.

HOW CAN PEOPLE COMMUNICATE WITH ANIMALS?

People have been talking with animals ever since prehistoric times, when we first began to work with horses and dogs. But it is impossible to teach animals to use human language. Animals do not have the right kind of vocal organs needed for speaking human languages. What can we do so that we can communicate with animals?

- 1) What is your prediction when you read the title?

- 2) Skim the first paragraph; Who is the passage about?

- 3) Read the last sentence; What is your prediction for the next paragraph?

Tip. For the prediction strategy, first you read the title and figure out what the passage is about and you can also look at the subheadings and pictures, if any. Secondly, read the first paragraph by skimming (picking out what you think they are main ideas). Don't pay your attention on every word. While reading you can predict

what is going on next. Finally, you can predict the next paragraph from the contents of the paragraph you are reading.

Questioning

Questions are constructed to ask about the main idea or the important formation of the text. The purpose of this strategy is to test whether the reader understands the text read and to help the reader identify important information in the text. Some useful question words are who, what, when, where, why, and how. For example, what is happening? “Why is this happening?”

Example

Camels have been helpful to people who live in deserts for thousands of years. They have carried people as well as their goods on their backs. They are able to cross deserts and mountains on trips that may take two months.

Questions _____

Exercise 1 Read these paragraphs and ask the questions.

Can We Ever Communicate?

In the past, most people couldn't communicate with other people around the world because of time, distance, and their different languages. But as the 20th century closes and the 21st century begins, new machines and inventions help us to communicate with each other.

Questions _____

Think about life before modern communications. Until the 15th century, most people communicated only face-to-face or by handwritten letter. Books were made by hand, so they were rare and expensive. But after the printing press was invented, authors could tell their ideas to thousands of readers, cheaply and quickly.

Questions _____

Since the 19th century, sending messages has become easier and faster. First, Samuel Morse invented the telegraph in 1844. By sending simple clicking sounds over a wire, people could communicate between faraway places-instantly.

Questions _____

Then, after the telegraph, the telephone was invented in 1876. People could speak to each other from far away, using their own voices. Later came radio-one person could speak or sing to millions of listeners at the same time. After that, television allowed millions of people everywhere to see and hear the same pictures at the same time.

Questions _____

In the 1960s, satellites helped build a global communications network. Now we have audio cassettes, video cassettes, computers, e-mail, TELEX and FAX machines, too. And many people log on to the "Web." In fact, we have everything we need for instant worldwide communication-except one single language!

Clarification

Clarifying occurs when there are comprehension breakdowns or confusions and the reader attempts to restore meaning. For example, the reference terms are unclear,

difficult or unfamiliar vocabulary is. To help the reader to understand the text, you should look for some signals: that is, or, in other words, such as, and for example. These signals may be in the previous or the next sentences. There are two ways for clarifying: reference and vocabulary.

1. Reference

1.1 Personal ***pronoun***: I, You, We, They, He, She, It and me, you, us, the, him, her, it.

Example Mangoes are sweet when they are ripe.

They refers to _____.

1.2 Demonstrative: this, that, these, those.

Example The doctor prescribed the wrong drug. This nearly cost the patient's life.

This refers to _____ .

1.3 Indefinite ***pronoun***: Some, all, both, each, many, more, most, others.

Example Twenty candidates applied for the job. One was successful while The others failed.

One refers to _____ .

The others refers to _____ .

1.4 Relative Pronoun: Who, whom, whose, which, and that

Example This is why Mark is active about many things which he knows to be unimportant.

Which refers to _____ .

1.5 Adverb of time

Example It was 10 years ago when I met Jennie and she was a little girl then.

Then refers to _____ .

1.6 Adverb of place

Example Two years ago he visited his friend who worked in Sukhothai.

There he met his twin brother.

There refers to _____ .

1.7 Super – ordinate

Example Mr. Pike finally came in sight. The man looked very tired.

The man refers to _____ .

2. Vocabulary

There are two ways to help you clarify the unknown vocabulary: word formation and context clue.

1. The poor boy knows what he wants to say but he just cannot **articulate it**.

articulate = _____

clues = _____

2. I wonder how you can **extol**, or praise, such sloppy work.

extol = _____

clues = _____

3. Bob enjoys **aquatic** sports such as swimming and sailing.

aquatic = _____

clues = _____

Exercise 1. Read the following paragraphs and clarify each reference word.

1. Teaching methods in nursery schools differ from **those** of elementary and high schools. The children in nursery schools spend most of **their** time playing or in activities **they** have chosen instead of doing work assigned by the teacher. The classroom of a nursery school also looks different. Instead of rows of chairs and desks, **it** has areas called activity centers. **Each** has different equipment and materials for the children to use.

those = _____ their = _____

they = _____ it = _____

Each = _____

2. As **its** name suggests, shorthand is a shortened form of writing for speedily recording the spoken word. Shorthand was employed as early as the first century BC when Marcus Tiro, secretary to Cicero, the Roman orator, invented **his** own system **that** soon came into general use. Today the two best known systems are Pitmen and Gregg, in **which** symbols are used to represent the sounds of words or entire phrases.

its = _____ his = _____

that = _____ which = _____

Exercise 2 Write down the meaning and the clues of each bold word.

1. In several parts of this country there were two financial extremes: from **penury** to great wealth.

penury = _____

clues = _____

2. Jack is usually **loquacious**, but today he's rather silent.

loquacious = _____

clues = _____

3. The government must ensure that the people are supplied with **transport facilities**: planes, trains, buses, cabs and ferries.

transport facilities = _____

clues = _____

4. A helpful context clue is **an antonym** – a word which means opposite to the unfamiliar word.

An antonym = _____

clues = _____

5. **Carnivores**, or animals that mainly eat meat, are also hunted for leather.

Carnivores = _____

clues = _____

6. The writer suggests **two basic rapid-reading techniques**: scanning and skimming.

Two basic rapid-reading techniques = _____

clues = _____

7. **Citrus fruits** (juicy and sharp-tasting fruits) such as oranges, lemons and grapefruits grow in warm or hot countries.

Citrus fruits = _____

clues = _____

8. **Amphibians** are animals that live two kinds of life: the first part in the water and the latter part mostly on land.

Amphibians = _____

clues = _____

9. The main idea may be stated in **part of a sentence**-that is, in a clause or in phrase.

Part of a sentence = _____

clues = _____

10. Some birds such as the **condor** – a large South American bird-eat the meat of dead animals.

condor = _____

clues = _____

Summarization

A summary consists of one or two sentences. It identifies the most important ideas/main idea of the passage. A good summary does not include details that are not important. Summarization is used to help you to understand the main ideas of the text in order to comprehend the whole pictures of what you have read and to guide you for your further reading. You should think of what the paragraph/text is mostly about. Find a topic sentence and construct a sentence that reflects the most important information in the paragraph.

The main idea of a paragraph is usually stated by one of the sentences in the paragraph. The main idea sentence is commonly known as “a topic sentence” or “topic statement.” It may appear in one of several places in the paragraph. *Most frequently the first sentence of a paragraph states the main idea.*

Exercise Read the following paragraph and make note of the main idea for each paragraph.

1. In the 1960s, satellites helped build a global communications network. How we have audio cassettes, video cassettes, computers, e-mail, telex and fax machines, too. And many people log on to the “Web.” In fact, we have everything we need for instant worldwide communication-except one single language!

Main idea: In the 1960s, satellites helped build a global communications network.

However, the main idea sentence may also appear in other places: in the middle or at the end of a paragraph.

2. “We are slaves to nothing but the clock,” it has been said. Time is treated as if it were something almost real. We budget it, save it waste it, steal it, kill it, cut it, and account for it; we also charge for it,. It is a precious resource. Many people have a rather acute sense of the shortness of each lifetime. Once the sands have run out of a person’s hourglass, they cannot be replaced. We want every minute to count.

Main idea: It (= Time) is a precious resource.

In this paragraph, the main idea appears in the middle of the paragraph.

3. Americans believe no one stands still. If you are not moving ahead, you are falling behind. This attitude results in a nation of people committed to researching, experimenting and exploring. Time is one of the two elements that Americans save carefully, the other being labor.

Main idea: Time is one of the two elements that Americans save carefully, the other being labor.

In this paragraph, the main idea appears at the end of this paragraph.

4. When a volcano erupts, melted rock, steam, and ashes are forced through the top of the mountain. The area around the volcano is sprayed with ashes and boiling liquid called lava. Trees and buildings in its path are destroyed. Wildlife and people are killed.

Main idea: When a volcano erupts, it destroys both land and people surrounding it.

Please notice that sometimes there is no sentence in the paragraph which directly states the main idea. That doesn’t mean that there isn’t main idea in the paragraph, only the main idea is implied. In these cases you have to write a sentence to sum up the main idea of the paragraph.

Exercise 1 Read these paragraphs and make note of the main idea for each paragraph.

1. In the past, most people couldn’t communicate with other people around the world because of time, distance, and their different languages. But as the 20th century closes and the 21st century begins, new machines and inventions help us to communicate with each other.

Main Idea:

Think about life before modern communications. Until the 15th century, most people communicated only face-to-face or by handwritten letter. Books were made by hand, so they were rare and expensive. But after the printing press was invented, authors could tell their ideas to thousands of readers, cheaply and quickly.

Main Idea:

Since the 19th century, sending messages has become easier and faster. First, Samuel Morse invented the telegraph in 1844. By sending simple clicking sounds over a wire, people could communicate between faraway places-instantly.

Main Idea:

Then, after the telegraph, the telephone was invented in 1876. People could speak to each other from far away, using their own voices. Later came radio-one person could speak or sing to millions of listeners at the same time. After that, television allowed millions of people everywhere to see and hear the same pictures at the same time.

Main Idea:

In the 1960s, satellites helped build a global communications network. Now we have audio cassettes, video cassettes, computers, e-mail, TELEX and FAX machines, too. And many people log on to the "Web." In fact, we have everything we need for instant worldwide communication-except one single language!

Main Idea:

Exercise 2 Summarize the whole above text.

.....

.....

.....

.....

.....

.....

.....

.....

Assignments

Make a conclusion (either in Thai or English) of the following topics.

1. What is predicting? When do you use prediction? How do you use it?
And how can it help you improve your reading?
2. What is questioning? When do you use questioning? How do you use it?
And how can it help you improve your reading?
3. What is clarification? When do you use clarification? How do you use it?
And how can it help you improve your reading?
4. What is summarizing? When do you use summarizing? How do you use it?
And how can it help you improve your reading?

LESSON PLAN 2

(Experimental Group)

OBJECTIVE:

Students will be able to understand and know when and how to use the four key strategies from teacher's model.

CONTENT

1. There are four key strategies: predicting, questioning, clarifying and summarizing. These four key strategies help readers solve the problems occurring when they read.
2. Each strategy is used for different steps: pre-reading, while-reading and post-reading.

MATERIALS

Reading No. 2 "*Robot*"

INSTRUCTIONAL ACTIVITIES

Pre-reading stage

Min Step

- 5 1. Review what the four key strategies are (predicting, questioning, clarifying and summarizing) and then ask the students When and how to use them.
- 5 2. Introduce the students that today the teacher will model the whole process of using four key strategies in the reading texts step by step. This demonstration will help them to see the whole picture of reciprocal approach and to understand and know when and how to use four key strategies clearly and systematically.
- 5 3. After the students finish reading paragraph 1, the teacher asks them some questions by using questioning clarifying, and summarizing strategies.

T : Look at the title. What is your prediction about this text?

Ss: Robot

T : In what way about robots /

Ss: How do people make robots work? What can robot do for us?

T : Let's read paragraph I to check your prediction.

T : Can you ask questions about robots in the hospital?

S₂/T: What do the robots do in the hospital?

Ss: They take medicine down halls, call for elevator, and deliver meals.

T : Where else do the robots work?

S₃: In the museum.

T : Any confused words

T : What does "intelligent" mean?

Ss: ฉลาด / smart

T : Any questions on robots in the museum?

S₄: What do the robots do in the museum?

Ss: A tour guide

T : How many jobs can robots do?

Ss: There are three jobs that robots do.

T : What are they?

Ss: A mail carrier, a help mate and a tour guide.

T : And where do they work?

Ss: In a big office, in the hospital, and in the museum.

T : What does the last sentence of the paragraph say?

Ss: Robots can be a teacher.

- 5 4. Ask students for the main idea of this paragraph this paragraph and write on the Reading Think Shee.

T : What is the main idea of this paragraph?

Ss: Robots can do lots of jobs.

- 5 5. Ask students to write the main idea of paragraph 1, the questions for the contents of the paragraph, and words or references students need to clarify on their Reading Record Sheet.

- 5 6. Ask students whether their prediction for paragraph 1 right or wrong, and what their prediction for the next paragraph is and write down their prediction for the next paragraph on the reading text.

T : What is your prediction for the next paragraph?

Ss: Robots work as teachers.

10 7. For paragraph two to five, do the same process as paragraph one (step 1 - 5).

Here are some possible questions for paragraph 2.

- a. Who is Mr. Leachim?
- b. What is he like?
- c. what does advantage mean?
- d. Who does "he" in line 2 refer to?
- e. What is an identification number?
- f. How can the children talk to Mr. Leachim?

10 8. Here are some possible questions for paragraph?

- a. What is another advantage of Mr. Leachim?
- b. What does flexible mean?
- c. What does repeat mean?
- d. Who does "They" in line 2 refer to?
- e. What does Mr. Leachim do when the children do a good job?
- f. What is the good thing about Mr. Leachim?
- g. What does difficult in line 6 mean?

10 9. Here are some possible questions for paragraph 4.

- a. What are scientists trying to do now?
- b. Who is Kismet?
- c. Does she have any emotion? Show some examples.
- d. What does pay attention mean?
- e. What does mood mean?
- f. What will she do when she get bored with a toy?
- g. What does personality mean?
- h. What is the different between Kismet's emotion and human's emotion?

5 10. Here are some possible questions for paragraph 5.

- a. At present, do robots have emotion like us?
- b. When will robots have emotion?

Pre-reading stage**Min Step**

20 1. After the teacher models through on the passage, the students do exercises to check their reading comprehension. Ask students scan the exercises first to scope their goal. Ask them what they should do if they do not know the answer? (Reread and choose only the related information). Then check the answers

10 2. Review what they have studied.

Answer keys**Vocabulary**

- | | | | |
|------------------|-----------|-------------|---------------|
| 1. smart | 2. create | 3. emotions | 4 mood |
| 5. pay attention | 6. enters | 7. flexible | 8. switch off |

Answer the question (free answers)**Looking for the main ideas**

- | | | |
|------|------|------|
| 1. b | 2. c | 3. b |
|------|------|------|

Looking for details

- | | | | | | |
|------|------|------|------|------|------|
| 1. T | 2. T | 3. F | 4. F | 5. F | 6. T |
|------|------|------|------|------|------|

READING 2

ROBOT

From the title your prediction about the text is _____

Robots are smart. With their computer brains, they can do work that humans prefer not to do because it is dangerous, dirty, or boring. Some robots are taking jobs away from people. Bobby is a mail carrier robot that brings mail to a large office building in Washington, D.C. There are hundreds of mail carrier robots in the United States. In more than seventy hospitals around the world, robots called Help Mates take medicine down halls call for elevators, and deliver meals. In Washington, D.C., a tour guide at the Smithsonian museum is a robot called Minerva. About 20 percent of the people who met Minerva said that she seemed as intelligent as a person. There is even a robot that is a teacher.

What is your prediction for the next paragraph? _____

Mr. Leachim is a fourth-grade teacher robot. He weighs 200 pounds, is six feet tall, and has some advantages as a teacher. One advantage is that he doesn't forget details. He knows each child's name, the parents' names, and what each child knows and needs to know. In addition, he knows each child's pets and hobbies. Mr. Leachim doesn't make mistakes. Each child tells Mr. Leachim his or her name and then enters an identification number. His computer brain puts the child's voice and number together. He identifies the child with no mistakes. Then he starts the lesson.

What is your prediction for the next paragraph? _____

Another advantage is that Mr. Leachim is flexible. If the children do not understand something, they can repeat Mr. Leachim's lesson over and over again. When the children do a good job, he tells them something interesting about their hobbies. At the end of the lesson, the children switch off Mr. Leachim. The good thing about Mr. Leachim is that he doesn't have a nervous system like a human, so he doesn't get upset if a child is "difficult."

What is your prediction for the next paragraph? _____

Today, scientists are trying to create a robot that shows emotions like a human being. At M.I.T. (Massachusetts Institute of Technology), Cynthia Breazeal has created a robot called Kismet. It has only a head at this time. As soon as Breazeal comes and sits in front of Kismet, the robot's mood changes. The robot smiles. Breazeal talks to it the way a mother talks to a child, and Kismet watches and smiles. When Breazeal starts to move message Kismet is giving is "Stop this!" Breazeal stops, and Kismet becomes

calm. Breazeal now pays no attention to Kismet, and the robot becomes sad. When Breazeal turns toward Kismet, the robot is happy again. Another thing Kismet does like a child is to play with a toy and then become bored with the toy and close its eyes and go to sleep. Breazeal is still developing Kismet. Kismet still has many things missing in its personality. It does not have all human emotions yet, but one day it will!

What is your prediction for the next paragraph? _____

At one time, people said that computers could not have emotions. It looks very possible that in the future scientists will develop a computer that does have emotions and can even be a friend. But what are the advantages of having a friend that's a machine?

Vocabulary

Complete the sentences with the following words.

enters	pay attention
create	mood
flexible	switch off
emotions	smart

1. Robots with their computer brains are _____ .
2. Cynthia Breazeal is trying to _____ a robot that has feelings.
3. Kismet does not have _____ like love.
4. When a person looks at Kismet for the first time, the robot's _____ changes.
5. Kismet doesn't like it when you don't _____.
6. A child goes to Mr. Leachim and _____ an identification number.
7. When a child needs more time or needs Mr. Leachim to repeat something, the robot is _____ .
8. When the lesson finishes, the child can _____ Mr. Leachim.

Answer the questions.

1. Who is a smart student in your class?

2. When do you enter a number?

3. To whom do you usually pay attention in class?

4. What machine do you switch on and off?

5. What emotion do you feel when you do well on a test?

6. What mood are you in most of the time?

7. What can you create with a piece of paper?

Looking for the Main Ideas

Circle the letter of the best answer.

1. Robots _____ .
 - a. can help people in regular jobs
 - b. cannot help people do difficult jobs
 - c. work only in hospitals
 - d. work only in post offices
2. Mr. Leachim is a _____ .
 - a. mail carrier robot
 - b. fourth-grade teacher
 - c. fourth-grade teacher robot
 - d. Help Mate robot
3. Kismet is a _____ .
 - a. dog robot
 - b. robot that has some emotions
 - c. robot that is just like a human
 - d. Help Mate robot

Looking for Details

Circle T if the sentence is true. Circle F if the sentence is false.

- | | | |
|---|---|---|
| 1. Bobby is a mail carrier robot in an office building. | T | F |
| 2. Hospitals use robots called Help Mates. | T | F |
| 3. Mr. Leachim identifies a child by his or her voice only. | T | F |
| 4. When the lesson is over, the child enters an
identification number. | T | F |
| 5. Kismet cries when it doesn't like something. | T | F |
| 6. Kismet goes to sleep when it is bored. | T | F |

Reading Think Aloud Sheet

Name / Class / Number _____

Title: _____

<p>Prediction: Before you begin to read the selection, look at the title or cover, scan the pages to read the major heading, and look at any illustrations. Write down your prediction (S).</p>	
<p>Prediction:</p>	<p>Support:</p>
<p>Main Ideas: As you finish reading each paragraph or key section of text, identify the main idea of that paragraph section.</p>	
<p>Main Ideas 1:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Main Ideas 2:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Main Ideas 3:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Main Ideas 4:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Main Ideas 5:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Questions: For each main idea listed, writ down at lest one question.</p> <p>Question for paragraph 1:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Question for paragraph 2:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Question for paragraph 3:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Question for paragraph 4:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Question for paragraph 5:</p> <p>_____</p> <p>_____</p> <p>_____</p>

Summarize: Write a brief summary of what you read.

Clarify: Copy down words, phrases, sentences, or references in the passage that are unclear. Then explain how you clarified your understanding.

Word or Phrase of Reference;

How to clarify:

LESSON PLAN 2

(Experimental Group)

OBJECTIVE:

Students will be able to understand the text by teacher's encouragement. The teacher will help students comprehend the texts through some basic skills in reading.

CONTENT

1. There are some basic skills use in reading comprehension such as vocabulary skills, sentence level skills, finding the main idea of the paragraph, finding details and facts, finding the references, drawing inferences, and explaining grammar and structure of the passage. Students use these reading skills while reading with the teacher's help
2. Vocabulary: create, flexible, pay attention, emotions, smart, advantage.
3. Structure: if clause – first condition.

INSTRUCTIONAL ACTIVITIES

Pre-reading stage

Min Step

- | | |
|----|---|
| 10 | 1. Teach and review these words: create, flexible, pay attention, emotions, smart, advantage. |
| 5 | 2. Teach and review if clause-first condition. |
| 5 | 3. Students read paragraph one silently. Teacher asks for the main idea of this paragraph. |
| 15 | 4. Ask Students for main idea. |
| | T : Why robots are smart? |
| | Ss: They have their computer brains. |
| | T : What does “they” in line 1 refer to? |
| | Ss: Robots |
| | T : What can robot do? |
| | Ss: Work that humans prefer not to do? |

- S₁: What does “humans” mean?
- T: มนุษย์หรือคน who is Bobby?
- Ss: A mail carrier
- S₂: What does “carrier” mean?
- T : Any one knows the meaning of carrier?
- T/S₃: คนส่งคนถือ
- T : What does Bob do?
- Ss: Bring mail to a large office building in Washington D.C.
- T : How many mail carriers are there in the United States?
- Ss: Hundreds
- T : Who is Help Mates?
- Ss: Robots work in the hospitals.
- T : What do Help Mates do?
- Ss: Take medicine down halls, call for elevators and deliver meals.
- S₄: What does “elevator” mean?
- Ss /T: A lift.
- T : Who is Minerva.
- Ss: A tour guide robots.
- T : Where does she work?
- Ss: In the museum / At the Smithsonian museum.
- T : What do people think about Minerva?
- Ss: She seemed as intelligent as a person.
- S₅: What does “intelligent” mean?
- T /Ss: ฉลาด
- T : What is the main of this paragraph?
- Ss: Robots works for humans / Robots can do many jobs.
- 50 5. Does the same process as paragraph one for paragraph two-five.
- 5 6.

Ask students scan the exercises and answer the questions in each exercise. Then check the answers and ask students which part of the passage they get the answers (what is the answers and where to get them).

Answer keys

Vocabulary

- | | | | |
|------------------|-----------|-------------|---------------|
| 1. smart | 2. create | 3. emotions | 4 mood |
| 5. pay attention | 6. enters | 7. flexible | 8. switch off |

Answer the question (free answers)

Looking for the main ideas

- | | | |
|------|------|------|
| 1. a | 2. c | 3. b |
|------|------|------|

Looking for details

- | | | | | | |
|------|------|------|------|------|------|
| 1. T | 2. T | 3. F | 4. F | 5. F | 6. T |
|------|------|------|------|------|------|

READING 2

ROBOT

Robots are smart. With their computer brains, they can do work that humans prefer not to do because it is dangerous, dirty, or boring. Some robots are taking jobs away from people. Bobby is a mail carrier robot that brings mail to a large office building in Washington, D.C. There are hundreds of mail carrier robots in the United States. In more than seventy hospitals around the world, robots called Help Mates take medicine down halls call for elevators, and deliver meals. In Washington, D.C., a tour guide at the Smithsonian museum is a robot called Minerva. About 20 percent of the people who met Minerva said that she seemed as intelligent as a person. There is even a robot that is a teacher.

Mr. Leachim is a fourth-grade teacher robot. He weighs 200 pounds, is six feet tall, and has some advantages as a teacher. One advantage is that he doesn't forget details. He knows each child's name, the parents' names, and what each child knows and needs to know. In addition, he knows each child's pets and hobbies. Mr. Leachim doesn't make mistakes. Each child tells Mr. Leachim his or her name and then enters an identification number. His computer brain puts the child's voice and number together. He identifies the child with no mistakes. Then he starts the lesson.

Another advantage is that Mr. Leachim is flexible. If the children do not understand something, they can repeat Mr. Leachim's lesson over and over again. When the children do a good job, he tells them something interesting about their hobbies. At the end of the lesson, the children switch off Mr. Leachim. The good thing about Mr. Leachim is that he doesn't have a nervous system like a human, so he doesn't get upset if a child is "difficult."

Today, scientists are trying to create a robot that shows emotions like a human being. At M.I.T. (Massachusetts Institute of Technology), Cynthia Breazeal has created a robot called Kismet. It has only a head at this time. As soon as Breazeal comes and sits in front of Kismet, the robot's mood changes. The robot smiles. Breazeal talks to it the way a mother talks to a child, and Kismet watches and smiles. When Breazeal starts to move message Kismet is giving is "Stop this!" Breazeal stops, and Kismet becomes calm. Breazeal now pays no attention to Kismet, and the robot becomes sad. When Breazeal turns toward Kismet, the robot is happy again. Another thing Kismet does like a child is to play with a toy and then become bored with the toy and close its eyes and go to sleep. Breazeal is still developing Kismet. Kismet still has many things missing in its personality. It does not have all human emotions yet, but one day it will!

At one time, people said that computers could not have emotions. It looks very possible that in the future scientists will develop a computer that does have emotions and can even be a friend. But what are the advantages of having a friend that's a machine?

Vocabulary

Complete the sentences with the following words.

enters	pay attention
create	mood
flexible	switch off
emotions	smart

1. Robots with their computer brains are _____ .
2. Cynthia Breazeal is trying to _____ a robot that has feelings.
3. Kismet does not have _____ like love.
4. When a person looks at Kismet for the first time, the robot's _____ changes.
5. Kismet doesn't like it when you don't _____ .
6. A child goes to Mr. Leachim and _____ an identification number.
7. When a child needs more time or needs Mr. Leachim to repeat something, the robot is _____ .
8. When the lesson finishes, the child can _____ Mr. Leachim.

Answer the questions. Use complete sentences.

1. Who is a smart student in your class?

2. When do you enter a number?

3. To whom do you usually pay attention in class?

4. What machine do you switch on and off?

5. What emotion do you feel when you do well on a test?

6. What mood are you in most of the time?

7. What can you create with a piece of paper?

Comprehension (Looking for the Main Ideas)

Circle the letter of the best answer.

1. Robots _____ .
 - a. can help people in regular jobs
 - b. cannot help people do difficult jobs
 - c. work only in hospitals
 - d. work only in post offices
2. Mr. Leachim is a _____ .
 - a. mail carrier robot
 - b. fourth-grade teacher
 - c. fourth-grade teacher robot
 - d. Help Mate robot
3. Kismet is a _____ .
 - a. dog robot
 - b. robot that has some emotions
 - c. robot that is just like a human
 - d. Help Mate robot

Looking for Details

Circle T if the sentence is true. Circle F if the sentence is false.

- | | | |
|---|---|---|
| 1. Bobby is a mail carrier robot in an office building. | T | F |
| 2. Hospitals use robots called Help Mates. | T | F |
| 3. Mr. Leachim identifies a child by his or her voice only. | T | F |
| 4. When the lesson is over, the child enters an
identification number. | T | F |
| 5. Kismet cries when it doesn't like something. | T | F |
| 6. Kismet goes to sleep when it is bored. | T | F |

Appendix F Course Schedule

Course Schedule		
Week	Control Group	Experimental Group
1	Pretest	Pretest and pre questionnaire
2	Reading 1 "Can we Ever Communicate?"	Four main strategies and Reading 1
3	Reading 2 "How Can Animal Communicate?"	Reading 2
4	Reading 3 "Robot"	Reading 3
5	Reading 4 "The World's Most Unusual millionaire?"	Reading 4
6	Reading 5 "Celebrating Fifteen"	Reading 5
7	Midterm examination	Midterm examination
8	Reading 6 "Many Faces, One Body"	Reading 6
	Assignment 1 "Earth Living Planet"	Assignment 1
9	Reading 7 "The Knight's Tale"	Reading 7
10	Reading 8 "Zoo"	Reading 8
11	Reading 9 "Killer Bees"	Reading 9
12	Reading 10 "GM Food"	Reading 10
	Assignment 2 "Frankenstein"	Assignment 2
13	Posttest	Posttest and post-questionnaire
14	Final examination	Final examination

Appendix G Results of the Questionnaire

Item	Description	Before training			After training			T
		Mean score	SD	Level	Mean score	SD	Level	
1	I used titles and subtitles (if any) to predict the content of the text.	3.40	0.96	M	4.03	0.73	H	5.117*
2	I used pictures (if any) to predict the the content of the text.	3.70	0.87	H	4.40	0.81	H	4.826*
3	I examined what the reading instruction or exercise questions required me to do.	3.43	1.00	M	4.03	0.85	H	4.871*
4	I predicted what would happen next while I was reading.	3.00	0.94	M	3.53	0.77	H	4.287*
5	I checked whether my predictions about the text were right or not.	3.36	0.06	M	4.06	0.78	H	5.114*
6	I used my own knowledge on English structure to comprehend the text.	3.70	1.10	H	4.23	0.77	H	3.395*
7	I used my personal experience (what I already know) to help me understand the text.	3.66	1.00	H	4.16	0.87	H	4.014*
8	I was aware of which strategy to use and how to use it when I faced reading problems.	3.00	0.90	M	3.56	0.72	H	3.616*
9	I tried to find the topic and main ideas by skimming.	3.66	0.99	H	4.13	0.77	H	3.751*
10	I guessed the meaning of the important new words from the context by reading on or looking back.	3.40	1.00	M	4.00	0.74	H	3.525*
11	I ignored the meaning of the unimportant new words from the context.	2.46	0.86	L	2.80	0.92	L	3.340*
12	I selected the relevant information to help me understand the text.	3.50	0.82	H	3.76	0.72	H	1.861*
13	I related the important points to one another to understand the text as a whole.	3.50	0.93	H	4.10	0.71	H	4.039*
14	I re-read the relevant information if I did not understand the text.	4.06	0.94	H	4.46	0.68	H	3.520*
15	I underlined the main ideas or took notes on the important points.	3.10	1.10	M	3.90	0.96	H	4.878*
16	I made a mental or written summary of the information.	3.06	0.90	M	3.73	0.73	H	3.818*
17	I scanned the text to find the information.	3.70	0.70	H	4.06	0.58	H	3.266*
18	When I started to complete the exercise, I planned how to do it and followed that plan.	3.26	0.90	M	3.90	0.84	H	4.289*
19	I checked whether I had successfully achieved the reading task by re-reading some parts of the text.	3.66	0.88	H	4.23	0.81	H	4.011*
20	I used all the relevant information to help me answer the questions.	3.80	0.92	H	4.26	0.69	H	2.841*

Appendix H Findings from Reading Think Aloud Sheet

Appendix H

Examples of the written record on Reading Think Aloud Sheet of less proficient and proficient students.

Examples of the written record on Reading Think Aloud Sheet of less proficient Reading Think Aloud Sheet.

Reading Think Aloud Sheet (Reading 6)

Title: *Many Faces One body*

Prediction: Before you begin to read the selection, look at the title or cover, scan the pages to read the major headings, and look at any illustrations. Write down your prediction (s).	
Prediction: <i>The story may be about the person or the people that were so many masks.</i>	Support: <i>The topic of article</i>
Main Ideas: As you finish reading each paragraph or key section of text, identify the main idea of that paragraph or section.	Questions: For each main idea listed, write down at least one question.
Main Idea 1: <i>They are two personalities: one main personality multiple personality.</i>	Questions 1: <i>What most of people have?</i>
Main Idea 2: <i>Personalities often don't know that they have many personalities.</i>	Questions 2: <i>Do people who have multiple personalities know that they have many personalities?</i>
Main Idea 3: <i>There is an example of multiple personalities.</i>	Questions 3: <i>What do these people sometime do?</i>
Main Idea 4: <i>These people who have many personalities which it comes from their bad childhood experiences.</i>	Questions 4: <i>Are bad childhood experiences?</i>

<p>Main Idea 5: <i>It's difficult to help these people.</i></p>	<p>Questions 5: <i>Why is the way to help these people?</i></p>
<p>Summarize: write a brief summary of what you read. <i>Most people have only on main personality, but there some people who have multiple personalities that bad childhood experiences make these people have multiple personalities and they may create new personalities in their own minds which these personalities may be young or old, male or female, good or bad. It's difficult to help these people but It's mostly impossible.</i></p>	
<p>Clarify: Copy down words, phrases, or sentences in the passage that are unclear. Then explain how you clarified your understanding.</p>	
<p>Prediction: <i>Us line 1 of the first paragraph</i> <i>These people line 1 of third paragraph</i> <i>They line six of the third paragraph</i></p> <p><i>Multiple</i> <i>Personality</i> <i>childhood</i> <i>experience</i> <i>difficult</i> <i>mind</i> <i>create</i></p>	<p>Support: <i>Most people in the world</i> <i>People who have many personalities</i> <i>Multiple personalities</i></p> <p><i>Ask my friends in my group and from dictionary</i></p>

Reading Think Aloud Sheet (Reading 9)

Chapter or Book title: *Killer Bees*

Prediction: Before you begin to read the selection, look at the title or cover, scan the pages to read the major heading, and look at any illustrations. Write down your prediction (S).	
Prediction: <i>I think killer bees is breed with the male bees. The male bees is die after it breed.</i>	Support: <i>From Title. From the word bees and killer.</i>
Main Ideas: As you finish reading each paragraph or key section of text, identify the main idea of that paragraph section.	Questions: For each main idea listed, writ down at lest one question.
Main Ideas 1: <i>Killer bees is difference regular bees are little smaller, angry more easily and at tack more of than honeys but honey bees makes five time more honey than a killer bees.</i>	Question for paragraph 1: <i>What killer bees and honey bees Like? What are their differences?</i>
Main Ideas 2: <i>Killer bees starts in Brazil in 1957. because He wanted to make more honey so he put forty-six African bee in with some Brazilian bees but new bees were a mistake by accident, twenty-six African bee escapes and bred with Brazilian bees auto.</i>	Question for paragraph 2: <i>Why a scientist breed bees? What is accident?</i>
Main Ideas 3: <i>The bees spread. They went from Brazil to Venezuela and then to Central America. Now they are in North America and grows to four times its old size in a year.</i>	Question for paragraph 3: <i>Where are killer bees spread? How many killer bee grows in a year?</i>
Main Ideas 4: <i>Killer bees are very dangerous. Student in Costa Rica had 10,000 stings and died.</i>	Question for paragraph 4: <i>How many killer bee stings you?</i>
Main Ideas 5: <i>When killer bees arrived the first</i>	Question for paragraph 5: <i>The first you most when killer</i>

<p><i>thing you can do is runs-as you can because killer bees do not move very fast and you most go into the nearest house or tent but Do not jump into water,</i></p>	<p><i>bees arrived?</i></p>
<p>Summarize: Write a brief summary of what you read. <i>Killer bees is difference regular bees. Killer bees are a little smaller and angry more easily and honey bees makes five times more honey than a killer bee. Killer bees start in Brazil by Sao Paulo because wanted to make honey so he put African bees in with some Brazilian bees but the new bees ware a mistake. He not control the problem. The bees spread they went to outside. They very dangerous. The can stings and dies. They do not move very fast but they will follow you put up to one mile, if the bees sting you many times you must get medical attention immediately.</i></p>	
<p>Clarify: Copy down words, phrases, sentences, or references in the passage that are unclear. Then explain how you clarified your understanding.</p>	
<p>Word or Phrase of Reference;</p>	<p>How to clarify:</p>
<p><i>expert</i> <i>mistake</i> <i>escaped</i> <i>bred</i> <i>spread</i> <i>colonies</i></p>	<p><i>seriously</i> <i>shiny jewelry</i> <i>handkerchief</i> <i>take off</i> <i>medical attention</i> <i>immediately</i></p> <p><i>Apply my background</i> <i>Knowledge context clues to the words that</i> <i>I don't know</i></p>

Example of the record on Reading Think Aloud Sheet of proficient student.

Reading Think Aloud Sheet (Reading 6)

Title: *One Body Many Faces*

<p>Prediction: Before you begin to read the selection, look at the title or cover, scan the pages to read the major headings, and look at any illustrations. Write down your prediction (s).</p>	
<p>Prediction: <i>The story may be about the dupery or hypocritical person or the people that were so many masks.</i></p>	<p>Support: <i>They came from my mind and my background knowledge.</i></p>
<p>Main Ideas: As you finish reading each paragraph or key section of text, identify the main idea of that paragraph or section.</p>	<p>Questions: For each main idea listed, write down at least one question.</p>
<p>Main Idea 1: <i>They are two personalities: one main personality multiple personality.</i></p>	<p>Questions 1: <i>What personality most people have? How many personalities do people have?</i></p>
<p>Main Idea 2: <i>People with multiple personalities often don't know that they have many personalities.</i></p>	<p>Questions 2: <i>Do people with multiple personalities know that they have more than one personality?</i></p>
<p>Main Idea 3: <i>Examples of multi personalities</i></p>	<p>Questions 3: <i>From the example. How many personalities does she have? What are they?</i></p>
<p>Main Idea 4: <i>Psychologist had told that multiple Personalities come from bad childhood experiences</i></p>	<p>Questions 4: <i>Where do multiple personalities come from? What is the reason may become so strong in new personality?</i></p>
<p>Main Idea 5: <i>How to help people with multiple personalities.</i></p>	<p>Questions 5: <i>How many ways to help people with multiple personalities and what are there? What are they?</i></p>
<p>Summarize: write a brief summary of what you read. <i>There are two personalities: one main personality and many or multiple</i></p>	

personalities consequently people with multiple personalities often don't know that they have many personalities for example: One woman had 13 personalities, each with a name and each very different from the other. Psychologist had told that multiple personalities come from bad childhood experiences that it is very difficult to help them.

Clarify: Copy down words, phrases, or sentences in the passage that are unclear. Then explain how you clarified your understanding.

Prediction:

Personality (1)

strange (3)

psychologist (4)

peace (5)

us line1 paragraph1

they line6 paragraph2

she line2 paragraph3

Support:

From context clues and word formation

Something that controls what we act...

the different things from other things

One of the doctor's branches.

Opposite "argue"

Readers

People

One woman

Reading Think Sheet (Reading 9)

Title: *Killer Bees.*

Prediction: Before you begin to read the selection, look at the title or cover, scan the pages to read the major heading, and look at any illustrations. Write down your prediction (S).	
Prediction: <i>This story may be concerned with the bees or another type of bees.</i>	Support: ก็แปลตามตัว <i>killer</i> คือนักฆ่า, <i>Bee</i> คือผึ้ง ก็ น่าจะเกี่ยวกับผึ้งสายพันธุ์นักฆ่า
Main Ideas: As you finish reading each paragraph or key section of text, identify the main idea of that paragraph section.	Questions: For each main idea listed, writ down at lest one question.
Main Ideas 1: <i>Killer bees are little smaller than regular bees killer bees like attacking and stinging people and they can also make honey</i>	Question for paragraph 1: <i>What is the difference between killer bees and regular bees? Can killer bees make honey? How many times can killer bees sting people?</i>
Main Ideas 2: <i>Killer bees started in Brazil in 1957. Sao Paula wanted a new kind of bee but the bees were a mistake and they escaped and bred with the Brazilian bees outside</i>	Question for paragraph 2: <i>When did killer bees start? Who was Sao Paula? What did Sao Paula want to do with a bee? What did killer bees want to do with people?</i>
Main Ideas 3: <i>The bees spread and scientist couldn't control the problem. Each group of bees or colony grows to four times its old size in a year.</i>	Question for paragraph 3: <i>Why couldn't scientist control the problem? To where do a killer Bees go from Brazil? How many miles did a killer travel a year?</i>
Main Ideas 4: <i>Killer bee likes to attack people because of a stormy smell or because a person is wearing a dark odor, has dark hair or shinny jewelry.</i>	Question for paragraph 4: <i>What did killer bees attack people for? Why are people afraid of killer bees? Why do killer bees attack people?</i>
Main Ideas 5: <i>The way to protect yourself from</i>	Question for paragraph 5: <i>Which pant of body do killer bees</i>

<p><i>killer bees such as run as fast as you can cover your head with a handkerchief or go into the hoarest house on tent.</i></p>	<p><i>try to attack? Why shouldn't jump into water when killer bees came? What is the first thing should do when killer bee from?</i></p>
<p>Main Ideas 6: <i>Killer bees have killed many people in America the first American died from bee stings in Texas in 1993</i></p>	<p>Question for paragraph 6: <i>How many American people did killer Bees kill? When did the first American die from the bee sting?</i></p>
<p>Summarize: Write a brief summary of what you read. <i>Killer bees are a little smaller than regular bees but they didn't want to make honey because they wanted attack people which this was a unsolvable problem accused by a scientist named Sao Paulo killer bees like to attack people because at a strong smell or because a person is wearing a dark color, has dark hair, wearing shiny jewelry However the way to protect your self from killer bees such as, run as fast as you can, find something to cover your head, but do not jump into the river. Here are a great number of people who have been killed by killer bees, approximately 1,000 people.</i></p>	
<p>Clarify: Copy down words, phrases, sentences, or references in the passage that are unclear. Then explain how you clarified your understanding.</p>	
<p>Word or Phrase of Reference;</p>	<p>How to clarify:</p>
<p><i>Regular, expert, attack, shiny, breed, shiny, mile, handkerchief, medical attention immediately.</i></p>	<p>ใช้ความรู้จากการ clarify ที่เคยทำผ่านมา สังเกต. ใช้ประโยชน์ข้างเคียงช่วยในการเดาความหมาย บางอย่างก็ถามเพื่อน และใช้ Dictionary บ้างนิดหน่อย</p>

Appendix I Findings from Audio-tapping

Results from Audio Tapping

Transcript of reading passage “Many Faces One Body”

- เมธ : เรามาคุยชื่อเรื่อง Many Faces One Body เพื่อน ๆ คิดว่าเรื่องนี้ น่าจะเกี่ยวกับเรื่องอะไร
- หทัย : คนหลาย ๆ หน้า
- ฉญา : เอ้อ บุคลิกหลาย ๆ คน
- หทัย : คุณที่มีหลาย ๆ บุคลิกในคนเดียวกัน
- เมธ : มาคุยกัน Most of us have different personality คิดว่า personality หมายถึงอะไร
- วุฒิ : บุคลิกงาน
- เมธ : ถ้าเราว่า one main personality น่าจะหมายถึงอะไร
- หทัย : บุคลิกหลัก บุคลิกเดียว
- นิจ : น่าจะใช่
- เมธ : ถูกต้อง
- เมธ : บุคลิกอย่างไร จากประโยค that controls what we believe น่าจะหมายถึง
- หทัย : การควบคุม
- คุณ : ตั้งแต่เกิด
- หทัย : อ้อ
- เมธ : Multiple personality น่าจะหมายถึงอะไร คิดว่า multiple น่าจะแปลว่าอะไร ในเมื่อ Main personality หมายถึงบุคลิกเดียว
- หทัย : ต้องหลาย ๆ
- นิจ : นี่ไง มี or many แสดงว่า multiple มีความหมายเหมือน many
- เมธ : แสดงว่า multiple หมายถึง many
- เมธ : คนน่าจะมีกี่บุคลิก
- วุฒิ : น่าจะ 2 แบบ
- หทัย : ใช่ main personality กับ multiple personalities.
- เมธ : Paragraph นี้ น่าจะพูดถึงอะไร
- ฉญา : คนหลายคนที่มีหลายบุคลิก
- หทัย : คนหนึ่งคนที่มีหลายบุคลิก
- คุณ : ใช่
- เมธ : สรุปก็หมายถึงว่า คนส่วนใหญ่มีบุคลิกเดียว แต่บางคนมีหลายบุคลิก คิดว่าย่อหน้าต่อไปจะเป็นเรื่องอะไร

หทัย : เกี่ยวกับคนหลายบุคลิก
 ญา : เกี่ยวกับบุคลิกภาพ
 วุฒิ : เอ้อ คนที่มีหลายบุคลิกมีลักษณะอย่างไร

ญา : จากย่อหน้า 2 คำว่า บุคลิก completely น่าจะหมายถึงอะไร
 เมธ : รวมกัน
 หทัย : แตกต่างกันอย่างสิ้นเชิง
 เมธ : บุคคลที่มีหลายบุคลิก ที่แตกต่างกัน โดยสิ้นเชิง
 ญา : ใช่ ใช่ มันต่างกันอย่างไร
 วุฒิ : หนึ่งบุคลิกจะมีลักษณะ การกระทำ การพูด ที่อีกบุคลิกไม่ชอบทำ
 หทัย : เหมือนขัดแย้งในตัวเอง
 นิจ : อีกบุคลิกชอบทำ อีกบุคลิกเกลียด ไม่ชอบที่จะทำ
 ญา : ใช่
 ญา : ทำไม “Why people with multiple personalities don’t know that they have many personalities?”
 เมธ : คนหนึ่งคนที่มีบุคลิกต่างกัน
 หทัย : Because different personalities control the person at different times
 ญา : จากที่หมอกล่าวมา มันทำไม
 วุฒิ : คนมีหลายบุคลิก เข้าไม่รู้
 หทัย : ใช่ คิดว่า คนมีหลายบุคลิกเข้าไม่รู้ว่าเขามีหลายบุคลิก
 ญา : Paragraph นี้ น่าจะสรุปว่าเกี่ยวกับอะไร
 วุฒิ : คนที่มีหลายบุคลิกไม่รู้ว่าตนเองมีหลายบุคลิก
 หทัย : ใช่
 เมธ : คนที่หลายบุคลิกไม่รู้ตัวว่ามีหลายบุคลิก
 ญา : ใช่ เพื่อน ๆ คิดว่าย่อหน้าต่อไปน่าจะเกี่ยวกับอะไร
 เมธ : ตัวอย่างคนที่มีหลายบุคลิก
 วุฒิ : ก็โรคจิตนั่นแหละ

หทัย : Clarify can do strange thing บรรทัดแรกน่าจะหมายความว่าอะไร
 คุณ : ทำแปลก ๆ
 หทัย : Sometimes these people can do strange things คำว่า these people หมายถึงใคร

- เมธ : คนที่มีหลายบุคลิก
 วุฒิ : คนที่มีหลายบุคลิกมักจะทำอะไรแปลก ๆ
 หทัย : ใช่ ตัวอย่างเช่น
 ญา : One woman tried to kill herself.
 หทัย : เธอให้เหตุผลว่าอย่างไร
 เมธ : เธอมี 13 บุคลิก
 หทัย : เธอมีหลายบุคลิกในตัวเธอ ในตัวเธอคนเดียวมีหลายบุคลิก แล้วมันเป็นอย่างไร
 ญา : มี 13 บุคลิกต่างกัน
 เมธ : บุคลิก 13 บุคลิก แตกต่างกันไป
 วุฒิ : เออ ใช่
 หทัย : คิดว่าคำว่า include บรรทัดที่ 3 หมายถึงอะไรในประโยค They included kid.
 ญา : รวม ๆ กันไป
 เมธ : คละกันไป
 หทัย : งั้นเดี๋ยวเราตรวจสอบว่าประโยคต่อไปจะว่าอย่างไร
 เมธ : อาจจะเป็นเด็กอายุ 5 ขวบ
 ญา : อาจจะมีชื่อ Cyntia เป็นผู้หญิงที่อารมณ์ร้าย
 วุฒิ : เป็น Alice ที่อยากฆ่าตัวตาย
 หทัย : เพื่อน ๆ คิดว่าย่อหน้านี้มีใจความหลักอะไร
 เมธ : ผู้หญิงที่เป็นโรคจิต มีหลายบุคลิก
 ญา : ผู้หญิงคนนี้จะ มี 13 บุคลิก
 นิจ : ชื่อหนึ่งก็มีบุคลิกหนึ่ง แตกต่างกันไป
 หทัย : สรุปคือ ตัวอย่างของคนที่มีหลายบุคลิก และ paragraph ต่อไปน่าจะเกี่ยวกับอะไร

- นิจ : ทำไม เพราะอะไร จึงเป็นอย่างนี้
 หทัย : งั้นเดี๋ยวเรามาดูตรวจสอบกัน
 นิจ : เพื่อน ๆ อ่านจบแล้ว ลองดูคำศัพท์ psychologist เพื่อน ๆ คิดว่าหมายถึงใคร
 ญา : น่าจะเป็นคน
 นิจ : คำว่า theory น่าจะหมายถึงอะไร
 วุฒิ : ทฤษฎี
 นิจ : แล้วคำว่า they ในบรรทัดที่ 2 One theory is that they come from bad childhood experience they หมายถึงอะไร

- หทัย : หมายถึงคนหลายบุคลิก
- เมธ : คนพวก multiple personalities
- นิจ : มีอะไรเกิดขึ้น why do they have many personalities?
- คุณ : เกิดจากประสบการณ์ที่ไม่ดี
- หทัย : ประสบการณ์ในตอนเด็ก
- นิจ : เกิดเหตุการณ์อะไร
- วุฒิ : ตอนเด็ก ๆ จะได้รับบาดเจ็บ ถูกทำร้าย
- คุณ : ได้รับบาดเจ็บร้ายแรง ฟังใจ
- เมธ : แล้วเกิดอะไรขึ้น
- วุฒิ : บุคลิกใหม่ก็เกิดขึ้นมา
- เมธ : พอได้รับบาดเจ็บ ถูกทำร้าย ก็เลยสร้างบุคลิกใหม่ขึ้นมา
- นิจ : แล้วบุคลิกที่สร้างขึ้นเป็นอย่างไร
- เมธ : แตกต่างกันไป
- วุฒิ : เป็นคนแก่ อะไรพวกนี้
- ญา : เป็นผู้หญิง ผู้ชาย ค้ายหรือเปล่า
- นิจ : อาจจะเป็นเด็กหรือคนแก่ เป็นผู้หญิงหรือผู้ชาย
- วุฒิ : แล้วก็เมื่อเป็นเด็กเขาจะเริ่มเล่นกับคนใหม่ บุคลิกใหม่ในตัวเขา
- เมธ : แล้วเปลี่ยนไปเปลี่ยนมา
- วุฒิ : แล้วก็ personalities ใหม่จะแข็งแรงขึ้น
- เมธ : แล้วมาครอบงำ
- หทัย : สุดท้ายก็ควบคุมตัวเองไม่ได้
- นิจ : คิดว่า paragraph นี้สรุปเรื่องอย่างไร
- หทัย : คนมีหลายบุคลิกมีสาเหตุจากวัยเด็กที่ได้รับการทำร้าย
- นิจ : ใช่คนที่มีความหลายบุคลิกมีสาเหตุมาจากประสบการณ์ที่ไม่ดีในวัยเด็ก และคิดว่า paragraph ต่อไปน่าจะเป็นเรื่องอะไร
- หทัย : เอ้อ น่าจะแบบว่าทำอย่างไรถึงจะหาย

- คุณ : เพื่อนลองดู paragraph นี้ คำว่า difficult หมายถึงอะไร
- ญา : ยาก เรื่องยาก
- หทัย : มันน่าจะเป็นว่า มันเป็นเรื่องยากที่จะช่วยพวกนี้ได้อย่างไร
- คุณ : If possible คำว่า possible หมายถึงอะไร
- ญา : เป็นไปได้

- หทัย : ก็เป็นไปได้
 คุณ : แล้วคำว่า they น่าจะหมายถึงใคร
 ญา : คนที่หลายลักษณะ
 เมธ : คนที่หลายบุคลิก
 หทัย : เป็นไปได้ที่คนหลาย ๆ บุคลิก กลับมาเป็นบุคลิกเดียว
 นิจ : กลับมาเป็นคนเดิม
 คุณ : ก็คือคนหลาย ๆ บุคลิกสามารถกลับมาเป็นบุคลิกเดี๋ยวน่า
 คุณ : เมื่อก็มีคำว่า possible บรรทัดที่ 3 คำว่า impossible หมายถึงอะไร
 หทัย : เป็นไปไม่ได้
 คุณ : ถ้าเป็นไปได้ที่จะกลับมาเป็นบุคลิกเดียว น่าจะหมายถึงอะไร
 เมธ : คนที่มีหลายบุคลิก กลับมาเป็นบุคลิกเดียวไม่ได้ ก็ควรมีหลายบุคลิกที่ไปกันได้
 คุณ : สรุปย่อหน้านี้ พูดถึงอะไรเป็นหลัก
 นิจ : การรักษา
 หทัย : ก็คือการให้เขากลับมามีบุคลิกเดียวถ้าเป็นไปได้
 นิจ : ถ้าเป็นไปได้ ก็ให้หลายบุคลิกอยู่ด้วยกันได้

Transcript of reading passage “Killer Bees”

- นิจ : เพื่อน ๆ เห็นเรื่อง Killer Bees แล้วคิดว่าน่าจะเป็นเรื่องเกี่ยวกับอะไร
 เมธ : ผึ้ง
 หทัย : ผึ้งมาตกร
 นิจ : อ้อ แล้วใน paragraph ที่ 1 Killer bees ต่างกับ Normal bees
 Normal bees หมายถึงอะไร
 หทัย : ผึ้งธรรมดา
 วุฒิ : ปกติ
 นิจ : Killer bees มี จะต่างกับผึ้งธรรมดา แล้ว regular bees หมายถึงอะไร
 เมธ : ธรรมดา
 หทัย : ผึ้งธรรมดา
 นิจ : expert คือใคร
 วุฒิ : ผู้เชี่ยวชาญ
 นิจ : ผู้เชี่ยวชาญสามารถทำอะไร
 เมธ : คือว่า Killer bees ต่างจากผึ้งธรรมดาอย่างไร
 คุณ : เราดูไม่ออกหรอก

- นิจ : Killer bees มีลักษณะอย่างไร ที่ต่างจากผึ้งปกติ
 เมธ : โจมตี และต่อย
 นิจ : Killer bees attack and sting รู้ใหม่ว่า sting หมายถึงอะไร
 เมธ : เหล็กไน
 หทัย : ปล่อยเหล็กไน
 วุฒิ : ต่อย ปล่อยเหล็กไน
 คุณ : ต่อย
 นิจ : เออ แล้วรู้ใหม่ คำว่า great number แปลว่าอะไร
 เมธ : จำนวน
 หทัย : น่าจะเหมือนจำนวนมาก
 นิจ : Killer bees มันทำอะไร
 หทัย : มันต่อย คนจำนวนมาก
 คุณ : หลายคน
 นิจ : เอ้อ เหมือนกับ Killer bees ต่อยได้มากกว่า honey bees แต่ที่เหมือนกับ Honey bees คือต่อยแล้วมันจะตาย
 นิจ : แล้วรู้ใหม่ว่า Killer bees มันผลิตน้ำผึ้งได้ไหม
 ทุกคน : ได้
 เมธ : แต่ ได้น้อย
 วุฒิ : ได้ในปริมาณที่น้อย
 นิจ : น้อยกว่าเป็นเท่า
 เมธ : น้อยกว่า 5 เท่า
 คุณ : 5 เท่า
 นิจ : แล้วรู้ใหม่ว่า paragraph นี้สรุปว่าอย่างไร
 หทัย : ก็
 เมธ : สรุปว่า ลักษณะทั่วไปของ Killer Bees
 หทัย : เป็นอย่างไร
 เมธ : ตัวเล็กกว่าผึ้งธรรมดา
 หทัย : มันโกรธง่ายกว่า ต่อยมากกว่า
 วุฒิ : ผลิตน้ำผึ้งน้อยกว่า
 นิจ : แล้ว paragraph ต่อไปเขาจะพูดถึงเรื่องอะไร
 เมธ : พูดเกี่ยวกับว่าประวัติของ Killer bees
 วุฒิ : เขาเกริ่นมาอย่างนี้น่าจะพูดถึง Killer bees ต่อ

-
- วุฒิ : หลังจากอ่าน paragraph 2 แล้ว ในตอนแรกของ paragraph เขาพูดถึงอะไร
- หทัย : Killer bees มีมาตั้งแต่เมื่อไหร่
- สุเมธ : การผสม Killer bees
- วุฒิ : Killer bees นี้เกิดที่ไหนครับ
- เมธ : Sao Paulo
- หทัย : เมือง Sao Paulo
- เมธ : Sao Paulo มันเกิดขึ้นได้อย่างไร
- นิจ : นักวิทยาศาสตร์เอาผึ้งมาผสมกัน
- วุฒิ : ผึ้งอัฟริกัน กับผึ้งบราซิลใช่ใหมครับ
- นิจ : ใช่ มาผสมกัน
- วุฒิ : ผึ้ง 2 ประเภทมาผสมกันทำให้เป็นผึ้งสายพันธุ์ใหม่
คือ Killer bees ในการทดลองของเขานี้ มันเกิดเหตุการณ์อะไรขึ้นครับ
- นิจ : ผึ้งไม่ยอมผลิตน้ำผึ้งแต่มันโจมตี
- หทัย : เป็นผึ้งโจมตีมากกว่า
- วุฒิ : มันเป็นผึ้งดุร้ายใช่ใหม พอผสมพันธุ์เสร็จแล้วมันก็เลยเพิ่มความดุร้ายเข้าไป
จากเหตุการณ์ที่ว่า มีผึ้งจำนวน 26 ตัวได้บินหนีออกมา ผึ้ง 26 ตัวนี้จะครบมันหนี
มาแล้วไปทำอะไรต่อ
- หทัย : ไปทำสายพันธุ์กับผึ้งบราซิลข้างนอก
- วุฒิ : ครับ คือ Killer bees หลุดออกมาจำนวน 26 ตัวได้ไปผสมพันธุ์กับผึ้งข้างนอก
ทำให้มันสามารถแพร่กระจายพันธุ์ได้อย่างรวดเร็ว มีข้อความไหนครับที่สนับสนุน
ประโยคนี้
- หทัย : เขาบอกว่า by accident twenty –six African bees escaped and bred with
the Brazilian bees outside.
- วุฒิ : ขอบคุณครับ สรุป paragraph นี้ะครับ พูดถึงว่า Killer bees เกิดขึ้นที่ไหน
เกิดขึ้นได้อย่างไร บอกถึงสาเหตุและการแพร่พันธุ์ของมัน และเพื่อนลองทาย
paragraph ต่อไปซิว่าจะเป็นเรื่องอะไร
- นิจ : มันออกไปข้างนอกแล้วเกิดอะไร
- เมธ : มันไปทำอะไรข้างข้างนอก
-

- คุณ : ลองอ่านย่อหน้า 3 นะครับ
- คุณ : Scientists could not control the problem นักวิทยาศาสตร์ไม่สามารถควบคุมปัญหานี้ได้ เพราะพวกมันไปทำอะไร
- หทัย : ไป แพร่กระจาย
- เมธ : แพร่กระจายไปคนละทิศละทาง
- ญา : ไข่ กระจาย
- คุณ : ตัวไหนที่หมายถึงแพร่กระจาย
- นิจ : spread
- คุณ : หลังจากที่มีมันหนีออกมาแล้ว คิดว่ามันไปที่ไหนครับ
- นิจ : เวเนซุเอล่า
- วุฒิ : เวเนซุเอล่า ก็บอเมริกาตอนกลาง
- คุณ : Now they are in North America. They travel about 390 miles a year.
: ปัจจุบันพวกมันอยู่ที่ไหน
- วุฒิ : อเมริกาเหนือ
- หทัย : มันเดินทาง 360 ไมล์ต่อปี
- คุณ : ต่อไปก็ ผูกตึงเตโตอย่างไร
- เมธ : เตบโต
- นิจ : ขนาดใหญ่ขึ้น
- วุฒิ : ใหญ่เป็น 4 เท่า
- นิจ : อาจจะเกิดจากการผสมพันธุ์ข้ามสายพันธุ์
- หทัย : มีจำนวนขนาด 4 เท่า ทั่วขนาดเดิม
- วุฒิ : คือมันจำนวนใหญ่ขึ้นขนาด 4 เท่าของขนาดเดิม
- คุณ : This means that there will be me million new colonies in five years
: คิดว่ามันจะเป็นอย่างไรต่อครับ
- หทัย : มันมีจำนวนเป็นล้าน
- วุฒิ : มันไปแพร่พันธุ์ แล้วเกิดสายพันธุ์ใหม่
- คุณ : โดยรวม ๆ แล้ว สรุปว่าพูดเกี่ยวกับอะไร
- วุฒิ : มันไปแพร่พันธุ์ที่ไหนบ้าง
- เมธ : การอพยพของมัน
- นิจ : จำนวนสิ่งในอนาคต
- คุณ : สรุปหมายถึงการแพร่พันธุ์ของมันแล้วใน paragraph ต่อไป
- วุฒิ : เกี่ยวกับสายพันธุ์

- หทัย : ลักษณะการโจมตีของมัน คืออะไร
- เมธ : คำว่า dangerous คืออะไร
- ทุกคน : อันตราย
- เมธ : To be afraid หมายถึงอะไร
- หทัย : น่ากลัว
- วุฒิ : น่าเกลียดน่ากลัว
- หทัย : สำหรับคนทั่วไป
- เมธ : เมื่อมันจู่โจม แล้วมันอย่างไร
- นิจ : เมื่อมันจู่โจม
- เมธ : มันจะทำให้เกิดอะไรขึ้นได้
- หทัย : ทำร้ายคน
- เมธ : Seriously หมายถึงอะไร
- หทัย : หนัก ๆ
- วุฒิ : เครียด
- เมธ : Sting รู้ความหมายแล้วใช่ไหมครับจาก paragraph แรก
- นิจ : มันต่อย
- เมธ : มันต่อยเท่าไรล่ะที่ทำให้คนตายได้
- หทัย : 400 ครั้ง
- เมธ : มันละ attack คน นักเรียนใน Costa Rica ก็ครั้ง
- วุฒิ : 10,000 ครั้ง
- หทัย : มันโจมตีแบบไร้เหตุผล
- เมธ : คือมันจะโจมตีใครบ้าง อย่างไร
- หทัย : รุนแรง
- เมธ : แล้วยังไงละ
- วุฒิ : คนที่ใส่ดำ ๆ
- หทัย : เข้ม ๆ ผมดำ
- นิจ : สีอะไรที่เข้ม ๆ นะ
- เมธ : ก็อะไรอีก
- วุฒิ : ใส่อำมณี
- หทัย : ที่มันระยิบระยับงะ
- เมธ : สรุปลงนี้มันพูดถึงอะไร
- หทัย : การอันตราย

- นิจ : มันโจมตีอย่างไรบ้าง
 เมธ : เหตุผลที่มันโจมตี
 เมธ : ย่อหน้าต่อไปน่าจะพูดถึงอะไร
 คุณ : วิธีป้องกัน
 เมธ : ใช่ เพราะเมื่อมันพุ่งถึงอันตรายของมัน ที่มันต่อเรา น่าจะเป็นวิธีการป้องกัน
-
- ญา : เราจะทำอะไรเมื่อผึ้งมันมาหาเรา ทำไงคะ
 ทุกคน : วิ่งให้เร็วที่สุด
 ญา : เพราะอะไร
 วุฒิ : มันช้า
 หทัย : ไม่ช้า
 ญา : ไม่ใช่ not very fast
 หทัย : ก็คือช้า
 ญา : They ในประโยค they will follow up you to one mile. They หมายถึงใคร
 วุฒิ : Killer bees
 นิจ : Killer bees
 เมธ : Killer bees มันตามไป
 ญา : follow you up คือ
 หทัย : มันตามเราไป
 นิจ : เป็นไมล์เลย
 ญา : เราจะแก้ปัญหาอย่างไร
 หทัย : หลบในที่มันใกล้ที่สุด
 วุฒิ : ห้ามกระโดดลงน้ำ
 ญา : มันจะโจมตีที่ไหน
 นิจ : ที่หัวและหน้า
 ญา : เราจะทำไง
 วุฒิ : ปิดหน้า
 เมธ : คลุมหน้าด้วย handkerchief หรือ coat
 ญา : take off ในประโยค you may even take off your shirt หมายถึงอะไร
 นิจ : ถอด คลุมหัว
 วุฒิ : คลุมหัวด้วย
 ญา : มันจะไม่อันตรายตอนมันต่ออยู่ที่ไหน

วุฒิ : ที่อกและหลัง
 นิจ : โคนหัวอันตราย
 เมธ : โคนหัวอันตรายมาก
 ญา : However คือ แต่ อย่างไรก็ตาม
 วุฒิ : ต้องกินยา
 หทัย : ต้องกินยาทันทีถ้าถูกต่อย
 ญา : ดู paragraph นี้ ใจความสำคัญคือ
 นิจ : โคนมันต่อยอย่างไร
 คุณ : ถ้ามันต่อยต้องกินยาค่ะ
 เมธ : วิธีการป้องกันเมื่อถูกมันต่อย
 ญา : Paragraph ต่อไปน่าจะพูดถึงอะไร
 หทัย : สรุปเรื่อง

หทัย : Up to now มันน่าจะหมายถึงอะไร
 ชญา : จนถึงปัจจุบัน
 หทัย : Killer bees มันฆ่าคนไปที่คน
 ฐวุฒิ : ประมาณ 1,000 คน
 เมธ : วิว 10,000 ตัว
 หทัย : ที่ไหน
 นิจ : เฉพาะในอเมริกา
 ทุกคน : ทวีปอเมริกา
 หทัย : เฉพาะในประเทศอเมริกา มีคนตายเพราะ Killer bees กี่คน
 ทุกคน : 5 คน
 หทัย : ตั้งแต่เมื่อไหร่
 เมธ : ตั้งแต่ 1990
 หทัย : คนอเมริกันคนแรกตายที่รัฐอะไร
 วุฒิ : เท็กซัส
 หทัย : ปีอะไร
 ญา : 1993
 หทัย : หลังจาก Texas มันไปที่ไหนต่อ
 นิจ : ไปทั่วเลย

- หทัย : Where will they go next?
They หมายถึงอะไร
- วุฒิ : Killer bees
- หทัย : สรุป paragraph นี้ว่าอย่างไร
- นิจ : จำนวนคนที่มันฆ่าในอเมริกา จบ
-

Appendix J Findings from Interview

Interview Results

Interview Questions	Less Proficient Students	Proficient Students
<p>1. What is your planning before you read?</p>	<p>S₁: Read the whole roughly to find main idea. Clarify some Key words.</p> <p>S₂: Find main idea of the text.</p> <p>S₃: Read questions and try to find the answers</p> <p>S₄: Before reading, I will predict what the text will be about from the title.</p> <p>S₅: Set goals such as finding main idea, clarifying some words, and summarizing.</p>	<p>S₁: Read the questions then find the answer by scanning.</p> <p>S₂: Set goal to find main idea of each paragraph.</p> <p>S₃: Analyze the title of the text and use background knowledge to guess about the text.</p> <p>S₄: Set goal to find main idea. First, look at the title to guess what the text is about. Then, find main idea and follow with the details of the text.</p> <p>S₅: If there are questions, I will read the questions in order to find the answers</p>
<p>Conclusion: Students read the questions first in order to find the answers. Predict the text from the title by using background knowledge. Set goals before reading such as finding main idea, clarifying some key words and summarizing.</p>		
<p>2. Do you think predicting can help you improve your reading? why?</p>	<p>S₁: Yes, because it helps readers understand the text roughly.</p> <p>S₂: Yes, because the title relate to the text.</p> <p>S₃: Yes, because readers can guess the direction of the content of the text.</p> <p>S₄: Yes a lot, because if we are not good readers, predicting give us some ideas what the text is about.</p> <p>S₅: Yes because readers know about the text roughly before reading.</p>	<p>S₁: Yes because it narrows down the frame of idea and it is easy to analyze the text.</p> <p>S₂: Yes because readers can see the frame of the text.</p> <p>S₃: Yes because it link to the contents of text.</p> <p>S₄: Yes because we can guess the text from predicting</p> <p>S₅: Yes because most of the title related to the content of the text. Though it does not give much information of the text, it helps readers guess the direction of the text from the title.</p>
<p>Conclusion: All students agree that predicting help them improve their reading because it give a whole picture of the text. Readers understand the content of the text roughly from predicting from the title before reading. It helps poor readers to understand text.</p>		

Interview Questions	Less Proficient Students	Proficient Students
3. While you are reading, what do you plan to do?	<p>S₁: Find main idea, ask the questions on main idea, clarify some key words and analyze the content.</p> <p>S₂: Ask questions, find main idea and analyze the content.</p> <p>S₃: Read for the main idea</p> <p>S₄: Read roughly one time. Reread and underline the important details. Circle the unknown words or the sentences which I do not understand.</p> <p>S₅: Find main idea.</p>	<p>S₁: First skim, find the unknown words, then find more details.</p> <p>S₂: Find main idea.</p> <p>S₃: Find main idea and the relation in the content.</p> <p>S₄: Ask questions about the content of text and clarify unknown words.</p> <p>S₅: Find main idea.</p>
4. What are more important the main idea or supporting details? How do you find it?	<p>Conclusion: Find main idea by asking questions on main idea, clarifying the unknown words, and analyze the content. Moreover some students read roughly one time. Then, reread the text, underline the important details, and circle the unknown words.</p>	
	<p>S₁: Main idea by reading roughly first then reread to find main idea.</p> <p>S₂: Main idea by reading roughly to find the theme of the text.</p> <p>S₃: Main idea, it may be in the beginning, in the middle or at the end of the paragraph.</p> <p>S₄: Main idea by read and reread then I can comprehend the text.</p> <p>S₅: Main idea and ignore the unimportant details.</p>	<p>S₁: Main idea. Scanning the text for important details.</p> <p>S₂: Main idea. Notice from the content which the writer talks many times.</p> <p>S₃ : Main idea. Find what the writer mainly talks about the topic.</p> <p>S₄: Main idea. Read the whole passage to find out main idea.</p> <p>S₅: Main idea. Scanning the text to find the main idea.</p>
5. Do you think questioning can help you improve your reading? How do you use questioning strategy?	<p>Conclusion: Main idea is the goal of reading. To find main idea, students first scan the text to see the whole picture and reread it again to find out main idea and more details.</p>	
	<p>S₁: Yes, Asking question is useful for understanding the next content in the paragraph</p> <p>S₂: Yes, It help me understand the content and unknown words</p> <p>S₃: Yes. It helps me revise and understand the content of the text.</p>	<p>S₁: Yes. The questions should relate to the content and lead readers to analyze.</p> <p>S₂: Yes. It helps us see different aspect of the text. The questions can also be asked for the content that I do not understand.</p> <p>S₃: Yes. The questions should focus on questions such as what, when, who where, and why.</p>

Interview Questions	Less Proficient Students	Proficient Students
6. Do you think clarifying strategy can help you improve your reading? How do you use clarifying strategy?	<p>S₄: Read roughly one time. Reread and underline the important details. Circle the unknown words or the sentences which I do not understand.</p> <p>S₅: Yes. Ask the questions about the important points of the content.</p>	<p>S₄: Ask questions about the content of text and clarify unknown words.</p> <p>S₅: Yes. The question should interact with the content of the passage.</p>
	<p>Conclusion: All students agree that asking questions is very important. It helps them comprehend the passage more. The questions should relate to the content: important points of the content and unclear points of the content.</p>	
	<p>S₁: Yes, a lot. Knowing the meaning of the words help me to understand the text. I guess the meaning of unknown words from context clues or my background knowledge</p> <p>S₂: Yes. Clarifying help me understand the passage. I guess the meaning of the word from the word I know and I some times look at sentence structure to see the relation of the sentence and the unknown words.</p> <p>S₃: Yes, I guess the meaning of words from context clue and from the sentences.</p> <p>S₄: Yes. I find the meaning of the words by using word formation and sentence.</p> <p>S₅: Yes. I use context clues and background knowledge.</p>	<p>S₁: Yes. If we don't know the meaning of key words, it will be difficult to comprehend the passage.</p> <p>S₂: Yes. I find the meaning of words from the sentence before and after the sentence the unknown words are in.</p> <p>S₃: Yes. I use word formation such as root, prefix, suffix and part of speech help me to clarify the unknown words.</p> <p>S₄: Yes. I use my background knowledge, context clue, and word formation helps me for clarifying.</p> <p>S₅: Yes. The more we know the meaning of words, the more we comprehend the passage. I clarify the words or references from the sentences or context clues.</p>
	<p>Conclusion: All students agree that clarifying is important strategy to use to comprehend the passage. Students clarify the unknown words, key words, or references from context clues, word formations, sentence structures and their background knowledge.</p>	

Interview Questions	Less Proficient Students	Proficient Students
7. While you are reading, do you have other approach to help you besides predicting, questioning, and clarifying?	<p>S₁: Use background knowledge</p> <p>S₂: Use background knowledge and concentrate in reading.</p> <p>S₃: Use background knowledge.</p> <p>S₄ : Hypothesize</p> <p>S₅: Summarize the content of the passage.</p>	<p>S₁: Use background knowledge</p> <p>S₂: Use background knowledge.</p> <p>S₃ : Translate into Thai</p> <p>S₄: Reread when I do not understand and use my background knowledge.</p> <p>S₅: Use background knowledge which relate to the passage.</p>
	Use background knowledge, summarize hypothesize the content of the passage and concentrate while reading.	
8. While reading, do you evaluate yourself? How?	<p>S₁: Yes. I check my understanding, how well I comprehend the passage.</p> <p>S₂: Yes. I asked myself whether I got main idea of the passage and whether I understood the passage.</p> <p>S₃: Yes. I try summarize the content of the passage to see whether I comprehend the passage</p> <p>S₄: Yes but not fix.</p> <p>S₅: Yes. I always ask myself while reading. If I do not comprehend the passage, I reread id.</p>	<p>S₁: Yes. I summarize the content of text.</p> <p>S₂: Yes. I reread the passage unless I understand the passage.</p> <p>S₃: Yes. I check my understanding of the content and how many words I know the meaning. If I do not comprehend the text. I reread the passage.</p> <p>S₄: Yes. I reread the passage if I do not understand.</p> <p>S₅: Yes. I summarize and reread the text.</p>
	Conclusion: All students evaluate themselves while they are reading. They check their understanding by summarizing. If they do not comprehend the passage, they reread it.	

Interview Questions	Less Proficient Students	Proficient Students
9. When you do not understand the passage, what will you do?	<p>S₁: Use dictionary to find the meaning of Key words and reread.</p> <p>S₂: Reread the passage</p> <p>S₃: Read for the details till I Understand.</p> <p>S₄: Reread and consult my friends in my group. If my friends also do not understand, I ask the teachers.</p> <p>S₅: Reread till I understand the passage and use dictionary for key words that I can not guess.</p>	<p>S₁: Reread and order the events in the passage.</p> <p>S₂: Reread</p> <p>S₃: Reread</p> <p>S₄: Reread and clarify some key words and summarize the content to check my understanding.</p> <p>S₅ : Reread</p>
10. After reading, do you think summarizing help you comprehend the passage? How do you summarize the passage you have read?	<p>S₁: Summarizing helps me comprehend the passage. I summarize by linking the main idea of each paragraph.</p> <p>S₂: Summarizing help me understand the passage more. I summarize by linking the main idea of each paragraph and analyze.</p> <p>S₃: It helps me. Connecting each main idea and make a connection between each paragraph.</p> <p>S₄: It makes the content of the passage concise. I connect the main points of each paragraph for summarizing.</p> <p>S₅: I summarize the whole passage in a concise and easy to understand.</p>	<p>S₁: I reorganize the main points of each paragraph.</p> <p>S₂: It helps me. I make a conclusion from main idea.</p> <p>S₃: It helps me. I combine the main idea from each paragraph.</p> <p>S₄: It helps me to be better reader. I summarize from the main points of the passage and ask myself what the writer wants to convey to readers.</p> <p>S₅: I understand more by summarizing. I summarize the main points of the passage which connect with each other.</p>
	<p>Conclusion: Summarize help students to understand the passage more. Students summarize by connect the main idea fro each paragraph concisely.</p>	

Interview Questions	Less Proficient Students	Proficient Students
11. What do you think about working in group?	<p>S₁: Good I can share my idea. Everyone helps me.</p> <p>S₂: Good. It's a team work. We help each other, share ideas, and practice to be a leader.</p> <p>S₃: It's good. Help each other, practice to be a leader and good members of the group. It decreases my shyness and braves enough to share my idea.</p> <p>S₄: It helps us complete our task easily. Support our understanding and have a chance to be a leader.</p> <p>S₅: It helps us to be more harmony. Working together and help each other likes the real life. While I was a follower I learn from my friend, how to be a good leader.</p>	<p>S₁: Everyone have a chance to work and think together. It's not boring. Everyone can give comment and practices to be a leader.</p> <p>S₂: We can share knowledge and experience. Practice to be a leader and encourage as sharing ideas.</p> <p>S₃: It is a good system to work because everyone can share ideas and help each other</p> <p>S₄: It is good. We can share our knowledge but at the beginning some members sometimes did not share ideas. However, everyone has a chance to be a leader and a member of the group</p> <p>S₅: It is good. We have harmony and share our knowledge and experience. I learn from friends and adjust myself to be a good leader. In the future I can be a good leader or act as a teacher to help others.</p>
<p>Conclusion: Working in group helps students feel relax. Moreover, they learn from their friends. They can share their knowledge, idea, and experience with their friends. Moreover, the proficient students can help the less proficient ones.</p>		

VITAE

VITAE

Name: Mrs Yuwadee Yoosabai
Date of Birth: April 12, 1960
Place of Birth: Nakornpanom
Address: 143 Therdthai Road, Bangyeerua,Thonburi,
Bangkok 10600

Education Background:

1984 Bachelor's degree from Chulalongkorn University
1991 Diploma in TEFL
from Srinakharinwirot University
1998 Master's degree
from Srinakharinwirot University