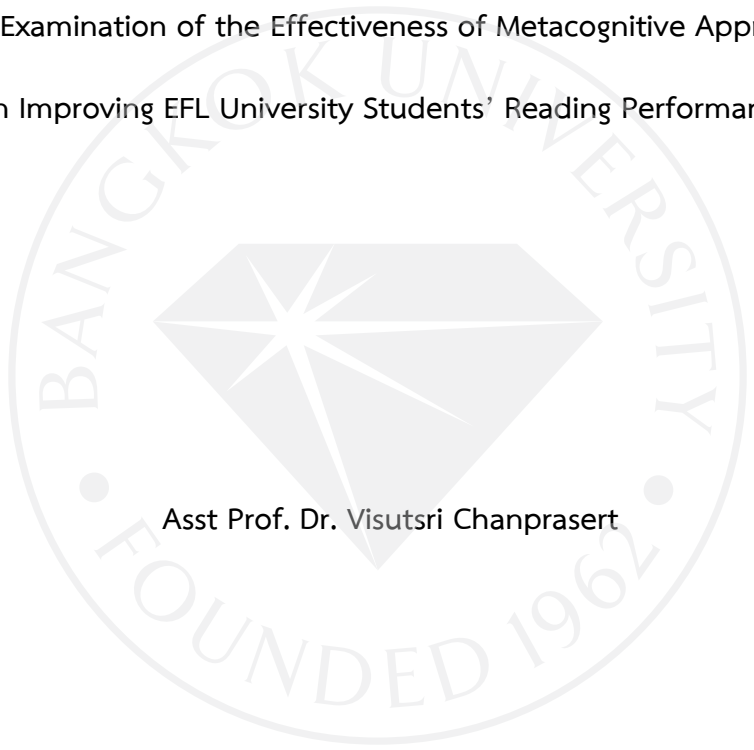


รายงานการวิจัย

เรื่อง

An Examination of the Effectiveness of Metacognitive Approach
in Improving EFL University Students' Reading Performance



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Research Title	An Examination of the Effectiveness of Metacognitive Approach in Improving EFL University Students' Reading Performance
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ABSTRACT

The purposes of this study were 1) to determine the differences in awareness of metacognitive reading strategies used before and after the strategy instructions; 2) to investigate the effectiveness of using metacognitive reading strategies on students' reading comprehension; 3) to examine the effects of metacognitive reading strategy instruction on students' reading performance.

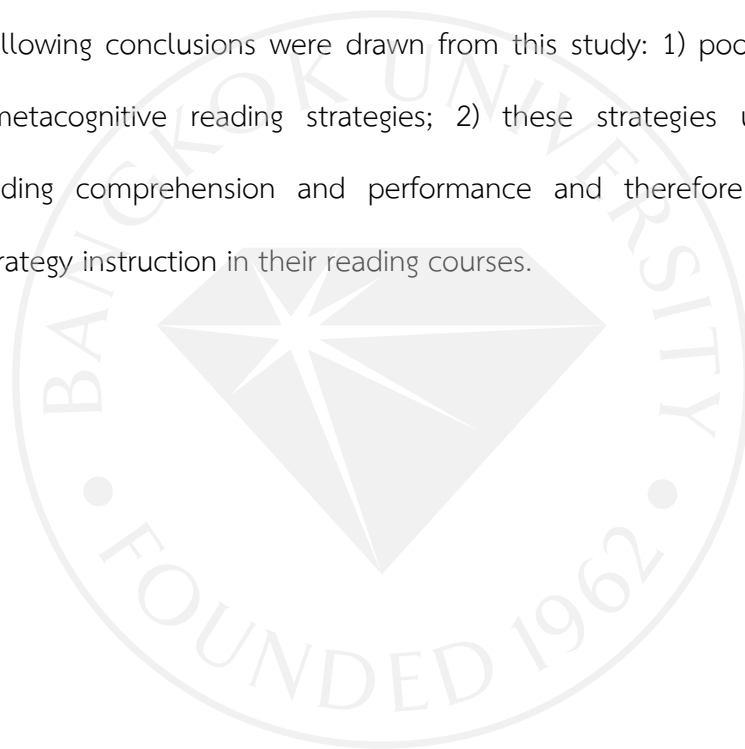
The participants were forty fourth-year English major students at Bangkok University enrolling in "Reading in Business" course. They were instructed with Metacognitive reading strategies used before, during, and after reading. These metacognitive reading strategies include previewing to make prediction; activating prior knowledge and setting up purposes to get involved; asking questions and looking for answers to check understanding; and applying fix-up strategies for better comprehension.

To answer the three research questions, the following instruments were used. Metacognitive Awareness of Reading Strategies Inventory of MARSI was administered to measure levels of their metacognitive reading awareness before and after the strategy instruction. Next, participants' reading responses and observation checklists were analyzed to determine participants' improvement in reading comprehension and performance. Then, conversational interviews and group discussion were used to

support and explained how the strategy instruction helped them improve their reading comprehension and performance.

The findings reveal positive results. Their metacognitive reading awareness as measured by MARSII has significantly increased at 0.01 level after the instruction. Metacognitive reading strategies employed before, during, and after reading taught were found to improve their reading comprehension and performance. They used the metacognitive approach as a tool to motivate and facilitate them in reading.

The following conclusions were drawn from this study: 1) poor readers can be taught the metacognitive reading strategies; 2) these strategies used significantly improved reading comprehension and performance and therefore teacher should include the strategy instruction in their reading courses.



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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อ 1) ศึกษาการพัฒนาการรับรู้การใช้กลยุทธ์ในการอ่านก่อนและหลังการเรียนการกลยุทธ์การอ่าน; 2) ตรวจสอบประสิทธิผลของการใช้เทคนิคในการอ่านที่มีผลต่อความเข้าใจ; 3) ศึกษาผลของการใช้ metacognitive approach ก่อน ระหว่างและหลังการอ่านที่มีผลต่อพฤติกรรมการอ่าน

ผู้เข้าร่วมงานวิจัยเป็นนักศึกษาวิชาภาษาอังกฤษชั้นปีที่ 4 ที่ลงทะเบียนวิชา Reading in Business จำนวน 2 กลุ่มรวม 40 คน ผู้เข้าร่วมจะได้รับการฝึกการใช้กลยุทธ์ในการอ่าน และการกำกับการอ่านโดยตนเอง (Metacognitive Approach) 3 ขั้นตอน คือ 1) ก่อนการอ่าน ผู้อ่านจะ preview เพื่อเตรียมพร้อมและรับรู้เรื่องที่กำลังจะอ่าน การนำความรู้และประสบการณ์เกี่ยวข้องมาใช้ เพื่อสร้างการเชื่อมโยงระหว่างเรื่องที่อ่านและสิ่งที่รู้หรือประสบการณ์ในชีวิตจริง การตั้งเป้าหมายในการอ่านไม่ว่าจะเป็น การอ่านเพื่อต้องการหาข้อมูล หรือการอ่านเพื่อทำงานที่ได้รับมอบหมาย เช่นตอบคำถามท้ายบท การเขียนแสดงความคิดเห็นเกี่ยวกับเรื่องที่อ่าน; 2) ระหว่างที่อ่าน การตั้งคำถามที่ตนเองต้องการรู้และค้นหาคำตอบ เพื่อตรวจสอบว่าตนเข้าใจเรื่องี่อ่านมากน้อยเพียงใด การใช้ fix-up strategies เพื่อช่วยให้เข้าใจเรื่องที่อ่านมากขึ้น; 3) หลังการอ่าน ผู้อ่านสรุปและแสดงความคิดเห็นเกี่ยวกับเรื่องที่อ่าน

เพื่อตอบคำถามวิจัย เครื่องมือที่ใช้มีดังนี้ 1) MARSI ใช้เพื่อวัดระดับการรับรู้เทคนิคการอ่าน ทั้งก่อนและหลังการเรียนเทคนิคนั้น; 2) งานเขียน (reading Responses) และตารางการสังเกตการณ์ (Checklists) พฤติกรรมของผู้เข้าร่วมวิจัยในห้องเรียน นำมาวิเคราะห์ เพื่อตรวจสอบประสิทธิภาพและผลของการใช้ Metacognitive Approach ต่อความเข้าใจและความสามารถในการอ่าน 3) การสัมภาษณ์เดี่ยวและกลุ่ม นำมาประกอบการอธิบายสิ่งที่เกิดขึ้น

ผลของการวิจัยสรุปได้ว่า 1) การรับรู้การใช้กลยุทธ์ในการอ่านของผู้เข้าร่วมวิจัย เพิ่มขึ้นอย่างมีนัยที่ 0.01 หลังการสอนและการฝึกการใช้กลยุทธ์ดังกล่าว; 2) เทคนิคในการอ่านสามารถช่วยให้ผู้เข้าร่วมมีความเข้าใจเรื่องที่อ่านมากขึ้น; 3) การใช้การกำกับการอ่านด้วยตนเองก่อนระหว่าง หลังการอ่าน มีผล

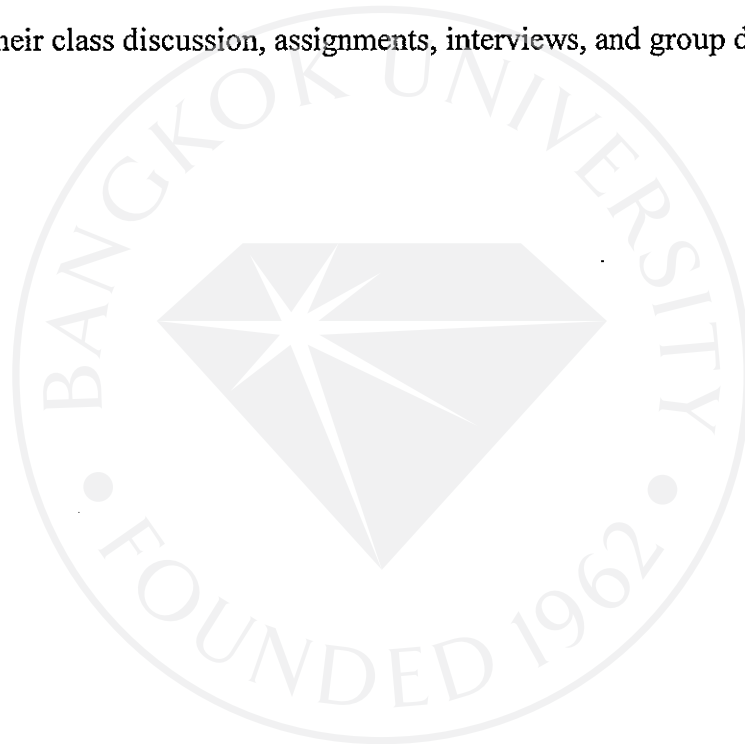
ต่อพฤติกรรมในการอ่าน ผู้อ่านใช้เป็นเครื่องมือและเป็นแรงจูงใจในการทำงาน รวมทั้งทำให้มีส่วนร่วมในเรื่องที่อ่านมากขึ้น

จากการวิจัยขอเสนอแนะว่า 1) ควรสอนการใช้เทคนิคในการอ่านให้นักศึกษาที่มีปัญหาในการอ่าน เพื่อช่วยให้สามารถอ่านอย่างมีประสิทธิภาพและเข้าใจเรื่องที่อ่านมากขึ้น; 2) ควรสอนกลยุทธ์ในการอ่านที่หลากหลาย และ Metacognitive Approach ในวิชาการอ่าน เพื่อให้นักศึกษาได้ฝึกใช้เทคนิคการอ่านอย่างมีประสิทธิภาพมากขึ้นอย่างต่อเนื่อง



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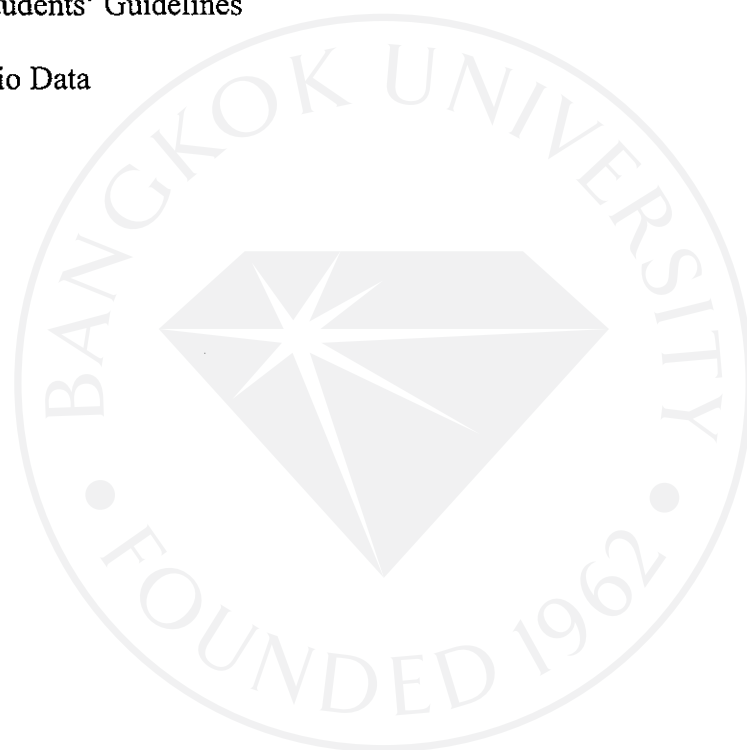
I am grateful for the grant and other supports Bangkok University has given me to undertake this research project. I would also like to acknowledge the invaluable advice Prof. Dr. Nongluk Wiratchai and Assoc. Prof. Dr. Sumalee Chinokul gave me during my proposal writing. Further, I appreciate both A. Pranee Swadisan and A. Paweena Kulprasoot for their assistance and advice throughout this research. And finally my special thanks go to all my students who participated in this study through their class discussion, assignments, interviews, and group discussion.



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CHAPTER 1

INTRODUCTION

Background of the Study

Reading has long been valued as a tool to acquire knowledge. In 2003, UNESCO established 2003-2012 as the “Literacy Decade” with a focus on all children achieving permanent literacy before they leave school so that they can use it as “a tool to advance and extend the knowledge and skills” which are essential for daily life in modern society. In Thailand, the government has realized that we have to strive to be a knowledge-based economy to compete with other countries in Asia for a better economy and that reading is one the keys to achieve that goal. Furthermore, to be in globalized economy, we need to read not only in Thai but in English as well.

Incidentally, as a reading teacher for more than 20 years, the researcher has observed that reading in English seems to cause problems for EFL students, not only because of their low level of vocabulary, but also their low motivation and little interest in reading as well. Consequently, their reading performance has decreased as they do not know what to do when they face difficulty in reading. Although it is evident that students can ‘improve their reading through reading,’ it is quite difficult to do so if they do not have a tool to solve their reading problems. In class, they lack motivation in reading even those whose English proficiency is good. What are the reasons behind this occurrence? What can we do about it? How can we motivate students to read in class and carry this attitude and motivation to read outside class? It is essential to find out solutions to the problems since poor reading abilities affect academic performance which in turn affects the human resources.

As a reading teacher, the researcher believes that there are ways to solve the problems and has therefore tried different strategies to improve students’ reading

comprehension and performance. She has also observed their reading behaviors and found some of the problems as follow:

1. They lack motivation and show little interest in reading.
2. They do not know why they read (lack purpose).
3. They do not know what to do when facing difficulty in reading (no knowledge of effective reading strategies) and therefore do not know what they are reading. That is they lack comprehension which is the reason for reading.

Researchers (Pressley et al., 1998) found that students' comprehension was not enhanced by merely reading more text but if they were given a variety of strategies that they could apply at their discretion, comprehension was greatly improved. At the same time, researchers have long recognized the importance of metacognition—the awareness and monitoring of one's comprehension process—in reading as it distinguishes between good readers and poor readers. This is supported by Thomas and Barksdale-Ladd (2002) who find that good readers, throughout their reading, use metacognition in order to make sense of what they are reading. In the same respect, many researchers have noted that an important aspect of reading comprehension is the metacognitive awareness and monitoring of comprehension process while reading and that good readers know what they are reading, why they are reading, how they read to understand the text; in other words, they know what strategies to use (Mokhtari & Reichard, 2002; Kuhn 2000). Knowing how to put together more than one reading strategy is an important metacognitive skill and it is a major distinction between good and poor reader (Anderson, 2002).

Although over the past two decades, research has documented the important role of metacognition in learning, many students are unaware of its use and how it can improve their learning. It is believed that strategy instruction has demonstrated that

students can learn to use metacognitive strategies for better comprehension and performance. More importantly, results of research suggest that low-achieving students can be taught to use metacognitive reading strategies which may ultimately improve their reading comprehension (Baker 2002). Other research results also indicate that students who received metacognitive tutoring improved in reading comprehension and did better than students who did not receive metacognitive tutoring (Hartman, 2000).

Reading theories and research have revealed that readers do better if they can control or monitor their own reading task—if they know what they are reading, why they read and how they read (Collins et al, 1996). It is supported by Anderson (2002) that “the use of metacognitive strategies ignites one’s thinking and can lead to more profound learning and improved performance”. Likewise, students’ metacognitive abilities greatly influence their reading achievement and that metacognitive strategies not only help improve intermediate or advanced readers but also struggling readers in their literacy achievement. In the same token, Collins (1996) finds out that the use of metacognitive strategies can improve reading performance especially among struggling readers whereas Cooper (2004) points out that the explicit methods for teaching metacognition strategies to students may contribute to improving students’ performance across age groups and subject domains.

The researcher would like to find out if students can better understand if they use a metacognitive approach before, during, and after reading in which students regulate and motivate themselves by setting their goals in reading, choosing appropriate reading strategies, and reflecting on what they have read. This leads to this study on a metacognitive approach in reading in relation to the improvement of students’ reading comprehension and performance.

The conceptual framework of the study was based on the theories of cognitive process stating that metacognition helps improve learning performance and that the use of metacognitive strategies in learning how to read positively improves reading achievement (Baker, 2002; Hartman, 2000).

Objectives of the study

The objectives of the study are to:

1. determine the differences in awareness of metacognitive reading strategies used before and after the strategy instructions;
2. investigate the effectiveness of using metacognitive reading strategies on students' reading comprehension;
3. examine the effects of metacognitive reading strategy instruction on students' reading performance.

Hypothesis and Research Questions

Hartman (2000) cited the result of research suggesting that students who received metacognitive tutoring improved in reading comprehension and did better than students who did not receive it whereas Collins (1996) found out that metacognition instruction enhanced reading comprehension and, in some instances, increased motivation. Reading researchers believe how well a reader constructs meaning (comprehension) depends in part on metacognition, the reader's ability to think about and control the reading process in which they plan, monitor comprehension, and revise the use of strategies for comprehension (Knuth 1991).

These notions lead to the following three research questions:

1. Can students develop more awareness of metacognitive reading strategies used before, during and after reading as a result of the strategy instruction?

2. Can using these metacognitive reading strategies help them better understand the reading text?
3. Can using metacognitive approach before, during and after reading enhance their reading performance?

The researcher hypothesizes as follows:

1. Students' awareness of metacognitive reading strategies increase as a result of the strategy instruction..
2. Metacognitive reading strategies students use before, during, and after reading increase their reading comprehension.
3. Metacognitive approach used before, during, and after reading enhance their reading performance.

Significance of the Study

The goal of this strategy instruction is for students to develop metacognitive awareness and self-regulatory mechanisms to facilitate their reading comprehension and to support their reading performance. After the metacognitive reading strategy instruction, students are expected to:

1. develop more awareness in metacognitive reading strategies;
2. regulate and motivate themselves to make reading purposeful and meaningful.
They will no longer see reading as an end (to finish a task they're required to do) but a means to an end (a tool to gain knowledge);
3. become better readers knowing what effective strategies to use, when to use and how to use them so that they better understand the reading text, improve their reading performance, and are independent readers.

Definition of Terms

Metacognitive Approach is a reading process in which readers self motivate and self regulate using different strategies before, during and after reading. The process includes planning (what to do before, during, and after reading), monitoring (using a variety of strategies to help them understand) and assessing (knowing what they understand or what they do not). Students' awareness of metacognitive reading strategies is measured by MARSII which reveals its development.

Self Motivation in Reading is the readers' ability to keep focused, anticipate what to read, get involved, read within limited time, and to finish a reading task.

Self regulation in Reading is the readers' ability to monitor themselves to read choosing different reading strategies such as previewing to predict what they are about to read, using prior knowledge to make sense of the text, using fix up strategies when they do not understand the text, self questioning to check their understanding.

Reading Comprehension is the readers' ability to understand the text. This includes the abilities to determine the writer's purpose, identify main idea/main points, recognize cause-effect, summarize major ideas, and make personal connection with the text. This is assessed by students' reading responses supported by observation checklists and conversational interviews.

Reading Performance is the readers' ability during the process of reading in which they self-motivate, understand purposes for reading, know what strategies to use, know what they understand or what they do not, know what to read or what to ignore, be able to integrate their personal experience with ideas in the text. This is determined by observation checklists supported by conversational interviews in which students talk about what strategies they use and by a focus group discussion in which students talk about the improvement in their reading performance.

CHAPTER 2

REVIEW OF RELATED LITERATURE

This chapter reviews background knowledge of the research, theories and framework of the study, and related research results.

Background knowledge of the research

As evident, reading is a tool in learning and comprehension is the reason for reading. Reading is seen as an interactive process between readers and texts. As Snow (2002) points out that reading is a process of simultaneously extracting and constructing meaning through interaction and involvement with written language which includes three elements: the reader, the text, and the purpose for reading. This is supported by Knuth & Jones (1991) who believe that reading is a process in which readers interact with the text using effective strategies while reading comprehension is a result of an interaction among the reader, the strategies used, the materials read, and the purpose of the reading task.

Goldman & Rakesteraw (2002) also see comprehension as a combination of readers and text as well as context in which readers connect their prior knowledge between what the readers know and what they are reading. They point to strategy instruction as an approach to improve reading comprehension. Interestingly, Schreiber (2005) also confirms that reading instruction requires the development of strategies that facilitate readers' metacognitive awareness and self-regulation to construct meaning in the text.

Metacognition has become an important concept in theories of education psychology since it was first introduced by John Flavell in 1970s (Hartman 1998). He first defined it as "thinking about or controlling one's own thinking and learning process." It includes knowledge about learning, self as a learner, and the monitoring

skills used while learning. Flavell (2002) also refers to metacognition as three factors: reader, task, and strategies. The term 'metacognition' is generally known as "thinking about thinking" and was later described by Paris, Wasik, and Turner (1991) as "self awareness, self-regulation, and self-motivation" while Mokhtari & Reichard (2002) defined metacognition in reading as "the knowledge of the readers' cognition about reading and the self-control mechanisms they exercise when monitoring and regulating text." Kuhn (2000) defines metacognition as a process enhancing metacognitive awareness of strategies and how they are applied to process new information. He believes that good readers use one or more metacognitive strategies to comprehend text.

In a more concrete term, reading metacognition is a process in which readers select and control the use of different strategies to achieve a reading task (Smith 2002). Livingston (1997) explains that in metacognition, students are taught how to be more aware of their learning process as well as how to regulate those processes for more effective learning. The activities such as planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task are metacognitive in nature. On the whole, Hacker (1998) pointed out, metacognition involves activating knowledge, making predictions about meaning, reflection on what has been comprehended, and revising understanding.

It is apparent that metacognition has been applied in many fields, namely study skills, mathematics, physics, science, and particularly in reading as a way of "learning how to learn". There is also evidence that metacognition is used in teaching in other countries such as Germany, Canada, Australia, UK, Korea, China, as can be seen from published research articles. In Thailand, though the metacognition was not much known in the past, at present educators and researchers are more interested in it

as Dr. Kasam Worawan Na Ayutthaya (2003) pointed out that it should be integrated in all subjects so that students “learn how to learn”.

Most researchers have long accepted that metacognition plays an important role in reading as Collins (1996) found that metacognitive knowledge and reading comprehension were related significantly in 92% of his studies.

Theories and Framework

The conceptual framework of the study was based on the theories of cognitive process stating that metacognition helps improve learning performance and that the use of metacognitive strategies in learning how to read positively improves reading achievement (Baker 2002; Hartman 2000). Reading involves more than just checking students understanding of a text but actually includes teaching them how to comprehend text (Durkin, 1979). He also sees reading comprehension not as an isolated process that is activated after reading but as a network of process working together before, during, and after reading. Metacognitive instruction is believed to facilitate reading comprehension and it is strongly associated with successful reading development (Cooper 2004). A study by Brown and Palincsar (1985) revealed that more successful readers engaged in metacognitive activities including planning before reading, monitoring understanding during reading and checking outcomes after reading. That is to say readers know what they are doing/thinking while they read by self-monitoring. They know why they read by setting goals, how they read and what they are reading through the application of metacognitive reading strategies to construct meaning and to understand the texts.

Metacognition consists of five components: 1) planning; 2) deciding when to use particular strategies; 3) knowing how to monitor strategy use; 4) learning how to use multi strategies simultaneously; and 5) evaluating reading strategy use (Anderson,

2002). However, awareness is hold as an important factor in metacognition. As Wade et al. 1989 found that three types of awareness is necessary to reading and can be taught: 1) task awareness—awareness of the purpose for reading; 2) strategy awareness—awareness of what strategies are available for accomplishing this purpose; and 3) performance awareness—awareness of how effective each of these strategies is for accomplishing the purpose.

According to Anderson (2002), two main categories of metacognition strategies used to improve reading comprehension and performance the researchers cite are

1. Fix-up strategies to resolve comprehension failures which includes visualizing, rereading, adjusting the rate of reading, using contextual analysis to identify unknown words or concepts.
2. Study strategies which include underlining, outlining, summarizing, and self-questioning. Various studies have reported improved performance by students at different levels who were trained to use specific study strategies.

Related research results

Research in the past three decades suggests that teaching students to monitor their reading is essential to success in reading comprehension (Baker & Brown, 1984). In the same token, other studies have shown that students who use metacognitive strategies when reading become better readers and more clearly understand what they read (Cross and Paris, 1988; Dewitz and Dewitz, 2003). Vice versa, Snow et al (1998) found that lack of these metacognitive reading strategies is one of the main reasons some students do not become good readers. This is also in line with Collins (1996) who believes that successful readers engage in metacognitive reading skills while struggling readers generally lack them. Snow et al (1998)

supported the notion that proficient readers require the metacognitive processes of evaluating comprehension.

Researchers in reading believe that good readers use a variety of strategies such as setting goals, previewing text to connect with prior knowledge, relating new information to existing knowledge, and monitoring reading (Cooper, 2004). Similarly, a study on reading behaviors of good readers by Pressley and Afflerbach (1995) found that good readers use specific metacognitive strategies before, during, and after reading to assist in their comprehension while less able readers are less proficient in automatically apply such strategies. Therefore, these strategies should be taught to poor readers as a tool to tackle their problems in reading (Block & Israel 2004; Pressley & Afflerbach 1995).

Research results showed that reading metacognition is related to reading comprehension and that this relation may be affected by students' motivation as Pierce (2003) found that metacognition affects motivation because it affects attribution and self-efficacy. That is when students achieve good results they tend to attribute the result to their ability and effort; they are then motivated while underachievers tend to put little effort on the tasks and lack motivation to complete a task. Not only that metacognition instruction enhances reading comprehension and performance but in some instances, increases motivation (Collins, 1996).

Evidence supports that it is essential to assist students to be independent when reading through the use of metacognitive strategies (Block, 2004). Israel (2007) notes that the use of metacognitive strategies increases students' reading performance. They are tools to help develop and control over reading and improve reading comprehension and develop more effective and critical reading. Anderson (2002) concludes that the use of metacognitive strategies ignites one's thinking and can lead

to more profound learning and improved performance, especially among struggling readers.

A large volume of work indicates that we can help students acquire the strategies and processes used by good readers and that this improves their overall comprehension of text (Farstrup & Samuels, 2002). As evident, research indicates that readers use many strategies but good readers tend to use the most effective strategy that leads to a thorough processing of the text. Another research suggests that metacognitive approach helps inefficient readers increase their awareness and use of reading strategies while reading (Mokhtari & Reichard, 2002). Not only what strategies to use but also when, where, and how to use them.

Other research reveals that successful readers tend to relate text to previous knowledge while less successful readers showed little tendency to use their knowledge to understand the text (Collins 1996). Additionally, good readers have automatically developed these reading strategies over long period of time, with lots of different texts and lots of opportunities to practice applying strategies. Therefore, metacognitive reading strategy instruction should be done over period of time. The study also reveals that strategy learning and self regulation of strategies are correlated with motivation (Guthrie, et al., 2004). Research also shows that good readers use metacognitive strategies in reading and that high achievements in reading correlated with high abilities in using reading strategies and metacognitive behaviors. At the same time, good readers better monitor and better use reading strategies. That is, students' metacognitive abilities greatly influence students' reading achievement. This is supported by Smith (2002) that development of metacognitive strategies and behaviors can help poor readers make improvements in their reading achievement.

Reading research has recently begun to focus on reading strategies and how the use of strategies is related to effective reading comprehension. These strategies are actions that readers select and control to achieve desired goals and objectives. The term, “strategies” refer to reader’s active participation and their reader’s performance (Carrel, 1998). Reading strategies are of interest for what they reveal about the way readers manage their interaction with written text and how these strategies are related to text comprehension. Comprehension and reading strategies indicate how readers conceive of a task and how they make sense of what they read and what they do when they don’t understand. These strategies are processed to enhance reading comprehension and overcome comprehension failures (Singhal, 2001).

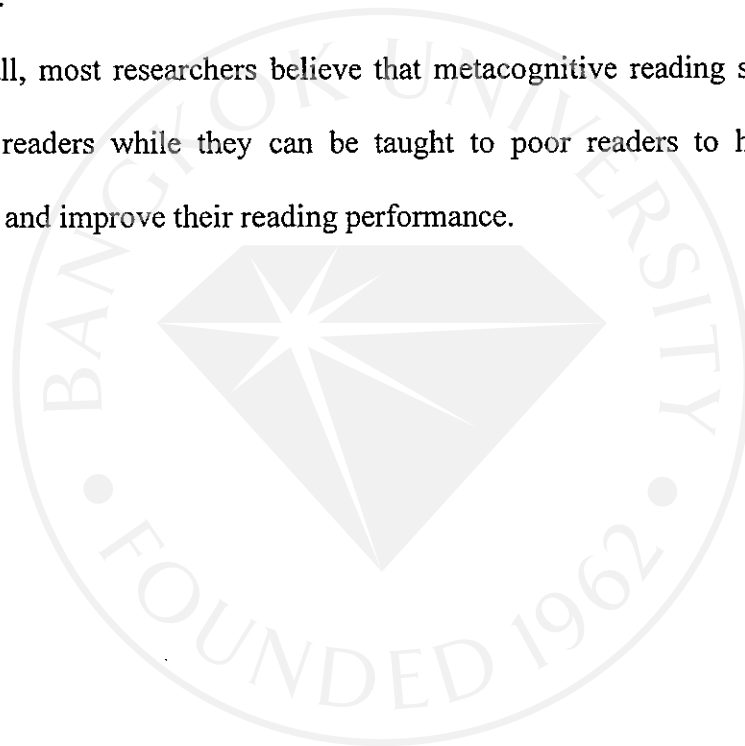
Poor readers are generally less strategic and unaware of the strategies they did use. This is due in part to the fact that they devote too much attention to the vocabulary that there are no cognitive resources left for construction of meaning. Hence, an effective instructional program for poor readers may need to include metacognitive training in appropriate strategies for developing comprehension (Bruce 2000). However, effective instruction in metacognitive reading strategies requires that explanation of the strategies when, why, and how to use them, provide guided practice on a range of texts, and give corrective feedback (Hartman, 2000). These metacognitive reading strategies include previewing, activating relevant prior knowledge, visualizing, predicting, self-questioning, comprehension monitoring, and summarizing.

Generally, self-monitoring plays an important role in learning as students start viewing themselves as responsible for their learning. Therefore, it is essential that students at any level should be instructed with metacognitive strategies including those in the university (Diket, & Abel, 2001). This is supported in the study by

Thomas and Barksdale-Ladd (2000) pointing out that university students also need more training on metacognitive strategies.

Another study by Phakiti (2003) investigating the relationship of test-takers' use of cognitive and metacognitive strategies among the EFL students at a Thai university suggested that (1) the use of cognitive and metacognitive strategies had a positive relationship to the reading test performance; and (2) highly successful test-takers reported significantly higher metacognitive strategy use than the moderately successful ones.

All in all, most researchers believe that metacognitive reading strategies are used by good readers while they can be taught to poor readers to help them in comprehension and improve their reading performance.



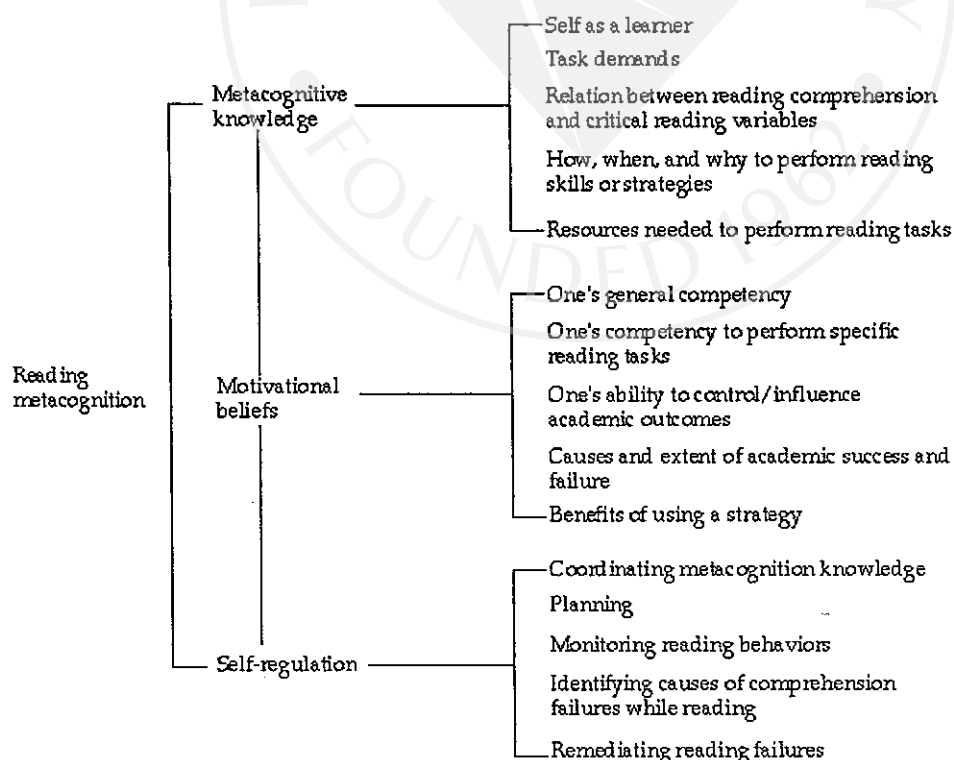
CHAPTER 3

RESEARCH DESIGN

This study was based on the hypothesis that metacognitive approach used before, during, and after reading can enhance the students' reading comprehension as well as performance. Two main theories of metacognitive approach implemented by researchers in the field of metacognition in reading were applied in this study.

1. *Reading metacognition* as seen in Figure 1 comprises of a) metacognitive knowledge (know what they understand or what they don't); b) motivational beliefs—in their competency to perform specific reading tasks, in the benefit of using a strategy; and c) self-regulation (monitoring their own reading behaviors—knowing what to do when they don't understand).

Figure 1: Reading Metacognition



(Source: Collins, 1996)

2. *Metacognitive behaviors of good readers* summarized by Cook (1989) as illustrated in Figure 2 in which students control their behaviors before, during and after reading.

Figure 2: Metacognitive Behaviors of Good and Poor Readers

	GOOD READERS	POOR READERS
BEFORE READING	<ul style="list-style-type: none"> • Activate prior knowledge • Understand task and set purpose 	<ul style="list-style-type: none"> • Start reading without preparation • Read without knowing why
DURING READING	<ul style="list-style-type: none"> • Anticipate and predict • Use fix-up strategies when lack of understanding occurs • Use contextual analysis to understand new terms • Use text structure to assist comprehension • Organize and integrate new information • Self-monitor comprehension by knowing what is being understood 	<ul style="list-style-type: none"> • Are easily distracted • Read to get done • Do not know what to do when lack of understanding occurs • Do not recognize important vocabulary • Do not see any organization • Add on, rather than integrate, new information • Do not realize they do not understand
AFTER READING	<ul style="list-style-type: none"> • Summarize major ideas • Reflect on what was read 	<ul style="list-style-type: none"> • Stop reading and thinking • Feel success is a result of luck

(Source: Cook, 1989)

Samples

This study was conducted in an ongoing regular 'Reading in Business' class in Semester 2/2004 at Bangkok University. The 40 students participating in this study were 2 groups of fourth-year English major students selected from those enrolling in the course. . These samples were divided into two groups—20 good readers and 20 poor readers—by their previous grades in 4 reading courses. Good readers were defined as those with grades A or B+ whereas poor readers were defined as those with grades C or D. Eventually, the top eight from each group were chosen to study in details—in class observation, conversational interviews, and group discussion.

Variables

In this study, the strategy instruction—metacognitive approach used before, during and after reading—is considered an independent variable while the awareness of the strategy, reading comprehension, and reading performance are dependent variables. Since the researcher basically studied the reading performance of each student not in comparison with others, therefore, other factors such as their English proficiency—levels of vocabulary, knowledge of language structure, and language development were not considered in this study.

Research Methodology

In this study, students were instructed to

1. develop their awareness of the metacognitive reading strategies used before, during, and after reading.
2. apply these reading strategies to regulate and monitor their reading process for better comprehension. They know what strategies to use, when to use, and why to use.

There is evidence that using a combination of data sources can validate and crosscheck findings, therefore, the methods of data collection were a combination of the following:

1. Inventories and questionnaires designed to investigate the students' metacognitive reading awareness of the reading strategies use, and how they use the strategies. These were done once at the beginning of the study and also toward the end of the study to determine their improvement in awareness of reading strategies.
2. Observation Checklists The attentive observation of the researcher's class was done on checklists. The data evaluated the extent of the development of reading strategies learned, their comprehension, attitude, and motivation during the semester.
3. Conversational interviews were conducted in class informally with one participation at a time. This was to obtain detailed and desired information about the students' reading behaviors which would not be otherwise possible by means of observation or questionnaire.
4. Researcher's journal a written record of classroom events related to the research questions such as participants' reading behaviors, the strategies used to better understand the text and their improvement in comprehension, and performance. It also includes researcher's opinions and reactions to research questions. These were taken as classes proceeded.
5. Students' reading responses was assessed to determine how much they understand the text. A reading rubric was designed based on 6 categories—showing understanding, focusing on key ideas, discussing relevant details,

providing supportive reasoning, connecting with experience, indicating interpretation, and showing what they learned.

6. A focus group discussion can reveal interactions among participants which in turn enhances data quality. Participants tend to provide checks and balances on each other which remove false information. This was conducted to cover certain areas the questionnaires do not. It aimed at getting students to talk about their reading behaviors using a metacognitive approach before, during and after reading, about specific incidents happening in class, or tasks given. A set of questions was formulated in advance. Some of the topics discussed include the reading strategies used, their perceptions about the effectiveness of the metacognitive approach and the use of different reading strategies with relation to their comprehension and performance. The discussion was done toward the end of the study and was audiotaped (with informed permission) and shortly summarized and analyzed afterwards.

Research Instruments

Following is the description of the instruments used to collect data for the study. (See Appendix A for more information of each instrument)

Instruments #1 Metacognitive Awareness of Reading Strategies Inventory (MARSI) was designed by Mokhtari and Reichard (2002) to assess students' awareness and use of reading strategies while reading. It consists of a list of metacognitive reading strategies on three subscales: global strategies, problem-solving strategies, and support reading strategies. The first category (Global Reading Strategies) contains 13 items and represents a set of reading strategies oriented toward a global analysis of text. These strategies aim at getting the participants involved in reading the text. The second category (Problem-solving Strategies) contains 8 items that appear to be

oriented around strategies for solving problems when text becomes difficult to read. The last category (Support Reading Strategies) contains 9 items which primarily involve use of outside reference materials. These three types of strategies interact with each other and have an important influence on text comprehension (Mokhtari & Reichard, 2002, P. 252-53).

Instrument #2 Metacognitive Reading Awareness Inventory

The inventory implemented by International Reading Association was administered to check if they were aware of what strategies they use to make them better understand while reading and how much they know about themselves (self as a reader) what they understand what they do not understand.

Instruments #3: Observation Checklists

The four checklists were designed (adapted from Illinois State Board of Education 2004; National Assessment Governing Board 2001; Pennsylvania Department of Education 2004; Washington Public Instruction 2000)) to determine their improvement in comprehension and their performance. Checklist 1 is used to find out the frequency of reading strategies—preview, activate prior knowledge, fix-up strategies, questioning—participants used; checklist 2 is to determine their ability understanding—determine writer’s purpose, identify main points, recognize cause-effect, make conclusion, checklist 3 is to see their attitude and motivation in reading—read faster, read within limited time, get involved in related activities, and positive attitude toward reading, and checklist 4 is to check the improvement of students’ reading performance.

Instruments #4: Questions for conversational interviews

The questions (Adapted from Grabbe, 2001) were used in the conversational interviews conducted to check what reading strategies they use to better understand

the text and to improve their reading comprehension and performance. The questions focus what they do when they encounter difficulty in reading or how each reading strategy helps them read.

Instrument#5: Questions for focus group discussion

The questions (adapted from Grabbe, 2001) focus on how metacognitive approach before, during, and after reading and the use of reading strategies help participants improve their comprehension and their performance. Questions deal with how they are motivated to read, how prior knowledge helps them in reading, how they see themselves as a reader, etc.

Instrument #6: Response Scoring Rubric

The Rubric (adapted from Illinois State Board of Education 2004; Saskatchewan Education 1998; Regina Public Schools 2004) was used to assess the students' reading responses to determine improvement in their reading comprehension.

Procedure

The following documents were planned and designed: 1) guidelines for students on what to do and its benefits, 2) metacognitive reading strategies to be trained, 3) questionnaires, observation checklists, and 4) questions for conversational interviews and focus group discussion.

The data collection started in November 2004. The procedure and the tools used during the 12 weeks of study can be summarized as follows:

Figure 3: Summary of procedure and tools used

Week	Procedure	Tools
1	1. Inform of research—their role and benefits using metacognitive strategies as in guidelines (Appendix B) 2. Metacognitive Behaviors of good and poor readers (Figure 2) 3. A list of metacognitive strategies to use before, during, and after reading (Figure 3)	MARSI were administered (Instrument #1)
2	*1. A list of metacognitive reading strategies (Figure 4) *2. previewing, activating prior knowledge, and setting purpose in reading. *3. KWL (Think of what they know, what they want to know, and what they've learned.	*Field notes Students' reading responses are kept and evaluated every week.
3	Rereading, identifying key words, connecting to prior knowledge, visualizing practiced.	Conversational interview
4	Self questioning, summarizing, adjusting reading rate practiced	Conversational interview
5	Using multi strategies to help them read. Think of themselves as a reader.	Conversational interview
6	Using multi strategies to help them read. Think of themselves as a reader.	Observation Checklist Conversational interview
7	Using multi strategies to help them read. Think of themselves as a reader.	Observation Checklist Conversational interview
8	Using multi strategies to help them read. Think of themselves as a reader.	Observation Checklist Conversational interview
9	Using multi strategies to help them read. Think of themselves as a reader.	Observation Checklist Conversational interview
10	Using multi strategies to help them read. Think of themselves as a reader.	MARSI were administered (Instrument #1)
11	Reading Group Discussion	Focus Group Discussion
12	Reading Group Discussion	Focus Group Discussion

* Something done every week

Figure 3 shows what we did in class and the tools used during the study. In the first class, participants were all informed of the research, the role they would be in, and the benefit they would get. It is necessary to inform them of the benefits since the Metacognitive approach requires students to control their own learning process; they must know what they are doing and why they are doing it. They were then provided with Guidelines (see Appendix B) stating the purpose and their tasks for the study. They were informed that 1) knowing what reading strategies to use and how to use them improve their reading comprehension; 2) using the metacognitive approach (done mostly by good readers) helps them process the text actively; and 3) using the approach to enhance their reading performance. It is essential for the students to understand the importance and value of what they were doing.

Next, MARSII was administered. The researcher explained the purpose of the inventory—to check if they were aware of and use these metacognitive reading strategies. To make sure the students did the inventory accurately, the researcher took time to explain some important points and also let them ask for more explanation while working on the inventory. It took them approximately 20 minutes to complete it.

From discussion with the participants, prior to the introduction of the metacognitive approach, most students had low motivation reading business texts. They were not sure if they could read and understand the texts because they had very little knowledge of business terms and concepts. Besides, they had no interest and no knowledge background in the business concepts and issues. The researcher questioned if this metacognitive approach before, during, and after reading can be used as a tool for the students to get started. It can help them know what they have to do and in a way that motivate them to improve their reading.

Students were instructed with a *metacognitive approach* used before, during, and after reading done by good readers (as in Figure 3). They were taught to be aware of their own reading process. They planned what to do first before, during, and after reading in order to better understand the text. Below is *metacognitive approach* used before, during, and after reading adapted from Cook (1989).

Figure 4: *Metacognitive approach* used before, during, and after reading

	Reading Strategies	Reading Behaviors
Before Reading	Previewing	Read the title, the introduction, and conclusion Identify what they were about to read.
	Activating Prior Knowledge	They think about what they know about the topic to make their reading meaningful.
	Setting purpose	What they want to know What they have to perform (some tasks—to answer questions, to give response)
During Reading	Self questioning	Ask questions and look for answers to clarify their understanding.
	Using fix up strategies	Reread, use prior knowledge, visualize the text, use contextual analysis, adjust speed
	Summarizing	Summarize main points to check if they understand the reading texts
After Reading	Reflecting	Discuss what they have learned Reflect and write their response in the journal

At the same time, a list of effective reading strategies for better understanding as in Figure 4 below were provided with explanation and explicit instruction. This is to make sure they know what strategies to use, when and how to apply them so that it helps them better understand the text.

Figure 5: A list of metacognitive reading strategies

	Metacognitive Reading Strategies	Description of the strategies
1.	Previewing	Read the title, heading, subheading, the beginning and ending of the text to get a sense of what the text is about
2.	Activating prior knowledge	Make connections between what you know and what you are reading in order to get involved
3.	Setting a purpose	Why you read—to learn something or to performance a task—to provide motivation and attention ask question what you want to know from the text
4.	Skimming/Scanning	Identify main idea and main points
5.	Self questioning	Ask and answer questions to check understanding, predicting and verifying
6.	Rereading	Reread to better understand
7.	Visualizing	Form mental images that emerge from reading to better understand
8.	Using contextual analysis	Use surrounding text to determine the meaning of an unknown word or concept
9.	Adjusting reading rate	Focus on main points (read slower and more careful) and read faster or skip when the part is not important
10.	Relating to prior knowledge	Relate what you know about the text to make sense of it
11.	Identifying key words	Look for words that guide you to better understand the text or summarize information
12.	Summarizing	Sum up major ideas to help you understand and check what you have learned

The researcher explicitly pointed out to the participants that the approach facilitated their reading comprehension and helped improve their performance. She ensured participants understand both the strategies and how to use them. Hence, participants were taught a variety of strategies (See Figure 4), when and how to apply

them. They practiced using multi strategies to help them understand since no single strategy worked in every instance.

Each week student participants were instructed to use metacognitive approach before, during, and after reading as follows:

Before reading, they previewed the text by looking at the title and the introduction to evoke relevant thoughts and associations. They activated their background knowledge by questioning themselves what they already knew or didn't know about the topic. They then set purposes for reading by asking themselves what they wanted to know or learn from the text; or what task they needed to do after they finish reading. These activities help them get involved and complete the reading task.

During reading, they monitored the reading predicting, and confirming, asking questions and looking for answers. They used different fix-up strategies (reread, identifying key words, use context clues) when they didn't understand the text. They integrated their new understanding with their prior knowledge. How they used the strategies was interviewed later on so that we see a pattern of behaviors how they developed their comprehension.

After reading, they summarized what they had been reading. They discussed in class to check their understanding. They reflected and developed more thoughtful and critical interpretations of the text. Finally, they made applications of the ideas encountered in the text by writing *a reading response*. This response was analyzed to determine how much they understood the text based on 6 categories.

Class observation was done during pre-reading discussion, while they were reading, during class discussion after reading. This was to determine the improvement of their reading performance through 4 observation checklists (see Appendix A) to find out the strategies used, to see the improvement in their

comprehension and their development in reading attitude and motivation. Checklist 1 was designed to check the frequency of reading strategies students used to better understand the text while Checklist 2 determines their abilities using the strategies to comprehend the text. The list consists of 4 reading strategies that help them understand the text, Checklist 3 consists of a list of attitude and motivation to find out if there are positive changes. And Checklist 4 is designed to check the improvement in students' reading performance. The observation checklists were done with conversational interviews after the observation to confirm what was observed.

In the same respect, *regular conversational interviews* were conducted with one participant at a time in an informal manner. They were asked what they didn't understand, why, and how they solved the problem. Although the conversational interview questions were prepared in English, the interviews were conducted in Thai (then translated into English when recorded) so that participants felt comfortable talking about their reading performance.

At the end of the semester, *a focus group discussion* was conducted; questions focusing on how the approach helps them improve their reading performance as a whole. Twelve groups (3-4 participants) with 40 participants were in the discussion. It took each group 15 – 20 minutes to talk about their performance.

Data Collection and Analysis

In order to answer *Research Question 1*, Can students develop more awareness of metacognitive reading strategies after the strategy instruction? MARSII was conducted to determine the development of their awareness in using different strategies to help them while reading.

Regarding *Research Question 2*, Can using these reading metacognitive strategies help them better understand the text? Students' responses, conversational

interviews, and class observation were conducted to check their improvement in reading comprehension.

In regard to *Research Question 3*, Can the metacognitive approach in which they self monitor before, during, and after reading enhance their reading performance? Their reading journal (self as a reader), researcher's journal, and focus group discussion were implemented to assess their improvement in reading performance.

The data was collected from 30 participants in MARSII and Focus Group Discussion while 16 participants were done in observation, conversational interviews, and reading responses when more details had to be dealt with. See Appendix A for more details of these instruments. These were conducted as follows:

1. *MARSII*: It was conducted twice; once at the beginning of the study before the introduction of Metacognitive Approach to determine the students' awareness of metacognitive reading strategies and later at the end of the study to determine the development of their metacognitive reading strategies awareness.
2. *Classroom observation*—Observation Checklists—reading strategies, reading comprehension, attitude and motivation, reading performance—were recorded to find out how each participant perform their task. What went on in class and the researcher's remarks were also recorded in the researcher's journal.
3. *Conversational interviews* were conducted in class informally and individually with one participant at a time. A set of questions were used to interview the participants after they finished a task. This was to obtain detailed and desired information about the students which would not be otherwise possible by means of observation document review.

4. The *student's journal* with their reading responses and self-reflection indicated the student's understanding and improvement in their reading performance. Responses were analyzed based on 6 categories—1) showing understanding, 2) focusing on key ideas, 3) discussing relevant details, 4) providing supportive reasoning, 5) connecting with experience, and 6) indicating interpretation.. Self reflections as a reader from their journals were reviewed to understand how they saw themselves as a reader.
5. The *focus group discussion* revealed interactions among participants enhance data quality. Participants tended to provide checks and balances on each other, which removed false information. This was conducted at the end of the semester. Three issues were focused: 1) motivation; 2) comprehension; and 3) reading performance.

CHAPTER 4

ANALYSIS AND RESULTS

This chapter is organized into 3 parts following the three research questions and its findings. As well, data were analyzed in reference to the three research questions as follows.

To answer research questions 1, Can students develop more awareness of metacognitive reading strategies? Data from MARSIS were analyzed to determine if their awareness of the metacognitive reading strategies has developed after strategy instruction.

Metacognitive Awareness of Reading Strategies Inventory or MARSIS was used to determine how often these reading strategies were used by the participants. Participants used a 5-point Likert-type scale to respond to each strategy-related statement within the three subscales ranging from 1 = I never do this to 5 = I always do this. The overall average indicates how often participants use these reading strategies when reading. The average for each subscale of the inventory shows which group of strategies (global, problem solving, and support strategies) participants use most. A low score in any of the subscales or items indicates that there may be some strategies that they might want to consider using more often when reading.

Data collected from the MARSIS were analyzed as seen in Table 1. All participants' responses (N = 40) were scored for the 30 items of reading metacognitive reading strategies. Their means and standard deviation were reported to determine if differences existed between before and after the strategy instruction.

Interpreting the MARSIS takes the Likert scale of 1 to 5 and narrows it down to three levels (Mokhtari & Reichard, 2002):

High level with a mean score of 5 – 3.46

Medium level with a mean score of 3.45 – 2.46

Low level with a mean score of 2.45 or lower

Table 1 reveals all participants have developed more awareness in metacognitive reading strategies in all three subscales.

Table 1: A comparison of mean scores of overall metaconitive awareness in reading before and after strategy instruction

Reading Strategies	Before		After		t	p
	\bar{x}	S.D.	\bar{x}	S.D.		
Global	2.86	.552	3.46	.572	-8.831	.001**
Problem-solving	3.34	.554	3.86	.544	-7.153	.001**
Support	2.89	.489	3.40	.568	-6.979	.001**
Overall	2.99	.453	3.55	.510	-8.849	.001**

**Significance at 0.01 ($p < .01$)

The table shows mean scores before and after instruction are significantly different with mean scores higher (3.55) than before the strategy instruction (2.99). Significance was established at the 0.01 level. It also shows mean scores of each subscale have significantly increased as a result of strategy instruction.

Table 2: Number and percentage of participants regarding levels of metacognitive awareness in reading

Awareness Levels	No. of participants before	% before	No. of participants after	% after
High level	4	10.00	23	57.50
Medium level	32	80.00	15	37.50
Low level	4	10.00	2	5.00

Table 2 reveals that more participants have developed their awareness in metacognitive reading strategies from medium to higher level. It shows 23 out of the 40 participants (57.50%) reported high use of these metacognitive reading strategies while 15 (37.50%) gave ratings indicating medium use of these strategies.

As **MARSI** is separated by three subscales: Global reading strategies, problems-solving reading strategies, support reading strategies, all participants' responses (N = 40) were scored for the 30 items within these three subscales. Their means and standard deviation were reported for each scale along with a total mean of the three scales.

Table 3: Number and percentage of participants regarding their levels of metacognitive awareness (Global reading strategies)

Awareness Levels	No. of participants/ before	% before	No. of participants/ after	% after
High level	3	7.50	17	42.50
Medium level	31	77.50	21	52.50
Low level	6	15.00	2	5.00

Table 3 shows the levels of metacognitive awareness in Global reading strategies. It reveals 17 out of the 40 of the participants (42.50%) reported high use of these global reading strategies while 21 (52.50%) gave ratings indicating medium use of these strategies. It is satisfactory that most of them have developed their awareness to a higher level.

Table 4: A comparison of mean scores of metacognitive awareness (Global reading strategies) before and after the instruction

No.	Reading Strategies	\bar{X} (Good)		\bar{X} (Poor)		\bar{X} of N = 40	
		before	after	before	after	before	after
1	I have a purpose in mind when I read.	2.45	3.50	2.75	3.60	2.60	3.55
3	I think about what I know to help me understand what I read.	2.90	3.85	3.40	4.00	3.15	3.93
4	I preview the text to see what it's about before reading it.	2.90	3.25	3.05	3.65	2.95	3.45
7	I think about whether the content of the text fits my reading purpose.	2.20	3.05	3.05	3.35	2.63	3.20
10	I skim the text first by noticing characteristics like length and organization.	3.20	3.55	3.00	3.65	3.10	3.60
14	I decide what to read closely and what to ignore.	2.90	3.55	2.75	3.30	2.83	3.43
17	I use tables, figures, and pictures in text to increase my understanding	3.30	3.50	2.95	3.40	3.13	3.45
19	I use context clues to help me better understand what I'm reading.	3.10	3.65	3.25	3.85	3.18	3.75
22	I use typographical aids like boldface and italics to identify key information.	2.80	3.30	2.25	2.75	2.53	3.03
23	I critically analyze and evaluate the information presented in the text.	2.45	3.00	2.00	2.60	2.23	2.80
25	I check my understanding when I come across conflicting information.	3.10	3.75	2.95	3.40	3.03	3.58
26	I try to guess what the material is about when I read.	3.20	3.75	3.15	3.65	3.18	3.70
29	I check to see if my guesses about the text are right or wrong.	2.55	3.40	2.80	3.65	2.68	3.53
	Overall for this subscale	2.85	3.47	2.87	3.45	2.86	3.46

Table 4 shows that the individual global reading strategies mean scores before instruction ($\bar{X} = 2.86$) and the scores after the instruction ($\bar{X} = 3.46$) indicate the use of global reading strategies has increased significantly (Table 1) after the instruction as seen in Table 1. Three strategies mostly used by good readers include: #3 thinking about what they know to help them understand ($\bar{X} = 3.85$); #25 checking

understanding when coming across conflicting information ($\bar{X} = 3.75$); and #26 try to guess what the material is about ($\bar{X} = 3.75$) while three strategies mostly used by poor readers are #3 thinking about what they know to help them understand ($\bar{X} = 4.00$); #4 preview ($\bar{X} = 3.65$); and #26 try to guess what the material is about ($\bar{X} = 3.65$).

Table 5: Number and percentage of participants regarding their levels of metacognitive awareness (Problem-solving reading strategies)

Awareness Levels	No. of participants/ before	% before	No. of participants/ after	% after
High level	15	37.50	34	85.00
Medium level	22	55.00	5	12.50
Low level	3	7.50	1	2.50

Table 5 shows levels of metacognitive awareness in problem-solving strategies. It indicates 34 out of the 40 of the participants (85%) reported high use of these problem-solving strategies while 5 (12.50%) gave ratings indicating medium use of these strategies.

Table 6 A comparison of mean scores of metacognitive awareness (Problem-solving reading strategies) before and after the instruction

No.	Reading Strategies	\bar{X} (Good)		\bar{X} (Poor)		\bar{X} of N = 40	
		before	after	before	after	before	after
8	I read slowly but carefully to be sure I understand what I'm reading.	3.95	3.90	3.75	3.80	3.85	3.85
11	I try to get back on track when I lose concentration.	3.75	4.25	3.05	3.85	3.40	4.05
13	I adjust my reading speed according to what I'm reading.	3.00	3.60	2.55	3.35	2.78	3.48
16	When the text becomes difficult, I pay closer attention to what I'm reading.	4.12	4.17	3.41	3.88	3.76	4.03
18	I stop from time to time and think about what I'm reading.	3.20	3.35	3.20	3.85	3.20	3.60
21	I picture or visualize information to help remember what I read.	2.80	3.30	2.60	3.45	2.70	3.38
27	When text becomes difficult, I reread to increase my understanding.	3.95	4.50	3.60	4.45	3.78	4.47
30	I try to guess the meaning of unknown words or phrases.	2.95	3.80	3.35	4.25	3.15	4.03
	Overall for this subscale	3.47	3.86	3.19	3.86	3.34	3.86

Table 6 reveals the individual problem-solving scores before the instruction ($\bar{X} = 3.34$) and the scores after instruction ($\bar{X} = 3.86$) indicate that the use of these strategies has increased with significance at the 0.01 level as in Table 1. The following three strategies had highest ratings for good readers: #27 rereading to increase understanding ($\bar{X} = 4.50$); #11 trying to get back on track when concentration was lost ($\bar{X} = 4.25$), and #16 paying closer attention when the text became difficult ($\bar{X} = 4.17$) while poor readers use #27 rereading to increase understanding ($\bar{X} = 4.45$); #30 guess the meaning of the unknown words ($\bar{X} = 4.25$), and #16 paying closer attention when the text became difficult ($\bar{X} = 3.88$).

Table 7: Number and percentage of participants regarding their levels of metacognitive awareness (Support reading strategies)

Awareness Levels	No. participants before	% before	No. of participants after	% after
High level	4	10	17	42.5
Medium level	26	65	19	47.5
Low level	10	25	4	10

Table 7 shows 17 out of the 40 of the participants (42.5%) reported high use of these problem-solving strategies while 19 (47.5%) gave ratings indicating medium use

Table 8: A comparison of mean scores of metacognitive awareness (Support reading strategies) before and after the strategy instruction

No.	Reading Strategies	\bar{X} (Good)		\bar{X} (Poor)		\bar{X} of N = 40	
		before	after	before	after	before	after
2	I take notes while reading to help me understand what I read.	2.35	3.25	2.15	3.20	2.25	3.23
5	When text becomes difficult, I read aloud to help me understand what I read.	2.95	3.00	2.95	2.70	2.95	2.85
6	I summarize what I read to reflect on important information in the text.	2.45	3.15	2.35	3.15	2.40	3.15
9	I discuss what I read with others to check my understanding.	3.45	3.85	2.95	3.40	3.21	3.63
12	I underline or circle information in the text to help me remember it.	3.95	4.35	3.80	4.00	3.88	4.18
15	I use reference materials such as dictionaries to help me understand	4.00	3.80	3.90	3.95	3.95	3.88
20	I paraphrase (relate ideas in my own words) to better understand what I read.	2.35	2.90	2.35	2.95	2.35	2.93
24	I go back and forth in the text to find relationships among ideas in it.	3.10	3.70	2.55	3.40	2.83	3.55
28	I ask myself questions I like to have answered in the text.	2.40	3.25	2.05	3.15	2.23	3.20
	Overall for this subscale	3.00	3.47	2.78	3.32	2.89	3.40

Table 8 reveals the individual support reading strategies scores before the instruction ($\bar{X} = 2.89$) and the scores after instruction ($\bar{X} = 3.40$) indicate that the use of these strategies has increased with significance at the 0.01 level as seen in Table 1. The following three dominant strategies for good readers are: #12 underlining or circling information in the text to help them remember ($\bar{X} = 4.35$); #9 discussing what they read with others to check understanding ($\bar{X} = 3.85$); and #15 using dictionary to help them understand ($\bar{X} = 3.80$) while poor readers use #15 using dictionary to help them understand ($\bar{X} = 3.95$); #9 discussing what they read with others to check understanding ($\bar{X} = 3.40$); and #24 find relationship among ideas ($\bar{X} = 3.40$).

The results revealed that the application of these strategies varied from participant to participant, as reflected in the differences in the total units of analysis in the metacognitive reading strategy categories and the differences in the total amount of categories used by individual participants. Specifically, the data indicated multiple strategy used by all participants; however, the level of use and diversity of strategies used varied from being similar to being different based on the data indicated in each category.

Within the interpreting category, it is interesting to see that the strategies used the least by participants were analyzing and evaluating the text ($\bar{X} = 2.8$) although there were differences between good readers ($\bar{X}=3.00$) and poor readers ($\bar{X} = 2.6$). The dominant strategy used by both groups was rereading ($\bar{X} = 4.47$) a very basic strategy. Besides, four more strategies that are important for comprehension are thinking about what I know, thinking about what I'm reading, going back and for the in the text to find relationships among ideas, and checking understanding when coming across conflicting information, were at a high level ($\bar{X} = 3.39, 3.6, 3.55, \text{ and } 3.58$ consecutively) while summarizing was at medium use ($\bar{X}= 3.15$).

MARSI also showed how participants approached the reading task. The two categories developed most by poor readers are a) checking to see if the guesses about the text (predictions) are right or wrong (mean increases from 2.68 to 3.53); and b) guess the meaning of unknown words or phrases.(mean increases from 2.95 to 3.8). It is interesting that poor readers developed more awareness than good readers. This might be in part because good readers already used the strategies or some of them used a combination of their own strategies to help them read while poor readers tended to stick to the strategies learned.

All in all, most participants showed their development in metacognitive awareness after the strategy instructions. The two strategies worth discussing are #3 “I decide what to read closely and what to ignore,” with the mean scores increased from 2.83 to 3.43 and #13 “I adjust my reading speed according to what I’m reading,” with the mean scores from 2.78 to 3.48. They both showed that participants were selective with the reading text. They know what they are reading and know what is important what is not. However, there are 2 strategies that they should improve: #23 “I critically analyze and evaluate the information presented in the text,” with the mean scores from 2.23 to 2.80, still needed to be develop further if the participants want to improve more advanced reading skills for more complex text.

Regarding Research Question 2, Can using these metacognitive reading strategies help them better understand the text? Students’ reading responses, class observation, and conversational interviews were analyzed to check if their comprehension has improved as a result of using these strategies.

Student Reading Responses Analysis

Eight reading responses (R1 – R8) from 16 participants (P1 – P16) were assessed by a reading response rubric with 6 categories: show understanding, focus on key ideas, discuss relevant details, provide supportive reasoning, connect with personal experience, and indicating interpretation, in 4 levels of comprehension ranging from low to very good. The scores obtained from each response were calculated in percentage.

Table 9: Students' Responses in Percent

	R1	R2	R3	R4	R5	R6	R7	R8	\bar{X}	SD
	%	%	%	%	%	%	%	%	%	
P1	70.83	100	87.50	87.50	87.50	100	100	79.16	89.06	10.66
P2	75.00	87.50	91.66	91.66	79.16	83.33	100	87.50	86.98	7.85
P3	75.00	79.16	79.16	95.83	83.33	100	87.50	70.83	83.85	10.06
P4	66.66	79.16	87.50	95.83	91.66	95.83	100	100	89.58	11.57
P5	54.16	70.83	58.33	95.83	79.16	95.83	100	95.83	81.25	18.36
P6	70.83	83.33	87.50	91.66	91.66	91.66	95.83	100	89.06	8.89
P7	58.33	66.66	66.66	91.66	91.66	100	95.83	95.83	83.33	16.51
P8	79.16	100	100	95.83	95.83	100	100	100	96.30	7.19
P9	75.00	83.33	83.33	83.33	95.83	95.83	100	83.33	77.08	8.62
P10	37.50	66.66	75.00	75.00	66.66	58.33	62.50	54.16	61.97	12.28
P11	29.16	41.66	54.16	58.33	58.33	70.83	70.83	66.66	56.25	14.60
P12	41.66	54.16	41.66	70.83	75.00	66.66	100	66.66	64.58	19.16
P13	54.16	75.00	75.00	83.33	33.33	62.50	62.50	58.33	63.02	15.50
P14	29.16	58.33	58.33	62.5	58.33	62.50	62.50	62.50	56.77	11.34
P15	25.00	25.00	41.66	75.00	54.16	58.33	70.83	50.00	50	18.76
P16	41.66	45.83	50.00	62.50	50.00	58.33	54.16	54.16	52.08	6.68

R1 –R8 = 8 Responses, P1 – P16 = 16 Participants

Table 9 shows the results of 8 responses (R1 – R8) by 16 participants with 8 good readers (P1 – P8) and 8 poor readers (P9 – P16) in percentage. It reveals the improvement in comprehension in most participants comparing Response 1 to other responses done later.

Results from the reading rubric show that most reading responses have something in common—they focused on key ideas and showed overall understanding of the text. This was explained in their conversational interviews that their overall comprehension has improved and that they could identify some key ideas to help them understand some important points. However, most of them didn't connect their personal experience with their responses. In their conversational interviews, they confessed that they were so concerned with the key ideas and due to the time limitation they; therefore, didn't connect their own experience in their responses. In some cases, they admitted they didn't have much background experience on the topic.

Table 10: Levels of comprehension, percentage, and number of participants as measured by the reading response rubric

Levels of comprehension	%	No. of Participants
Very Good	86 - 100	5 (31.25%)
Good	75 - 85	4 (25%)
Fair	60 - 74	3 (18.75%)
Low	50 - 59	4 (25%)

Table 10 shows students' levels of comprehension as measured by their reading responses. It might not be justified to claim that their comprehension has improved even though the scores of 5 good readers are at a very good level of comprehension while 3 are at a good level of comprehension. At the same time, it is

interesting that one of the poor readers (P9) could improve their comprehension up to a good level. This is also supported later in the interviews in which he accepted that the approach had motivated him to engage in the reading process and improved his reading comprehension. And 3 poor readers scored at a fair level of comprehension. According to the conversational interviews, they accepted that some articles were too difficult when they didn't have background knowledge on the topic. Besides, sometimes the vocabulary was difficult and the concepts were complicated.

Class observation and conversational interviews

In order to support the finding from reading responses, a class observation checklist focusing participants' abilities using the strategies to help them understand the reading text was calculated while conversational interviews were used to explain and support it.

Table 11: Participants' ability using the strategies to help in comprehension

	Reading Comprehension	1	2	3	4	5	\bar{x}	SD
1	Predict what the text is about after previewing	-	-	-	11	5	4.31	.47
2	Determine the writer's purpose	-	-	-	5	11	4.68	.47
3	Identify main idea/main points	-	-	-	3	13	4.81	.40
4	Recognize cause-effect	-	-	9	3	4	3.68	.87
5	Make personal connections to the text as a means of improving comprehension	-	-	5	5	6	4.06	.86
6	Make conclusions	-	-	3	7	6	4.18	.75
7	Summarize what was read	-	-	5	7	4	3.93	.77
8	Discuss the main points	-	-	9	4	3	3.62	.80
9	Ask/answer questions at the end of the reading	-	-	1	11	4	4.18	.54
10	Reflect understanding in the reading response	-	-	1	11	4	4.18	.54

Table 11 reveals 5 levels of participants' abilities using the strategies to help in comprehension ranging from very low to very high levels. Most participants reported high abilities using strategies to help them understand with mean scores ranging from 3.68 – 4.81. The two strategies they did well to help them in comprehension were determining the writer's purpose (4.18) and identifying main idea/main points (4.81). This was due to the fact that these two strategies did not require much detail from the text to work on while recognizing cause-effects needed more thorough details. As participants mentioned in the interview that they were better reader; they understood the main points but not all the details.

All in all, learning how to use these reading strategies gave them tools to try when they didn't understand what they were reading as well as facilitated them to read. They all accepted that these reading strategies helped them better understand the text.

The following discussion from the conversational interviews reveals how the strategies help them understand the reading texts. The five strategies in focus were as follows

1. Determining the writer's purpose
2. Identifying main ideas
3. Recognizing cause-effects
4. Summarizing major ideas
5. Making personal connection

Identifying main idea and determining the writer's purpose

Identifying main idea every time they read gives them an idea what the article is about. It also helps them understand the writer's purpose. Knowing the main idea and connect it with other parts of the text helps them see the relationship within the text which is important in comprehension.

P1 revealed, "Once I identify the main idea, I keep it in mind and try to connect it to explain other parts."

P2 said, "Identifying the main idea helps me see what the text is mainly about. It helps me understand what message the writer wants to tell us and at the same time it helps me understand other important parts as well."

P3 cited, "Knowing the writer's purpose makes me know what to focus like some main points."

Recognizing cause-effect

Recognizing cause and effect helps participants see why things happened. Now that they look for cause-effect, they see that most texts give explanation as well as reasons why something happens or something is like that.

P1 pointed out, "It is true when the teacher says something happened as a consequence of an incident. So I started to look for this cause and effect and it helps me see why things happen and that makes me understand the text better".

P2 confessed, "I never look for cause-effect in the text before. Looking for it helps me see relationship what I am reading. It's like I'm asking myself questions why things happen and look for an answer."

Summarizing key ideas

Summarizing each paragraph helps them stop and think and understand each part before they go on and read the whole text. It also helps keep focused; if they do not understand they will go back and try to understand the part before they move on.

P1 explained “If I keep on reading without understanding, it is discouraging. And I’d get bored. I’d lose interest of what I’m reading. Summarizing main points like in each paragraph helps them check to see if I understand the text or not.”

Summarizing shortly in their mind in Thai is not difficult. However, it’s difficult to write out the summary in English because they have to think of some vocabulary to use and the structure of the sentences they are writing.

P2 said, “It’s difficult for me to write a summary because I have to think of some vocabulary and then how to write them in sentences. It takes time too”.

P3 explained, “I do not summarize what I read if I’m not assigned to. It takes too much time to write a summary even a short one. I can circle some key words in a paragraph to remind me what each paragraph is about as a way of summarizing it. But I must say summarizing makes me know what I learned or I understand what I don’t.”

Connecting personal experience to text

Participants revealed that connecting personal knowledge to text not only helped them get connected to the text but also helped them see the relevance of the text to their real life or vice versa. It made the reading more meaningful.

P1 said, “I ask myself what I know to make sense of the text or what I don’t know and look for answers in the text.”

P2 revealed, “Class discussion before reading helps me think of some of my experience and that facilitate me in understanding the text”.

P3 confessed, “Now I know that prior knowledge helps me make sense of the text. Sometimes I read some articles (in Thai) related to the one I’m going to read, it facilitates me in better understanding the texts. But if I have little knowledge, I use some other strategies like discussing it with friends and try to focus on some main points.”

In short, the comprehension of the participants has improved as a result of using metacognitive approach and the strategies learned. Although most participants accepted that they didn’t understand everything in the text, they only understood about 80% of it.

In regard to Research Question 3: Can the metacognitive approach in which they self monitor before, during, and after reading enhance their reading performance?

First the three observation checklists were calculated to get the mean scores of their levels of reading performance (Table 12), their levels of attitude and motivation (Table 13) and frequency they used the strategies (Table 14). Their self reflections as a reader in their reading journal, conversational interviews, researcher’s journal, and focus group discussion were used to support and explain how the strategies help them improve their reading performance.

Table 12: Levels of improvement in their reading performance

	Reading Performance	0	1	2	3	\bar{x}	SD
1	Get involved	-	-	3	13	2.18	.40
2	Understand purpose of reading	-	-	-	16	3	.00
3	Know what strategies to use	-	-	-	16	3	.00
4	Know what you understand what you do not	-	-	7	9	2.58	.51
5	Know what to read what to ignore	-	-	6	10	2.62	.50
6	Connect personal experience with text	-	-	6	10	2	.61

Table 12 shows the improvement in participants' reading performance at a high level for #1-3 with mean scores of 2.81 – 3 and average improvement for #4-6 with mean scores of 2 – 2.62. Additionally, this was explained by the data from conversational interviews and focus group discussion as follows:

Getting Involved

The metacognitive approach used before, during, and after reading gives the participants some steps to follow and it gets them connected to the text. The strategies cited by participants that get them involved in the reading task are previewing, activating prior knowledge, and setting up purposes for reading

Previewing is the first thing they do when they start reading something.

P1 said, "The approach makes me know what to do. Previewing first helps me connect with the text and know what I am about to read."

P2 pointed out, "I used to start reading without a purpose. I didn't know what I was reading. So sometimes, I got bored of continuing reading and reading. Now I preview first: I start reading the title and the first paragraph, and look for the thesis. Doing this make me know what the article is about."

P3 noted, "Previewing makes me know what to look forward to. It helps me keep reading knowing what I am reading."

Activating prior knowledge by asking themselves what they know makes them make relevance of the text. Other than asking 'what I know' about the text, discussing some terms gives them background knowledge because sometimes they have very little knowledge of the topic and it's difficult to activate prior knowledge.

P1 said, "I tend to think that I know nothing about it. But if I stop and think about it; I do know something. So, I ask myself what I know and connect with the text. It also motivates me to read."

P2 said, “Discussing about what we know (background knowledge) is very important to reading. We share what we know and it helps connect to the text and better understand it. Discussion about some vocabulary and terms facilitate me in reading.”

Understanding purpose for reading

Setting up purposes by asking themselves why they are reading; for example, to find out some information helps them get involved and motivate them to read to find out what they want..

P1 cited, “I set some purposes for example what I want to know from the text. I then read to get what I want.”

P2 believed that, “If I know what I will do after I finish reading, such as answering some questions, I look for the answers to those questions when I read. It helps me keep focused and read faster.”

Know what strategies to use and how to use them

Knowing that there is a variety of reading strategies to use facilitate reading and understanding. For example, they use fix up strategies when they don't understand something. *Rereading and skipping* are the two basic strategies most students do to better understand.

P1 said, “I tend to skip the part I don't understand first and go on reading. The following parts could sometimes help me understand the part that I skipped. So I go back to that part and read again. It makes more sense when I see relationship of the text.”

P2 notes, “In the past I just reread what I didn't understand without knowing what I wanted from it. Now I often reread with a focus on what I want to know from that part and also use other parts to help understand it.”

Visualizing makes it easier for the participants to follow what is going on in the text. However, when the text gets too complicated they can't visualize.

P1 noted, "Visualizing works well with figures. I normally hate figures but if I try to see it as a large amount or small amount rather than the exact amount. I do not get stuck with these figures any more. We practiced once in class and it worked so I later use it more often. It also works well when the text deals with the movement of something like the prices which go up and down, I'll form a tentative graph in mind and it helps me better understand the text."

P2 mentioned, "I do it sometimes and it helps me move on with my reading. But sometimes when the text gets too complicated or too long, it's difficult to visualize."

A good reader said, "It works well when I focus on key words. These words form a short summary of what each paragraph is all about".

A poor reader said, "I skip the part I don't understand and keep on reading hoping the following parts can make me see what I'm reading and then go back to reread carefully the part I don't understand."

Knowing what to read or what to ignore

Focusing on important points makes it easier for them to read. Knowing that they don't have to understand every little details make them feel that reading is not too difficult.

"I used to read every word and treat every part of the text the same importance. Now I only pay close attention to important points and pay less attention to not so important points. It encourages me to finish reading an assignment".

Knowing what is important or what is not makes them adjusting rate while reading, for example, taking time to read some important parts carefully or read some

details faster, skipping some parts that they do not understand and keep on reading to clarify the part, help motivate them to finish reading.

“I used to read with the same speed throughout the text. Now I know that I should read some parts carefully and on the contrary, read some parts faster”.

Locating key words and key ideas

Looking for key words in a paragraph not only helps them understand what the paragraph is about but also helps them understand what is important what is not.

P1 said, “I can read paragraph by paragraph and connect some key words to form a big picture of the text and sometimes I can make a summary by looking at these words.”

P2 pointed out, “Identifying key words helps me keep focused what I’m reading. It helps me know what is important that I should read carefully and what is not important. I can read faster if it is not important.” However, it’s not easy for poor readers to identify key words as one of them said, “Sometimes, I’m lost and can’t find key words when the text gets too difficult or too long.”

P3 said, “It helps know where to focus when I read. Looking for some important ideas that are related to the main idea helps me see the relationship of these ideas and as a result helps me understand the article as a whole.”

P4 noted, “I read these key ideas more carefully because I know they are more important to help me understand the text. I know what to read what to ignore which helps me read faster and keep focused. I might be lost if I have to read and understand everything.”

Connecting personal experience with text

Students think that connecting their personal experience with text helps them a lot in reading. It helps them see the relevance of the text to their real life or vice versa they can use their real life experience to help them make sense of the text.

“In the past I never connected my experience with the text. What I was reading was in the book. Now I know that it helps me make sense of what I am reading.”

“It’s still difficult for me to connect my experience with the text ‘cos when I read, there are so many things to do like I think of what strategies to use.”

Other than knowing what strategies to use, reading motivation and attitude are important factors in comprehension. Guthrie & Wigfield (2002) pointed out that motivation and engagement make reading enjoyable and increase strategy use during reading and support comprehension. Vice versa, lacking motivation to read can impair comprehension and limit their ability to learn from what they read (Morgan & Fluke, 2007). The following checklist was done to fine out participants’ motivation and attitude after the strategy instruction.

Table 13: Participants' reading motivation and attitude

	Reading Motivation and Attitude	1	2	3	4	5	\bar{x}	SD
1	Anticipate what to read	-	-	4	4	8	4.25	.85
2	Read within limited time	-	-	1	10	5	4.25	.57
3	Keep focused on important points	-	-	4	7	5	4.06	.77
4	Self-questioning while reading	-	-	7	9	1	3.68	.61
5	Read faster	-	-	1	8	7	4.75	.61
6	Follow up reading by getting involved in related activities: engage in discussion	-	-	11	4	1	3.37	.61
7	Find vocabulary not too difficult	-	-	10	3	3	3.56	.81
8	Find sentences/paragraphs not too complicated	-	-	10	4	2	3.5	.73
9	Find the text not too difficult/long to read	-	-	7	5	4	3.93	.85
10	Not easily discouraged when encountering difficult text	-	-	5	8	3	3.87	.71

Table 13 shows that participants had high reading motivation (#1-6) with mean scores ranging from 3.37 – 4.75 and they had positive attitude (#7-10) with mean scores ranging from 3.5 – 3.87. Regarding their reading motivation, it was explained in the focus group discussion that the approach helped them get involved and connected; it motivates them to read. Their attitude had changed to be more positive. Before exposing to metacognitive approach, most students had low motivation reading business texts for the following reasons: difficult vocabulary, long or complicated sentences, no prior knowledge (no knowledge and no interest of business), dislike for figures, etc.

With regard to motivation and attitude, the participants pointed out as follows.

“I hate reading. And when it comes to reading business text, I just want to give up. I don’t know anything about it. Now I have changed my attitude; I try to see connection of business in my real life and how it might be useful to me when I work. I’m motivated to finish reading it’.

“The metacognitive approach helps me know what to do; I just follow the steps before, during, and after reading. Previewing and asking myself what I know (prior knowledge) help me get involved in reading”.

“At first I was discouraged to read business articles. I don’t know anything about it and I have no interest in it. But the approach teaches me to think of what I know (prior knowledge) or what I want to know (purpose). So I ask myself these questions and look for what I want to know It helps me keep focused”.

“I was afraid at the beginning of the course that I couldn’t make it through because of the unfamiliar business terms and concepts. But the metacognitive approach used before, during, and after reading helps me keep focused and read faster”.

“In the past once I didn’t understand something, I was annoyed and distracted easily. Now I try different strategies to help me understand. I even skip the difficult part for a while, go on reading to get more picture of the article and come back to that difficult part again trying to relate it to other parts that I understand”.

“Sometimes, I got stuck with some concepts and the structure was so complicated, then it’s difficult for me to understand that part of the text. Anyway, I keep on reading and focus on some other important parts instead.”

Their motivation and attitude were also mentioned in their reflections in their reading journal as follows

“I’m a better reader. I know what to do. I do not get stuck with difficult words, I use context to help me understand them. It doesn’t mean I understand everything but I think understanding the main points is very important.

“I’m a better reader. I monitor myself through the process of before, during, and after reading. Planning is important to me now. Like when I read, I remind

myself about the task I have to do after finishing. For example, if I know I have to write a response after I finish reading, I make some notes what I think about the text so that once I finish I already have in mind which point I want to make in the response. And I know what I should do while I'm reading, for example, I can use "fix-up" strategies to help me out when I don't understand the text".

"Metacognitive approach before, during, and after reading gives me good guidelines to follow when I read. I do not just keep on reading without knowing what to do or what I want to know. It motivates me to read when I set purpose what I want to know and I then look for answers."

"Metacognitive approach used before, during, and after reading helps improve my reading performance. I have more confidence what to do when I start reading; I ask myself what I want to know and try to find the answer. In a way, I'm motivated to read with a purpose and what I want to know in mind."

"Learning how to use fix up strategies helps me better understand the text. For example, I think of something that I know to make sense of the text."

"Learning to use different strategies makes me understands that focusing on main points is important than understanding everything in the text in which it is impossible for me. I feel more comfortable reading now."

Table 14: Frequency using reading strategies before, during, after reading.

	Reading Strategies used	1	2	3	4	5	\bar{x}	SD
1	Preview: read title, introduction, conclusion	-	-	-	5	11	4.68	.47
2	Use prior knowledge to get involved and to make sense of the text	-	-	-	8	8	4.5	.51
3	Set up a purpose—what they want to know	-	-	3	7	6	4.18	.75
4	Use fix-up strategies: skip, reread, use context, use references—when they don't understand the text	-	-	-	3	13	4.81	.40
5	Visualize the text to increase understanding	-	-	8	7	1	3.56	.62
6	Decide what to read or what to ignore	-	-	4	4	8	4.25	.85
7	Identify key words	-	-	5	6	5	4	.81
8	Ask questions and look for answers to clarify	-	-	7	7	2	3.68	.70
9	Summarize major ideas	-	-	5	6	5	4	.81
10	Reflect on what was read	-	-	-	11	5	4.31	.47

The table 14 shows that participants used reading strategies before, during, after reading with high frequency with mean scores ranging from 3.56 – 4.81. Most participants using fix-up strategies (4.81) is something participants familiar with and it helps a lot in their comprehension.

The following statements as noted by the participants (from focus group discussion) reveal how the strategies help them improve their performance.

Self questioning

P1 noted, “I ask myself questions like why or how something happened; then I try to look for an answer. This helps me know if I understand what I’m reading. But I do not do it very often. It needs a lot of concentration in which sometimes I don’t have. So I only do it when I’m serious with my reading.”

Although questions range from basic questions to speculative and insightful questions, most of them tended to ask themselves basic questions while good readers might ask themselves more speculative to insightful questions.

P2 supported, “I just ask basic questions like who, what, when, where, why, how to help me keep on reading to find the answers. Only once in a while I might think of more insightful questions.”

“Setting up purposes before reading like what I want to know from the text helps me get connected with the text in the first place and also helps me move on reading it. It also helps me anticipate what will come next in the text ‘cos I know what I want from it.”

“I know what to do when I do not understand the text. Sometimes I think of what I know (prior knowledge) to make sense of the text. In the past, I just gave up reading or I just read it again without knowing what I want but now I reread it and ask myself what I want to know.”

“In the past, I never used prior knowledge to help me understand. I only focused on what I’m reading. Now I ask myself what I know and try to think of something that I have heard or have read that is related to what I’m reading to make sense of the text.

“I could see improvement in my comprehension as well as my reading performance as a whole. I have developed good reading strategies especially fix-up strategies. I read faster because I know what to focus. I make connection of the text to what I know to make sense of the part I do not understand. Connecting prior knowledge to the text makes me get involved and encourage me to complete the reading task.”

“With a set of strategies, I know what I should do when I do not understand, for example, I visualize what is happening and make use of the context to help me better understand the text”.

“Focusing on key ideas and knowing I don’t have to understand every little detail make me feel relaxed. In the past I just kept on reading without focusing on anything in particular. In the past I saw the whole article important and it was difficult to understand everything in it. Now I know what to read and what not to read. I also adjust my reading speed like when I know it’s important, I read carefully and it is not Important, I read faster.”

“Questioning helps me check my understanding. Like once I didn’t get the answer I realized that I wasn’t focused. I went back to read the part carefully and ask myself what I wanted to know. It helps me keep focused.”

The researcher’s journal reveal reveals students’ classroom reading behaviors. It shows gradual increase in the amount of reading accomplished in class, their ability to understand, their dependence on themselves. Further, students were not easily distracted and try to accomplish their reading assignments in limited time. They used multiple strategies simultaneously which is an important aspect of metacognition. For example, they know what strategies to use when they encounter difficulties; they know how to identify main idea which is the key to understanding the rest of the text.

Although using the approach motivated and facilitated them in reading; it didn’t imply that it helped them understand everything in the text. They indicated that sometimes their comprehension did not depend only on the strategies alone but also some other factors such as difficult vocabulary and concepts, little prior knowledge, and complicated sentences/structure also affected their performance.

From the focus group discussion, it can be concluded that most students were satisfied using metacognitive approach before, during, and after reading. They believed that the approach helped them know what to do, keep focused, get more involved, and read faster. The strategies learned especially fix-up strategies helped them know what to do when they did not understand the text. Knowing what strategies to use, when to use, and how to use help improve their reading performance. Learning more reading strategies to use gave them tools to try when they didn't understand what they were reading. All participants accepted that it helped them read better as a whole.

All in all, most of them accepted using the metacognitive approach before, during, and after reading helps motivate them to read since they know what to do. It also makes them get involved in the reading process. Besides, learning to use different reading strategies helps them improve their comprehension and reading performance. They know what to do when they do not understand the text as well as how to facilitate them when reading. They also see themselves as better readers especially the poor ones.

The results of the study have implications for students in the realm of TEFL. They should be taught to use different metacognitive reading strategies to facilitate them in reading. This is supported by research (Houtveen et al., 2007) reported positive results on effects of strategy instruction on reading comprehension. Students in their experimental group had substantially better results on reading comprehension than those in the control group. As well, Paris & Fluke (2005) believe that better understanding of what reading strategies are and how they facilitate reading, and

when and why they should be applied can help readers overcome their reading difficulties.

It can be concluded that strategy instruction has a positive effect on college students especially poor readers. They can use these strategies as tools not only to unlock their difficulty in comprehension but also to encourage them to get involved in reading.



CHAPTER 5

CONCLUSION AND DISCUSSION

This chapter reviews and discusses the major findings of the research supported by theories and related research. It also considers implications and recommendations for further research.

This study aims to a) determine the differences in awareness of metacognitive reading strategies used before and after the strategy instructions; b) investigate the effectiveness of using metacognitive reading strategies on students' reading comprehension; and c) examine the effects of metacognitive reading strategy instruction on students' reading performance.

It is hypothesized that the strategy instruction helps students develop their awareness of strategies needed to perform a reading task effectively; along with the ability to use self-regulation in terms of planning, monitoring, and evaluating, and eventually leads to the improvement in reading comprehension and performance. Theories and research on metacognition has been applied to the study since metacognition has received recent attention by researchers and teachers alike due to the possibilities for successful instruction for readers at all levels. Especially, low and middle ability students actually benefit more from strategy instruction than high ability students (Anderson, 2002).

Based on the findings of numerous studies, Metacognition is a tool of wide application for solving many sorts of problems. Its role in problem solving and learning has essential applications in the field of education, with some of the richest applications in the area of reading. When applied to the field of reading, metacognition contributes to understanding of how reading comprehension occurs and how instructional strategies facilitate reading comprehension (Flavell, Miller, &

Miller, 2002). Apparently, metacognitive theory helps researchers understand how good readers engage with text during reading for better comprehension as Keller (1997) notes that the distinction between good and poor readers relates to the differences in metacognitive awareness. As a result, recent research points to stimulating students to engage in text in the ways good readers engage with it (McTavish, 2008). Therefore, it is necessary to teach metacognitive reading strategies to help students, particularly, poor readers. If they fail to develop their reading strategies in comprehension, they will tend to dislike reading and in turn avoid further reading. Repeated failure results in motivational problems whereby it stops them to try which is one of the problems of leaning to read. Thus, this research was conducted on these notions of positive effect of metacognitive reading strategies on reading comprehension and performance.

Findings and conclusions

The research was conducted on three hypothesized questions to find out 1) whether students develop more awareness of metacognitive reading strategies after the instruction and practice; 2) whether different reading strategies used can improve their comprehension; and 3) whether the metacognitive approach before, during, and after reading can improve their reading performance.

Forty participants, with twenty good readers and twenty poor readers were selected for the study. However, to make it possible to conduct observation, conversational interviews, and assess reading responses, 16 participants from the group were focused. The research was conducted in a "Reading in Business" class in which most students thought reading business texts was a difficult task since so they thought they did not know or care about it. The metacognitive reading strategies used before, during, and after reading were instructed. Strategies such as setting up

purposes what they want to know motivated them to get involved, thinking about what they know and connecting to real life experience to texts were used to make them see its relevancy to their life, including fix-up strategies were to use to help them better understand when they encounter difficulty in reading. Participants learned to use and practiced these strategies through teacher's explanation and demonstration in class. With the approach, participants use it as a tool to engage and take more responsibility of their own progress.

The instruments used in data collection were as follows: MARSII was used to find the development of their awareness using metacognitive reading strategies; a reading comprehension rubric was to assess participants' reading responses to determine their comprehension; observation checklists were used to identify their comprehension and performance; conversational interviews and focus group discussion were used to support and explain the results.

The findings of the study yield positive results. First, the study indicates that after the strategy instruction, participants have increased awareness of metacognitive reading strategies. The mean scores before and after strategy instruction are significantly different; it has increased from 2.99 to 3.55. Significance was established at 0.01 level (See Table 1). All participants reported using most strategies at a high level in MARSII although some strategies were actually used more often than others. It is interesting that poor readers tended to follow the approach because they normally did not have tools to help them read and wanted to improve their comprehension while some good readers did not strictly follow the approach because they might have their own strategies to achieve comprehension.

Secondly, participants accepted that knowing how to use different reading strategies helps them improve their comprehension. Table 9 reveals that their

comprehension (assessed from their reading responses) has improved from the first to the later ones although it does not increase very consistently. Besides, Table 11 reports participants' high ability using the strategies to help them better understand with mean scores of 3.62 – 4.81.

It can be concluded that strategy instruction affects their comprehension. Collins (1996) who examined 13 studies on relation between metacognition and reading comprehension found that all studies except one reported a statistically significant effect of reading strategy instruction and students' reading comprehension. Reading strategies are an important aspect of learning to read and knowing how to use multiple strategies is an important metacognitive role in reading. It is more useful for students to use in a variety of situations although a large set of strategies might be more difficult to teach, (Smith, 2002). It is supported by Pressley et al (1998) that if students were given a host of strategies that they could apply at their discretion, comprehension was greatly improved. This process of using deliberate strategies in reading is a form of metacognition and the ability to select and use particular strategies in a given context for a specific purpose is important to comprehension.

Thirdly, participants viewed that the metacognitive approach used before, during, and after reading improve their reading performance as it facilitates reading, get them engaged, and make them take responsibility of their own reading. Table 12 shows satisfactory levels of improvement in their reading performance with mean scores ranging from 2- 3.

Their high motivation with mean scores ranging from 3.37 – 4.75 and positive attitude with mean scores ranging from 3.5 – 3.93 as in Table 13 affected their reading performance. As well, their reading performance was also reflected in high

frequency they used the strategies before, during, and after reading to help them better understand the texts (Table 14) with the mean scores ranging from 3.56 to 4.81.

This is supported by Collin (1994) that awareness of metacognitive strategies can be learned by instruction and can be integrated into instruction to make students take active role in reading. In the same token, Anderson (2002) points out that the use of metacognitive reading strategies encourage students to think about themselves and can lead to more profound learning and improved performance. Students can think and make conscious decisions about their learning process. It allows them to plan, control, and evaluate the strategies they used when reading.

Participants show evidence of reading process change as a result of the strategy instruction. It shows substantial improvement in reading performance as a result of the strategy instruction—metacognitive approach before, during, and after reading as well as a host of reading strategies. This is supported by Cooper (2004) that explicit teaching of metacognitive strategies to students contributes to improving students' reading performance across age groups and subject domains.

The results show that the most cited strategies used is rereading which is a very basic and traditional strategy although some of the participants claimed that they reread with a purpose what they want to know. The least cited strategies used by poor readers is analyzing and evaluating the text which is a more advanced strategy. These findings support previous metacognitive research conducted which has found that poor readers use less sophisticated reading strategies during reading. (Brown and Baker, 1986).

As evident, there appears to be a strong relationship between reading strategies used by readers, metacognitive awareness, and reading performance. Baker and Brown (1984) in their classic overview of Metacognitive strategies and reading point

out that metacognition is suggested as constructive process in all theories of reading and that good readers use a number of metacognitive strategies during reading to assist them in understanding a text. They know what to do when facing difficulty, for instance, using “fix-up” strategies to help them understand the text. They also use some other metacognitive strategies such as clarifying the purposes of reading, identifying key ideas, focusing on main points, and engaging in goal-setting, and determining if these goals are being achieved. Most students also view the importance of using prior knowledge in understanding texts as supported by Stahl and McKenna (2006, p. 304) that “prior knowledge, developed by building background before reading, primarily affects students’ understanding of the text” Activating prior knowledge, previewing, setting goals and/or purposes, choosing appropriate strategies are important trends in reading instruction. Knowledge about when to use these strategies is an important form of metacognition (Pressley, 1984).

With respect to the use of metacognitive strategies, no differences were found between good and poor readers. As noted earlier, metacognitive approach has been effective especially with poor readers. Poor reader revealed they were motivated when they followed the metacognitive approach before, during, and after reading. This might be because it encourages them to process the text in some more effective way. Not only these strategies provide support in comprehension but also prompt their reading motivation. This is supported by research which found that reading strategy instruction had the greatest impact on poor readers while good readers already use the strategies (Anderson, 2002). As well, research has suggested that instruction on using specific strategies benefits low performing readers more than high performing readers (Griffith & Ruan 2005). This suggests that though the good and poor readers differed in terms of their comprehension, they do not use metacognitive strategies differently.

However, students differ in terms of reading performance before and after exposure to the Metacognitive reading strategies.

Although the metacognitive reading strategies might work better with text of moderate difficulty and with text they have some prior knowledge, this study was conducted on a different ground. The researcher found that it worked with difficult texts, like business text in this study. Participants revealed they were motivated to read by previewing, setting purposes, using contextual analysis, and connecting to personal experience although the text is difficult.

These findings have important implications for reading instruction, assessment, and research. They can be useful in designing optimal teaching-learning reading environment in the future. The research has also brought to some considerations for practice.

Limitation

1. English proficiency might affect participants' writing on self reflection. It's quite difficult for the students to write out in English about their self-reflection—what they did and how they regulated themselves through the process of metacognitive approach before, during, and after reading. Therefore, researcher mostly conducted conversational interviews in an informal manner in Thai to get information instead. They found that answering her questions orally was more comfortable.
2. Students' English proficiency also affects their response writing. They just wrote what they could, not exactly what they really wanted to say even they showed their understanding during discussion, especially students with low English proficiency. Therefore, responses might not be accurately assessed.

Thereby, class observation was conducted to determine their understanding of the text through discussion or answering questions.

3. At times when they had no or little prior knowledge or experience about the topic, it was difficult to integrate it in the response. Some articles were more difficult not only in vocabulary but also in concepts. Also sometimes there were time limitations. When they spent too much time reading the text, it left little time to write their response.
4. Using Metacognitive approach takes the effort of the students in thinking and planning. They need to be very serious to do it. For example, setting purposes before they read is good but sometimes they just feel like reading it without setting purposes. Or sometimes, they might want to read something without planning what to do. Though some students claimed they might do it without knowing.
5. The researcher found some difficulties in administering the focus group discussion on a monthly basis. This was due to the difficulty in expressing what they did and especially in a big group in which they felt embarrassed to talk about themselves. Therefore, conversational interviews were conducted instead. However, the participants were more relaxed to talk about their reading performance in a focus group toward the end of the study.
6. Unlike in first language or second language, we do not have standardized tests or achievement tests to measure the students' improvement in reading comprehension and performance. This made it difficult for the researcher to determine their levels of comprehension based on the scores from their responses. And therefore, class observation was administered to give more explanation and support.

7. The number of samples might be small, thus, it might not well represent the general population of students at the university level. However, the researcher has noticed similar reading performance of these students and those in the previous years. Thereby, the results can lend some implications to EFL university students as a whole.

Implication and recommendations

The study provides valuable information making us more aware of how students use the strategies that affects instructional planning.

1. Teachers should incorporate reading strategy instruction into their reading classes. When students reflect upon their reading strategies, they become better prepared to make decision about what they can do to improve their reading. Researchers have suggested that teaching readers how to use specific reading strategies is a prime consideration in teaching reading (Anderson, 2002).
2. To be effective, Metacognitive instruction should be explicitly taught to students. More importantly students should be informed of the value and usefulness of strategies through direct explanation with explicit teacher modeling over a period of time so that it becomes their regular reading practice. As Brown et al. (1995) points out that it is not enough to know about reading strategies; rather, fairly extensive time for practice is needed for metacognitive strategies to become part of a student's repertoire.
3. The results of this study lend credibility to the notion that EFL students should be challenged to develop and utilize metacognition in reading since it enhances their reading performance. This is in the same line with the results of research by Hostetter (1994) suggesting that international students receiving

metacognitive tutoring improved in reading comprehension and did better than students who did not receive metacognitive tutoring.

Suggestions for future research

The following section addresses some future research considerations.

1. This study supports the need for additional research connecting metacognitive reading strategies to instructional practice in EFL reading classes. Fewer studies have been conducted with EFL students to examine the effects of metacognitive reading strategy instruction on their reading performance; therefore, more studies in the field should be conducted.
2. Explicit teaching of metacognitive reading strategies to students contributes to improving student performance in reading. Admittedly, we should also examine the effects of integrating metacognition in other skills such as listening and writing.
3. Further research should be designed to consider the impact of the metacognitive approach in reading on secondary or high school students. Studies should also find out effects of longer period of instruction on students to determine if they can transfer the application of the strategy to other situations. It might give students more opportunity to practice and increase the chance they use the approach as a part of their reading process in college.

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Appendix A

Appendix A contains instruments used in this research.

Instrument#1: Metacognitive Awareness of Reading Strategies Inventory (MARS) was administered to assess the development of students' awareness in metacognitive reading strategies.

- 1 means "I never or almost never do this."
- 2 means "I do this only occasionally."
- 3 means "I sometimes do this" (about 50% of the time).
- 4 means "I usually do this."
- 5 means "I always or almost always do this."

Reading Strategies		1	2	3	4	5
1	I have a purpose in mind when I read.					
2	I take notes while reading to help me understand what I read.					
3	I think about what I know to help me understand what I read.					
4	I preview the text to see what it's about before reading it.					
5	When text becomes difficult, I read aloud to help me understand what I read.					
6	I summarize what I read to reflect on important information in the text.					
7	I think about whether the content of the text fits my reading purpose.					
8	I read slowly but carefully to be sure I understand what I'm reading.					
9	I discuss what I read with others to check my understanding.					
10	I skim the text first by noticing characteristics like length and organization.					

- 1 means “I **never or almost never** do this.”
- 2 means “I do this **only occasionally**.”
- 3 means “I **sometimes** do this” (about 50% of the time).
- 4 means “I **usually** do this.”
- 5 means “I **always or almost always** do this.”

Reading Strategies		1	2	3	4	5
1	I try to get back on track when I loose concentration.					
2	I underline or circle information in the text to help me remember it.					
3	I adjust my reading speed according to what I’m reading.					
4	I decide what to read closely and what to ignore.					
5	I use reference materials such as dictionaries to help me understand what I read.					
6	When the text becomes difficulty, I pay closer attention to what I’m reading.					
7	I use tables, figures, and pictures in text to increase my understanding.					
8	I stop from time to time and think about what I’m reading.					
9	I use context clues to help me better understand what I’m reading.					
10	I paraphrase (relate ideas in my own words) to better understand what I read.					

- 1 means "I **never or almost never** do this."
- 2 means "I do this **only occasionally**."
- 3 means "I **sometimes** do this" (about 50% of the time).
- 4 means "I **usually** do this."
- 5 means "I **always or almost always** do this."

Reading Strategies		1	2	3	4	5
1	I picture or visualize information to help remember what I read.					
2	I use typographical aids like boldface and italics to identify key information.					
3	I critically analyze and evaluate the information presented in the text.					
4	I go back and forth in the text to find relationships among ideas in it.					
5	I check my understanding when I come across conflicting information.					
6	I try to guess what the material is about when I read.					
7	When text becomes difficult, I reread to increase my understanding.					
8	I ask myself questions I like to have answered in the text.					
9	I check to see if my guesses about the text are right or wrong.					
10	I try to guess the meaning of unknown words or phrases.					

(Source: http://litd.psych.uic.edu/courses/psych352_s04/questionnaires/mokhtari.html)

Name _____ Date _____

Instrument#2.1: Conversational Interview Checklist to track the frequency of reading strategies used before, during, after reading to determine their reading performance

- 1 means never
- 2 means rarely
- 3 means sometimes
- 4 means usually
- 5 means always

	Reading Strategies used	1	2	3	4	5
1	Preview: read title, introduction, conclusion					
2	Use prior knowledge to get involved and to make sense of the text					
3	Set up a purpose—what they want to know					
4	Use fix-up strategies: skip, reread, use context, use references—when they don't understand the text					
5	Visualize the text to increase understanding					
6	Decide what to read or what to ignore					
7	Identify key words					
8	Ask questions and look for answers to clarify					
9	Summarize major ideas					
10	Reflect on what was read					

Comments:

Remarks:

No. 1-3 show how much the students get involved in the text.

No. 4-6 show how they use fix-up strategies when they do not understand the text.

No. 7-10 show how much they understand the text.

Name _____ Date _____

Instrument#2.2: Class observation and conversational interview checklist to determine their ability using the strategies to comprehend the text..

1 means very low

2 means low

3 means average

4 means good

5 means very good

	Reading Comprehension	1	2	3	4	5
1	Predict what the text is about after previewing					
2	Determine the writer's purpose					
3	Identify main idea/main points					
4	Recognize cause-effect					
5	Make personal connections to the text as a means of improving comprehension					
6	Make conclusions					
7	Summarize what was read					
8	Discuss the main points					
9	Ask/answer questions at the end of the reading					
10	Reflect understanding in the reading response					

Comments:

Name _____ Date _____

Instrument#2.3: Class observation and conversational interview checklist to determine the student's reading attitude and motivation

1 means very low

2 means low

3 means average

4 means high

5 means very high

	Reading Attitude and Motivation	1	2	3	4	5
1	Anticipate what to read					
2	Read within limited time					
3	Keep focused on important points					
4	Self-questioning while reading					
5	Read faster					
6	Follow up reading by getting involved in related activities: engage in discussion					
7	Find vocabulary not too difficult					
8	Find sentences/paragraphs not too complicated					
9	Find the text not too difficult/long to read					
10	Not easily discouraged when encountering difficult text					

Comments:

Remarks:

No. 1-6 demonstrate reading motivation

No. 7-10 demonstrate reading attitude

Name _____ Date _____

Instrument#2.4: Class observation and conversational interview checklist to find out the improvement of students' reading performance.

- 0 means no improvement
- 1 means little improvement
- 2 means some improvement
- 3 means high improvement

	Reading Performance	0	1	2	3
1	Get involved				
2	Understand purpose for reading				
3	Know what strategies to use				
4	Know what you understand what you do not				
5	Know what to read what to ignore				
6	Connect personal experience with text				
7	Summarize important points				

Comments:

Instrument#3.1: Conversational interview questions to for students to think and understand themselves as a reader.

1. What do you do before you start to read?

2. What do you do while you are reading?

3. What do you do if you don't understand something when reading?

4. What do you do after you finish reading?

5. What strategies do you use most when you're reading? What do you do to understand?

6. How much do you normally understand the text you are reading?

100% 80% 60% 40% 20% 0%

10. What did you learn about yourself as a reader?

(Source: Adapted from Grabe & Stoller, 2002, p. 215)

Instrument#3.2: Conversational interview questions to determine what they do when they read.

1. Do you think you are a good reader? Why or Why not?

2. What causes you the greatest difficulty when you try to understand what you read?

3. What could you do to be better at understanding what you read?

4. What do you do when you come to a word that you do not understand?

5. What might stop you when you are reading?

6. What do you do when you have difficulty while reading?

7. Do you ask yourself questions as you read? Why?

8. What is the best advice you have ever been given about reading?

(Source: Saskatchewan Education. Sample Reading strategies questionnaire.

<http://www.sasked.gov.sk.ca/docs/mla/readstrat.pdf>.)

Instrument#4: Questions for Focus Group Discussion to find out how metacognitive approach before, during, and after reading helps them improve their performance.

1. How these strategies help you better understand the texts?

Setting up purposes, identifying main idea and key ideas, locating key words, recognizing cause-effect, connecting personal experience to text, Fix-up strategies, summarizing

2. What strategies help motivate you to read?

3. How did (Self Monitoring) Metacognitive approach using before, during, and after reading improve your reading performance?

4. How do you see yourselves as a reader? Do you see improvement in your reading performance?

Instrument #5: Reading Response Rubric

The rubric was used to assess the students reading responses to determine improvement in their reading comprehension.

	Comprehension	1 Low	2 Fair	3 Good	4 VG
1	Show understanding				
2	Focus on key ideas				
3	Discuss relevant details				
4	Provide supportive reasoning				
5	Connect with personal experience				
6	Indicate interpretation				

Appendix B

Appendix B consists of guidelines for students so that they know what role to take and what they will benefit from the instruction.

Guidelines for Students

What is a metacognitive approach?

This approach, use of metacognitive reading strategies before, during and after reading as done by good readers, will improve your reading performance. It helps you keep focused when reading and better understand the text.

What will you do?

1. practice using metacognitive reading strategies while reading
2. take part in a conversational interview at the end of the class
3. do questionnaires
4. participate in focus group discussion

What will you get?

1. use metacognitive approach before, during, and after reading to motivate you to read
2. know what strategies to use in order to make sense and better understand the reading text.
3. use the approach as a tool to enhance your reading performance

Metacognitive reading strategies used before, during and after reading

Before reading students

1. preview the title, introduction, and conclusion to identify the topic
2. activate prior knowledge to get involved. Ask, “What do I know?”
3. set a purpose—ask yourself “What I want to know from the text” and “what task do I need to do after reading?” —to help keep focused and to make reading more purposeful.

During

1. use appropriate reading strategies—identifying key words, summarizing key ideas, using prior knowledge to help you understand the text
2. check understanding—self-questioning and monitoring
3. use fix-up strategies—reread, context clues, skip, adjust rate—when lack of understanding

After

1. reflect on what was read—asking yourself, “What did I learn?” and give response
2. self reflect as a reader—how you read, what strategies are used, your problems and how you solve them, etc.

Self reflections questions you can ask before, during, and after reading

Before

1. What do I know about the topic?
2. What do I need to know?
3. What is my purpose for reading?

During

1. Do I understand what I am reading? Does it make sense?

2. What will I learn about next?
3. Do I visualize what I am reading?
4. What in my personal experience helps me to make sense of what I am reading?

After

1. What do I think? How did this affect me?
2. What did I learn that was new to me?

Students' Roles

Your role is to do the following tasks:

1. A reading journal in which you write down the followings
 - a. Use Metacognitive reading strategies: the purpose you set up, your prior knowledge, the questions you have before you start reading, the answers to the questions you've got during reading.
 - b. Response—write your understanding, your interaction and your interpretation
 - c. Self reflection as a reader—describe what you are like as a reader
2. Conversational Interviews will be conducted once in a while so that you can talk about your problems or improvement in your reading comprehension and performance.
3. A final group discussion will be conducted at the end of the semester to sum up how the metacognitive approach before, during, and after reading improve your reading performance
4. Questionnaires and rubrics will be given out to self evaluate and to know your own strengths and weaknesses in reading.

Self-assessment for Reading: is for participants to check and understand about their own reading strategies

Before I read this selection, I.....		
Yes	No	
		thought about the title and what it suggested the selection was about
		previewed the whole selection or parts of it.
		thought about the subject or situation suggested by my preview.
		set a purpose for my reading.
While I read this selection, I.....		
Yes	No	
		created a dialogue with the writer e.g. What is the writer saying? What is the main idea? How is it supported? What is the writer's viewpoint? What do I already know about this? What am I learning about this?
		paraphrased or retold to myself what I was reading.
		visualized whatever the writer was explaining.
		connected my personal experience to what I was reading.
		made inferences from textual clues given by the writer.
		distinguished fact from opinion.
		predicted and then confirmed what the writer might say next.
		went back and reread confusing parts.
		checked words that I did not know the meaning of from context.
After I read this selection, I.....		
Yes	No	
		discussed what I had read and my impressions with someone.
		reflected on what I had read.
		reviewed and summarized what I had read and learned.
		made notes in my journal, notebook, or in my head.
		reread and developed a more thoughtful interpretation of what I had read (e.g., considered why the writer wrote the text, what was being presented, and how it was constructed).
		evaluated what I had read and supported my judgements with references to the text.

(Source: Adapted from <http://www.sasked.gov.sk.ca/docs/ela20/teach5.html>)

Appendix C: Bio Data

Asst. Prof. Dr. Visutsri Chanprasert

Visutsri Chanprasert is an assistant professor in the English Department at Bangkok University. She received her Doctoral Degree in Educational Administration from Loyola University of Chicago, U.S.A., her Master's Degree in Reading from the same university and her Bachelor's Degree in French from Chulalongkorn University. She has been teaching different English courses mainly reading and speaking courses for more than 20 years. At the same time she has conducted training courses in Business English for various companies at different levels including executives. She is also the author of various books: Active Readers, Correspondence in the Business World, Reading in Business, and Career-based English.

