

A Glimpse of Metacognitive Reading Strategy Instruction Through Modeling Technique in ESP Class at the Tertiary Level

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Abstract

An integration of metacognitive reading strategies into the classroom has been discussed including its crucial role for enhancing students' reading comprehension (Talebi, 2012; Zhang & Seepho, 2013; Singh, 2019). Nonetheless, problems in reading are not only limited to English reading classes but also encountered in English for Specific Purposes (ESP) classrooms. Therefore, this study aims to explore the effectiveness of metacognitive reading strategy instruction through a modeling technique on students' reading comprehension in ESP context. The one group pre- and post-test study was implemented with an experimental group of the students who enrolled in the English for Tourism Course. The result indicated that the students' post-test scores were significantly higher than their pre-test scores after receiving the treatment ($p < 0.05$). This result was supported by the data from the students' learning logs that expressed their continuous progress towards the metacognitive reading

	strategy instruction and their reading comprehension improvement. Additionally, the students' perceptions reflected positive outcomes towards the metacognitive reading strategy instruction. In conclusion, the study suggests that metacognitive reading strategies should be integrated, not only in English reading classes, but also in other classes that have involvement in reading activities to increase the students' mastery of reading with strategies that enhance their reading comprehension.
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1. INTRODUCTION

Over the past ten years, a concept of metacognition has been proposed in a paper by Anderson (2002). It could be categorized into the following five groups (1) preparing and planning (2) selecting and using learning strategies (3) monitoring strategy use (4) orchestrating various strategies, and (5) evaluating strategy use and learning. His paper supported the idea that teaching metacognitive skills to learners provides great benefits to their second language learning due to the involvement of thinking about students' learning processes which helps develop their learning skills. This aspect reflects positive effects of metacognition in the learning process and it could be applied to learning to read when students learn how to read with metacognitive reading strategies.

Reading with metacognitive reading strategies empowers readers to be more aware of what they read and be more conscious of what they think during their reading. To provide students with positive experiences in reading, metacognitive reading strategies instruction has its place in classrooms as it could help improve students' reading comprehension (Van Kraayenoord, 2010). A substantial amount of research concurred that metacognitive reading strategies should be combined with part of teachers' instruction as they could make reading comprehension achievement possible (Alsamadani, 2011; Talebi, 2012; Zhang & Seepho, 2013; Singh, 2019). Explicit reading instruction of metacognitive strategies has been widely investigated in EFL classes and has demonstrated the positive effects of metacognitive reading strategy training on student's reading comprehension (Aghaie & Zhang, 2012; Habibian, 2015; Al-Ghazo, 2016).

Learning to read in English is found not only in a regular English class, but also in English for Specific Purposes (ESP) classrooms where there are reading activities organized for students to learn the new content. In this present study, the English for Tourism Course is selected to implement metacognitive reading strategies with a modeling technique. In this course, among the four skills, the skill of reading is promoted intensively throughout the course by having the students read and interact with various English texts about tourism. Based on the experience of the researcher, many students enrolled in this course still struggled to understand a reading passage in English and what they did to solve their problems was to attempt to translate every word in the text. This solution was not only ineffective, but also discouraged a lot of the students to continue reading. It ended up being that the students could not read well and did not feel the desire to continue. Thus, it is necessary to find out a pedagogical solution that helps strengthen the students' English reading ability because in this course, reading is a significant instrument for them to access and learn new and specific knowledge pertaining to tourism.

The aforementioned reading problem of students who study English for Tourism needs a different lens for viewing because the nature of reading in English for Specific Purposes, or ESP is not the same as regular English courses. The focus of an ESP course is not of general English usage but rather specific language needs in each particular context such as English for Medical Doctors, English for the Police, English for Ground Services, English for Hotel Industry, etcetera. The focal point of ESP is definitely on when, where, and why learners need the language either in their study or workplace contexts; and subsequently it is also explained as 'situated language use' (Basturkmen, 2010). In this regard, its focus is on communication skills rather than grammar and language practice and is mainly connected with each occupational purpose. Accordingly, studying English as a second language in this class is more intense due to the specific area of each target learning point.

Metacognitive strategies are considered essential in ESP teaching and learning because in ESP context, it is not only what to learn that plays an important role in classes, but also how students learn it (Pirsl et al., 2013). Consequently, the current research is geared to address the above stated problem by implementing metacognitive reading strategies through a modeling technique in class. The modeling technique is explicit instructions that require teachers to explain each strategy to students and

guide them through the thinking process while the students are reading and gradually have them read independently, steps that could help increase their reading comprehension (McLaughlin, 2012). The research aims at testing the effectiveness of teaching this group of reading strategies by using a modeling technique to find the best way to improve the students' reading comprehension in ESP Course and there are two research questions to be addressed:

Research Question 1 Is there a significant difference between pre- and post-test scores of the students' reading comprehension after the intervention?

Research Question 2 What are the students' perceptions of metacognitive reading strategy instruction with modeling technique?

2. REVIEW OF LITERATURE

2.1 Reading in a second language

Reading skills do not guarantee success for anyone, but success is much harder to come by without being a skilled reader (Grabe, 2012, p.5).

The idea above is presented in a simple way but strongly deepens our awareness towards the significance of reading. Reading is comparable to an entrance to large quantities of information and knowledge worldwide, particularly when it is conducted in English which is regarded as an international language. In academic settings, the purpose of reading is usually reading to learn, which means the students read a text identified by a teacher and the information will be used later in the future (Grabe, 2012). Thus, reading in English is essential for those students who enroll in higher education. The better they can comprehend assigned English reading texts, the faster they could move forward in their academic success and enhance their future careers. As the sentence above stated, it is difficult to be successful without good reading skills.

Nevertheless, reading becomes somewhat tougher for many students when they are required to read in another language. The first possible reason is that reading in another language takes more effort from the students to understand a writer's message than reading in their own mother tongue. To achieve reading comprehension when reading English, the readers must possess both linguistic and non-linguistic knowledge.

With regard to the issue of the language, in L2 reading, L2 language proficiency is believed to have an impact on reading comprehension (Aebbersold & Field, 2002). Based on the short circuit hypothesis, limited language proficiency could cause good readers in L1 to revert to poor readers in L2 reading (Clarke, 1980). With this theoretical assumption, L2 language proficiency underlined their importance in reading comprehension achievement.

However, the issue of language proficiency may not always be a crucial focus here. As Pae (2018) stated, lower and higher L2 proficiency may not be much different in transferring their L1 reading skills to L2 reading. It was stated that students with lower L2 proficiency could transfer their L1 reading skills as efficiently as higher L2 proficiency do. The study of Pae was in line with the linguistic interdependence hypothesis which assumes that the language processes such as reading and writing are transferrable and interlinked (Bernhardt & Kamil, 1995; Cummins, 1991). Based on this theoretical view, it means that reading skills the students acquire in their L1 are available for them when they work on reading tasks in L2.

Regarding the issue of L2 language, vocabulary is one great challenge for the students when reading in another language. It is said that poor readers may know what strategies to use, but their problems were a lack of vocabulary or other schema related information, which may prevent them from being successful in reading (Anderson, 1991). Nevertheless, it is also true to say that many times some unknown words are not connected to the main idea of the reading passage and could be simply ignored without intervening with the students' reading comprehension. This is one of characteristics of fluent reading where readers concentrate on important details and skip those which are less important (Ur, 2012). Thus, those students who are not fluent readers may not possess this behavior and do not recognize this fact and thus struggle trying to find out the meaning of every word. Therefore, it is useful to help students learn to read and compensate those unknown vocabulary with appropriate strategies, in this way, they would have a better chance to read with better reading comprehension (Kulaç & Walters, 2016).

Another plausibility that reading in another language requires more attempts from the students to achieve reading comprehension is contextual information. It is not only the L2 aspect that the readers are confronted with, but also the context of presented points that must be

encompassed into their cognition during their reading process. Without related background knowledge regarding a reading passage that the readers must go through (process), it is impossible for them to thoroughly understand the main point in the reading text. This theoretical view is addressed as schema theory. The principle, under this theory, focuses on the importance of background knowledge of readers in reading comprehension due to the fundamental belief that says reading comprehension achievement is an interactive process between the reader's background knowledge and the text (Carrell & Eisterhold, 2002). Additionally, under some conditions, students' background knowledge could be activated, for instance, by having students watch videos in the pre-reading stage that would stimulate their prior experience and this action could help improve their reading comprehension skills (Saeidi & Ahmadi, 2016).

2.2 Cognitive and metacognitive reading strategies

Reading strategies could be defined as processes that facilitate readers to understand what they read and to overcome problems they may encounter in their reading (Knight et al., 1985). Cognitive and metacognitive are intensely discussed and widely examined in the area of reading strategy. As Oxford (1990) stated, cognitive strategies are those that are used to work on the language material directly and cognitive strategies that could be applied in reading including connecting prior knowledge to the task, using context clues to guess meanings, and making use of similarities between their first language and English (Chamot & O'Malley, 1996). Cognitive strategies are directly involved with the processing of the information such as prediction, skimming, scanning, etc. (Ozek & Civelek, 2006). Additionally, using a dictionary and summarizing are also cognitive strategies. Students taking down important information during their reading or summarizing main points of the text at the end of their reading are examples of cognitive strategies employed in reading.

In contrast with cognitive strategies, metacognition is concerned with the following two dimensions: knowledge of cognition, and regulation of cognition. Simply put, knowledge of cognition refers to a readers' knowledge about available cognitive strategies, while regulation of cognition in reading context is the awareness of and knowledge of using different strategies in different reading texts (Carrell et al., 1998).

Metacognitive strategies work on monitoring or controlling cognitive strategies. When people are thinking about whether they have completed the task, they are involved in metacognition (Cromley, 2005). Metacognitive reading strategies could be divided into three phases which happen before, during, and after the reading. These three phases are planning, monitoring, and evaluating (Jacob & Paris, 1987) and contain several cognitive reading strategies inside each step to be used during readers' metacognitive processing (Iwai, 2011). In short, metacognitive strategies are connected with thinking about the learning process such as the monitoring of comprehension, and self-evaluation of learning after the activity ends.

2.3 Metacognitive reading strategies with modeling technique

Metacognitive reading strategies are believed to influence readers in a positive way for they can empower them as strategic readers to go through the reading systematically and effectively. Good readers are found to have these characteristics when they read: (1) they can preview a reading text, (2) predict what is going to happen next, and (3) evaluate and question the meanings they make as they read (Duke & Pearson, 2002). As a result, learning how to read with metacognitive reading strategies is like an imitation of reading behaviors of those good readers. Learning and imitating how to read with strategies will finally prompt the students to do so naturally and automatically.

Teaching metacognitive reading strategies to students in class could be implemented effectively by employing modeling technique. With this technique, the students would learn characteristics of metacognitive reading strategies and how to apply them in a reading text from their teacher who demonstrates his or her thinking process verbally while reading. Specifically, this technique will transfer non-verbal procedures from inside to outside and thereby the students could observe, imitate, and learn how metacognitive reading strategies are used in reading. With this regard, reading with modeling technique would verbally demonstrate what is happening in the teacher's mind. It is a technique that helps students learn how good readers read when faced with problems by observing and imitating their reading process. Raising metacognitive awareness by teaching them to read with this type of strategies is crucial because good readers think and ask themselves questions because the

students' habit of asking questions about the reading text is not a given (Setyaningsih, 2019).

Metacognitive reading strategies make a great contribution to the students' reading performance. As proved in many studies, teaching reading strategies would enhance reading comprehension (Bećirović et al., 2017). One research study in India, conducted in an ELT training program with a group of secondary school teachers, had them use this technique in their reading and showed a positive result for the participants felt that reading with this technique could make them perform their reading tasks better, and believed that this technique could help them go through reading problems (Pani, 2004). This result is in concurrent with the proposed paper from Walker (2005) that indicated struggling readers are passive when they read. They may read the words without thinking and they do not construct meaning. It was suggested in his paper that thinking aloud and modeling thinking and strategy use during reading could help struggling readers to internalize the process of comprehension achievement. Reading strategy instruction is not only found significant but also positive as seen among a group of undergraduate students in Iran (Rastegar et al., 2017). Therefore, teaching the students to read with the following technique would provide benefits for those students who start learning how to read and to those who attempt to overcome reading problems. With the increasing self-awareness, the students would become more efficient in reading because skilled reading is the orchestration between awareness and monitoring of a reader's comprehension (Mokhtari & Reichard, 2002).

2.4 Metacognitive reading strategies in ESP classroom

Learning to read in ESP context requires more effort from students. As a case study of four Iranian students demonstrated, when reading ESP texts, they tended to utilize their background knowledge in helping them achieve reading comprehension (Tabataba'ian & Zabihi, 2011). Moreover, it was also found that, in Tunisia, a traditional approach of teaching reading failed to help students achieve their reading comprehension with higher specialized texts in their academic field whereby metacognitive strategy training yielded a positive effect on the students' reading skills regarding reading research articles (Dhieb-Henia, 2003). Even though students are given a lecture on reading strategies, this does not guarantee that they can

apply them to their reading. In other words, it is not sufficient to just present students a list of strategies. Metacognitive reading strategy training is a solution to this point, particularly in ESP courses, where reading skill is considered important for many students' career paths (Dhieb-Henia, 2006).

The investigation of metacognitive reading strategies regarding ESP class context has been examined in various situations. In Iran, a study of Ajideh (2009) proposed that although language communication is significant to ESP course, the method of how students learn should not be ignored and therefore the study suggested that autonomous learning and metacognitive strategies should be implemented for teaching and learning ESP. Additionally, metacognitive strategy use was investigated at the university level with Iranian ESP Students and found that the students were moderate reading strategy users, hence the study urged that metacognitive awareness should be raised due to the importance of using strategies in reading ESP texts (Khoshsima & Samani, 2015). This is consistent with a study of metacognitive reading strategies among Croatian ESP Students which reported moderate use of metacognitive strategies when they read academic texts. The study emphasized that the application of strategies should be taught to make students employ effective strategies and become critical readers (Terzić, 2015).

The effectiveness of metacognitive strategy instruction on reading comprehension was later tested with the ESP Students who studied Civil Engineering in Iran and found that the experimental groups outperformed the control group in the post-test reading comprehension. This result demonstrated that the explicit instruction on metacognitive reading strategies helped increase the students' reading comprehension ability (Ahangari & Mohseni, 2016). This is consistent with an investigation of the effect of the explicit instruction of metacognitive reading strategies among undergraduate students in Iran in a study of Ajideh et al. (2018) which indicated a positive result on the students' reading comprehension in ESP texts. The results from these studies shed light on the positive effects of explicit instruction on metacognitive reading strategy towards reading comprehension achievement. In other words, the explicit instruction of metacognitive reading strategies proved to facilitate students' learning to read in ESP context.

Meanwhile, the examination of metacognitive reading strategies in Thailand has also been conducted and most of them are connected to

students' metacognitive reading strategy awareness and the effectiveness of metacognitive reading strategy instruction in helping students achieve their reading comprehension. Metacognitive reading strategy instruction has been encouraged to be integrated into reading classes from various studies due to its effectiveness towards reading comprehension achievement. A study of Wichadee (2011) studied a group of first year students at a private university in Thailand and supported the concept that explicit instruction of metacognitive strategies could enhance students' reading comprehension. During reading processes, there are many possible problems that may prevent students from understanding a text and metacognitive reading strategy instruction could be a solution that helps students tackle these problems in reading.

Later, the investigation of reading strategies awareness of the first-year students from the science and social science departments at Bangkok University pointed at the reading abilities of Thai students are still limited though they have been learning English for many years. Thus, it is suggested that students need to be trained and guided on how to apply different strategies in their reading to help them perform better in reading tasks (Munsakorn, 2012). More research of Thai EFL learners' metacognitive reading strategies and awareness was conducted with a group of fourth year students in the central region of Thailand concluded that problems in reading among less successful participants at the tertiary level, the level that requires students to read a large number of academic texts, might be caused by their focus on the meaning of each individual word in order to comprehend the reading text (Chutichaiwirath & Sitthitikul, 2017). It is actually not necessary to know every word in the text in order to understand the message from the author in each reading, so raising awareness of metacognitive reading strategies again would help address this problem.

At the same time, the examination of engineering and science students' reading strategies used in reading English texts at King Mongkut's University of Technology in Northern Bangkok indicated positive attitudes towards reading strategy-based instruction for it helps to improve the students' systematic thinking and reading comprehension. Teachers' direct explanation with modeling technique was recommended for teaching reading strategies because reading strategy-based instruction was proved to be more efficient in improving English reading competence (Akkakoson & Setobol, 2009). This positive effect of metacognitive reading

strategy training is in the same direction with a study of students from scientific and technological field which also suggested that explicit modelling and direct explanation should be used in teaching reading strategies to give the students clearer understanding of reading strategy use (Akkakoson, 2012). Lately, there has been a recent study at a public university in Bangkok which yielded the same positive effect of explicit reading strategy instruction on raising Thai EFL adult learners' reading strategy awareness and suggested that explicit reading strategy instruction would help learners become independent learners (Chumworatayee, 2017).

Despite the growing body of research on students' metacognitive reading strategy awareness and metacognitive reading strategy instruction in classrooms, there are few studies in Thailand that have addressed the issue of metacognitive reading strategy instruction with a modeling technique in the context of ESP which is believed to be the mainstream of English teaching in the 21st century (Chen, 2018). Thus, this research will broaden current knowledge of metacognitive reading strategy instruction through modeling technique in this particular area. The findings of the current study finally contribute to a set of pedagogical implications regarding metacognitive reading strategy instruction with modeling technique implemented in ESP classroom for undergraduate students whose major is not English. Thus, teachers who teach reading in their ESP courses with similar contexts would gain insightful perspectives on how reading should be tackled in this specific context and could apply them into their classroom. In conclusion, the findings would bridge the gap between metacognitive reading strategy instruction with modeling technique and learning to read in the Thai context of ESP courses.

3. METHODOLOGY

3.1 Research design

This research was a mixed-methods study which involved both quantitative and qualitative methods in data collection. The quantitative method was implemented by using a one group pre- and post-test design with the experimental group of the students who enrolled in English for Tourism Course, while the qualitative method involved what was called learning logs which required students to keep writing their reflection

towards their class every week. This combination of different research methods is believed to make the study more valid and reliable (Golafshani, 2003). In some issues, it might be best explored through either quantitative or qualitative methods, but in many cases, a mixed-methods approach provides well explanation regarding the understanding of a phenomenon in each investigation (Dornyei, 2007). With these reasons, the mixed-methods design has been selected to test the effectiveness of the metacognitive reading strategy-based instruction through modeling technique and also to explain the phenomenon regarding the quantitative result of the following experiment.

3.2 Data collection

The quantitative data was collected in the classroom by the research teacher. The participants were 47 students who majored in the Tourism Business Management Program and enrolled in the English for Tourism Course in semester 2, 2017. The student participants' mother tongue was not English and they studied in a non-language based program, and required to study their English communication intensively in this course. Reading is undoubtedly one major challenge for them. All of the participants were required to take the reading comprehension test (pre-test) before enrolling in the metacognitive reading strategy instruction. A pilot study was conducted with a group of 20 students with the same characteristics to identify the index of discrimination, index of difficulty, and reliability of the test. The reliability of the reading test was computed using Cronbach's Alpha. The reliability coefficient was 0.7 which suggested that the test was acceptable.

The lessons were implemented for 10 hours (2 hours/ week) from January 16 – 13 February 2018. These lessons measured the content validity through the use of an Item-Objective Congruence (IOC) before the lessons would be implemented with the experimental group. The students in this group were provided with metacognitive reading strategies and thinking aloud protocol. Then, the teacher demonstrated how to read with metacognitive reading strategies step by step before releasing this responsibility to group and individual work respectively for the students to practice using and reading with these strategies on their own. The non-

verbal thinking process of the teacher was presented to the students verbally and explicitly through think aloud protocol.

Meanwhile, every participant was assigned to reflect their views through their learning log about each lesson every week and submit it to the teacher in the following class. In this regard, the participants could express their perceptions of the metacognitive reading strategies with the modeling technique the teacher used in class. Furthermore, the teacher could observe the students' learning progress through the data from their learning log and utilize this information for another source for discussing and supporting the result from quantitative data which tested the effectiveness of metacognitive reading strategies instruction through modelling technique. At the end of the metacognitive strategy-based instruction, all of the students were asked to take the post-test. Then, the results of the post-scores were recorded and used for comparison with their pre-test scores.

3.3 Data analysis

The quantitative data was analyzed by comparing their mean scores before the lessons began and after all of the lessons ended in order to find out if there is any improvement in their reading comprehension score after receiving the treatment by computing a paired t-test to investigate a significant difference ($p < 0.05$) between the pre-test and the post-test scores of the students' reading comprehension after the intervention. This statistical result would be used to prove that the test results after the lessons have a statistically significant difference with the previous test score they received before participating in the metacognitive reading strategy-based instruction. Meanwhile, the qualitative data was analyzed parallel to the quantitative data by using content analysis approach. The qualitative data was used to describe and supplement the quantitative data regarding the participants' metacognitive reading strategies use and unveil their underlying meaning of the content regarding their perceptions behind their metacognitive reading strategies practice with their reading comprehension during the lessons.

4. RESULTS AND DISCUSSION

The findings of the research are presented based on two research questions and both sources of data. A quantitative and qualitative data were used to complement theoretical points in this discussion.

4.1 Research Question 1 Is there a significant difference between pre- and post-test scores of the students' reading comprehension after the intervention?

In research question 1, the data was collected and analyzed by using a paired t-test to compare mean values of pre- and post-test scores. The statistical results were illustrated in table 1.

Table 1

A Paired t-test of the Experimental Group

	N	Mean	Std. Deviation	t	p
Pre	47	4.57	1.44	13.56*	.000
Post	47	9.56	2.39		

*p<.05

From the numbers presented in table 1, the mean value of the post-test (M=9.56) was proved higher than that of the pre-test (M=4.57). While the result of the paired t-test could be interpreted as having a significant difference between the pre- and post-test scores of the students' reading comprehension after they had been instructed with metacognitive reading strategies through modeling technique ($p < 0.05$). In other words, this type of strategy showed significant positive results on the students' reading comprehension. With respect to the aforementioned statistical results, the figure supported the idea that receiving metacognitive reading strategy instruction helps improve the students' reading comprehension as their mean score before they participated in the treatment appeared to be low at 4.57 and then it was tested and was higher at 9.56 after they were trained how to read with metacognitive reading strategies.

This finding asserts that the presence of metacognitive reading strategies has a significant role in improving the students' reading

comprehension regardless of their target language proficiency. It is possible that the students' reading skills in L1 had been transferred to their L2 reading once they were instructed with metacognitive reading strategies and trained how to use them in their reading. It reflected a similar result with a study of Pae (2018) that students with lower L2 proficiency might transfer their L1 reading skills to their L2 reading as good as those with higher L2 proficiency do. Therefore, the students' reading comprehension could be enhanced due to the explicit instruction on metacognitive reading strategies. These results prove that this pedagogical way of teaching reading strategies has a great impact on and increases the students' reading comprehension by guiding the students through the invisible thinking process in reading step by step (McLaughlin, 2012). Being instructed with metacognitive reading strategies helps the students read more systematically and finally enhance their reading comprehension (Wichadee, 2011; Akkakoson, 2012; Ahangari & Mohseni, 2016; Ajideh et al., 2018).

Concurring with the statistical numbers presented above, the data from the students' learning logs also yielded the finding in the same direction as it was analyzed and proved the progress of the students' reading comprehension had risen from being trained how to read with reading metacognitive reading strategies through a modeling technique. From the very first week, the main problems mentioned by the students were those related to vocabulary. They were stuck in the belief that they needed to know every single word in that reading passage to understand each reading text (Chutichaiwirath & Sitthitikul, 2017). Some other problems that they faced included identifying the main idea of the reading and translating some of the words. Nevertheless, week after week, after being trained and becoming more familiar with metacognitive reading strategy use, they appeared to read more comfortably and with fewer problems.

Vocabulary problem which was mostly faced by the students was appropriately tackled for they realized that to understand the idea of each reading they did not need to know every word in the reading passage. It became clear to them that reading is different from translating for they could comprehend what each reading passage attempted to communicate to readers even though there were some unknown words in that reading text. Particularly, reading with metacognitive strategies made the students read more easily, without relying heavily on the dictionary. They realized

that some parts or some unknown words were not important and could be ignored without interfering with their reading comprehension. This practice is found in fluent readers who will pay more attention to key information intuitively (Ur, 2012). The statement below illustrated the reflection regarding this point.

I learned that I should read and find the main idea of the reading...though I couldn't translate some of the words in it, I could figure out what the reading was about and what it wanted to say to readers.

Student 5, female student

In addition to this vocabulary issue, a student also found that reading became easier for her after she learned how to read strategically as shown in the statement below.

I could understand reading better when I read more systematically.

Student 7, female student

The above statement yielded the effectiveness of reading with strategies. The word “systematically” might be inferred to metacognitive knowledge which is related to a process that readers read and regulate their cognitive thinking. Specifically, this means a state of feeling in control when they read. They know what they are reading and know how to handle problems that they encounter during their way. This systematic reading assists readers and makes them more likely to achieve reading comprehension just as proposed by Mokhtari and Reichard (2002) who stated that skilled reading is a combination between awareness and monitoring of a reader's comprehension.

Another point that adds explanation to the significant effective of the metacognitive reading strategy-based lesson is the students' continuous improvement in understanding a reading passage which was reported in their learning logs. The students' reading progress was explicitly shown through their personal notes that were written every week. During the last two weeks of the course, they ended with their confirmation that their reading skill had improved when being compared to their reading accomplishment in the first week which they had begun reading without being instructed with metacognitive reading strategy use and the main instrument that they relied on was a bilingual dictionary.

From poor reading level, it was much more developed...I was better at identifying the main idea of the reading...I read better...

Student 9, female student

The above sentence proves the significant effect of the connection between the ability to find the main idea and reading comprehension achievement. This is explicit proof from the student's comment that identifying the main idea is a vital part in reading comprehension and teaching readers to find the main idea in a text provides a positive impact on their reading comprehension (Jitendra & Gajria, 2011). The attempt to find the main idea in the text during reading is one of several cognitive reading strategies. In this study, the students learned how to read with metacognitive reading strategies which means they learned how to regulate their thinking including those cognitive strategies that they used in their reading. The different point is that when they found the main idea (utilizing a cognitive reading strategy) with metacognitive knowledge, they used it and also monitored whether it worked well or helped them to understand what they were reading (applying a metacognitive strategy), and if it did not, they should have been able to replace it with another appropriate strategy.

The significant effect of this strategy-based lesson is also concerned with their background knowledge. Metacognitive reading strategies help readers connect new information to their own experience which would make them understand better and clearer about what they are reading. One student mentioned this in the excerpt below.

I read and had better reading comprehension...I could relate the reading to my own experience.

Student 7, female student

When the connection had been made between the reading passage and her background knowledge, reading comprehension was strengthened and deepened. This phenomenon concurs with the theoretical idea of the schemata theory which proposed that an interactive process between the reader's background knowledge and the text is important for reading comprehension achievement (Carrell & Eisterhold, 2002). With metacognitive reading strategies, readers do not only read with their plan in mind, but they also read with questions that

help monitoring their comprehension and connecting the new information to their prior knowledge. This finding supports the effectiveness of this metacognitive reading strategy instruction towards the students' reading comprehension. The students' habit of asking questions about the reading text is not a given (Setyaningsih, 2019), thus providing them a session of metacognitive reading strategies would be beneficial to their reading development.

Consequently, the first research question has confirmed the effectiveness of metacognitive reading strategy instruction with modeling technique. The statistical results prove the significant increasing number of the post-test scores after the students intervened in the following metacognitive reading strategy instruction with the teacher demonstrating how to read strategically. This involvement in the lessons facilitates the students learn and practice the characteristics of those good readers who preview a reading text, predict what is about to happen, and evaluate and use self-questioning when they read (Duke & Pearson, 2002). With this strategic practice, they know how to read and realize that reading comprehension achievement means some unknown words may be ignored for their irrelevance and what is more, it means connecting the new information to their own experience as reading is an interactive process (Carrell & Eisterhold, 2002).

4.2 Research Question 2 What are the students' perceptions of metacognitive reading strategy instruction with modeling technique?

The students were required to reflect upon their lessons learned in class by writing their learning log from the first week, submit it to the teacher in the following class, and continue doing this at home until the last week of the lesson. It was found at the end of the training course, based on the qualitative data, that the students' perception of metacognitive reading strategy instruction with modeling technique echoed a positive state of views. The positive feeling of the students arose from their ability to deal with a reading task which was clearly illustrated in their learning logs and understanding how to read with strategies and applying them into their reading could help them read the text more easily. Reading activities seemed to be simpler for them because they were trained on characteristics of what good readers do when they read: they previewed a

reading text, thought about what could happen next, evaluated and did self-questioning about the reading (Duke & Pearson, 2002). This phenomenon supports the academic standpoint in reading that metacognitive reading strategy instruction does not only contribute an effective result to their reading comprehension but it also influences the articulation of positive feelings and opinions from the learners (Akkakoson & Setobol, 2009; Rastegar et al., 2017).

I learned how to read systematically. I knew how to find the main point of the reading passage, so I enjoyed the reading more than I used to.

Student 14, female student

Furthermore, the student's positive perceptions using metacognitive reading strategy instruction through modeling technique in class also proved to be one possible reason for stimulating their reading progress. Their perceptions towards the instruction in a positive way at the same time also influenced their learning in class. The students obviously stated, as recorded in their learning logs, their positive feelings when they read. When they felt relaxed, they would study more effectively. This is consistent with a study of students in Tunisia in ESP context which demonstrated that the students found sessions on practicing strategies useful and enjoyable and this is another point that proves the significance of the reading strategy instruction in ESP classroom where a traditional approach of teaching reading failed to improve students' reading comprehension with specialized texts (Dhieb-Henia, 2003).

I was happy when I read a text in class and I learned more about tourism.

Student 15, female student

To explain this in greater details, the two statements from the students presented two main points that are uncovered from the written expression, the advancement of their learning and their positive emotional state. The learning progress was based on the fact that they had learned how to read more systematically and when they had accomplished learning how to read, they stepped into a world of reading to learn. In this

world, the students read more comfortably and gained more confidence with direct and positive affects in their feelings towards reading activities. This supports the stance on encouraging teachers on metacognitive reading strategy instruction to increase students' reading proficiency and confidence (Ahangari & Mohseni, 2016). In this current research, the students are learning English for Tourism, enhancing their reading skill is very important because the students' success could not be guaranteed without the possession of good reading skills (Grabe, 2012). They will have a more enjoyable experience reading which will in turn lead to more effective interaction with the content of the reading text. In other words, the well-developed reading skills and the positive reading experience appear to be connected. Additionally, positive reading experiences could improve their comprehension of the lesson and develop their academic achievement to a higher level.

To summarize, in research question 2, the overall perception of the students indicated positive outcomes towards metacognitive reading strategy instruction through modeling technique as regards three main possible reasons. Firstly, learning to read with metacognitive reading strategies prepare them for reading more systematically. They preview, plan before they read, think about what they are reading, and evaluate if their comprehension does exist in each reading. Next, the students could deal with the main problem which is concerned with unfamiliar vocabulary without heavily relying on the dictionary as they used to do. Lastly, the students develop their reading skill after learning how to read with metacognitive reading strategies and read more independently. This reading skill achievement is remarkable for their academic achievement particularly when they study English in ESP Classes where metacognitive reading strategies are considered essential instruments in reading ESP Texts (Khoshsima & Samani, 2015) and where the language and the content are the same important portions of learning outcomes.

5. CONCLUSIONS

This mixed-methods research has addressed the two main research questions: the effectiveness of metacognitive reading strategy instruction through a modeling technique regarding the students' reading

comprehension, and the perspectives of those students who participated in class with the following technique. The findings from both quantitative and qualitative aspects verify positive outcomes of metacognitive reading strategy instruction through modeling technique in classroom. It clearly proved that the participants who studied reading through this intervention appeared to read and understand better. It is not only the statistical result that proved this claim, but also the participants' reflections regarding this technique which was evident in their learning logs which expressed positively. The students' positive learning experience empowers their learning to read and leads to better reading comprehension.

As mentioned early in this article, reading in English is challenging for those learners whose mother tongue is in another language for they will encounter not only language problems but also reading problems. Learning metacognitive reading strategies helps contribute to the students' reading performance as it has been explored and confirmed in many studies that teaching reading strategies would enhance reading comprehension (Bećirović et al., 2017). The students would benefit from reading strategy instruction for their reading improvement regardless of their L2 performance. Language competence might be one factor to predict the student's L2 reading success. However, as it was proved qualitatively and qualitatively in this study, that practical knowledge about metacognitive reading strategies is also another prominent factor that could help the students cope with linguistic difficulty and thus enhance their reading comprehension.

Even with the problematic point of unfamiliar or unknown vocabulary, metacognitive reading strategies also benefit readers who know how to read strategically. Reading with metacognitive awareness and strategies empowers readers to read more comfortably. As discussed in the previous section, it was explicitly stated through the learning logs that the students could skip some unknown words and still comprehend the overall meaning of the reading passage. This proof provides evidence from the fieldwork that once students learn how to compensate for unknown vocabulary with appropriate reading strategies, they become more successful in achieving better reading comprehension (Kulaç & Walters, 2016). Thus, it is pedagogically presented that reading comprehension could be successfully reached even though there are some unknown words within a reading text if readers read it consciously and skillfully. In other words, applying strategies in reading helps enhance

students' reading comprehension and strategy use is proved to be the most important factor that influences reading scores of EFL students (Lin, 2018).

Metacognitive reading strategy instruction helps raise the students' awareness of a wide range of reading strategies that they could use in their reading to ease problems and achieve better reading comprehension. The students who may appear to be passive are motivated and more conscious, which stimulates their cognitive thinking while they are reading. In this regard, the metacognitive reading strategy-based lesson would contribute great benefits to those students who are not fluent readers because they are more likely to read without thinking and without attempting to construct meaning (Walker, 2005). Metacognitive reading strategy instruction provides a positive result on learners because it helps them go through problems in reading (Pani, 2004). This would also lead to a positive impact on their emotional state which is interconnected with their academic learning outcome when they read better.

Among several advantages of learning metacognitive reading strategies through modeling technique, it specifically touches a small area of studying how to read in ESP classrooms. All of the students' reading comprehension progress found from the statistical result and from those positive reflections in their learning logs strongly confirm that the metacognitive reading strategy instruction should be integrated into any class which involves reading activities intensively not only reading subjects. It is suggested that every school take this proposed plan seriously to initiate the relevant policy that will launch the integration of metacognitive reading strategy instruction into relevant classes and devise appropriate reading activities for the students' benefits. Metacognitive reading strategies do not appear positive only in English reading classes but also have its place in any class that involves reading activities.

The pedagogical implication from this research, therefore, is geared to future training on metacognitive reading strategies for both students and teachers. For the students, they need instruction on these types of strategies so that they will be able to use them properly in each different reading situation. For teachers, they, in their personal time, would be readers and, in their class time, would be the demonstrators of the reading process. This notion explains why teachers also need to be trained on metacognitive reading strategy use. Raising teacher's

awareness of metacognitive reading strategies would support them in their reading instruction (Pascual, 2019). The current research findings encourage teachers to implement their metacognitive reading strategies in their classroom reading activities. As a result of the aforementioned effectiveness of metacognitive reading strategies, the strategy instruction would foster the students' interests in learning to read, enhance their reading comprehension, and increase their academic achievement.

Further research studies may consider exploring metacognitive reading strategy instruction with modeling technique with undergraduate students from other fields of study with different text genres to prove if this technique still yields the same positive result as it does in this current study. Researchers may also investigate the effectiveness of metacognitive reading strategy instruction by comparing two groups of students, those who study their reading in regular English courses and the others who participate and learn to read in English for specific courses to unveil similarities and differences found between regular English courses and ESP courses. With deeper investigations in more various contexts, further research can shed more light on teaching reading in ESP context.

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REFERENCES

- Aebbersold, J.A., & Field, M.L. (2002). *From reader to reading teacher: Issues and strategies for second language classrooms*. Cambridge University Press.
- Aghaie, R., & Zhang, L. J. (2012). Effects of explicit instruction in cognitive and metacognitive reading strategies on Iranian EFL students' reading performance and strategy transfer. *Instructional Science*, 40(6), 1063-1081.
- Ahangari, S., & Mohseni, F. (2016). The effect of awareness raising through metacognitive strategy-based instruction on ESP learners' reading comprehension. *The Journal of Applied Linguistics* 9(18), 65-77.
- Al-Ghazo, A. (2016). The effect of explicit instruction of meta cognitive learning strategies on promoting Jordanian language learners' reading competence. *Journal of Education and Practice*, 7(10), 170-177.
- Ajideh, P. (2009). Autonomous learning and metacognitive strategies essentials in ESP class. *English Language Teaching*, 2(1), 162-168.
- Ajideh, P., Zohrabi, M., & Pouralvar, K. (2018). The effect of explicit instruction of metacognitive reading strategies on ESP reading comprehension in academic settings. *International Journal of Applied Linguistics and English Literature*, 7(4), 77-86.
- Akkakoson, S., & Setobol, B. (2009). Thai EFL students' use of strategies in reading English texts. *The Journal of KMUTNB*, 19(3), 329-342.
- Akkakoson, S. (2012). Raising strategic awareness of Thai EFL students of science and technology disciplines through metacognitive strategy training. *3L: Language, Linguistics, Literature*®, 18(4), 35-47.
- Alsamadani, H. (2011). The effects of the 3-2-1 reading strategy on EFL reading comprehension. *English Language Teaching*, 4(3),

184-191.

- Anderson, N. J. (1991). Individual differences in strategy use in second language reading and testing. *The Modern Language Journal*, 75(4), 460-472.
- Anderson, N. J. (2002). *The role of metacognition in second language teaching and learning*. ERIC Digest.
- Basturkmen, H. (2010). *Developing courses in English for specific purposes*. Palgrave Macmillan.
- Bećirović, S., Brdarević-Čeljo, A., & Sinanović, J. (2017). The use of metacognitive reading strategies among students at International Burch University: A Case Study. *European Journal of Contemporary Education*, 6(4), 645-655.
- Bernhardt, E. B., & Kamil, M. L. (1995). Interpreting relationships between L1 and L2 reading: Consolidating the linguistic threshold and the linguistic interdependence hypotheses. *Applied Linguistics*, 16(1), 15-34.
- Carrell, P. L., Gajdusek, L., & Wise, T. (1998). Metacognition and EFL/ESL reading. *Instructional science*, 26(1-2), 97-112.
- Carrell, P. L., & Eisterhold, J. C. (2002). *Schema theory and ESL reading pedagogy*. P. L. Carrell, J. Devine, & D. E. Eskey (Eds.). Cambridge University Press.
- Chamot, A., & O'Malley, J. (1996). The cognitive academic language learning approach: a model for linguistically diverse classrooms. *The Elementary School Journal*, 96(3), 259-273.
- Chen, S. (2018). An empirical study of scaffolding instruction in ESP teaching. *The Asian ESP Journal*, 14(4), 120-137.
- Chumworatayee, T. (2017). The effect of reading strategy instruction on Thai EFL adult learners' reading strategy awareness. *LEARN Journal: Language Education and Acquisition Research Network*, 10(1), 135-148.
- Chutichaiwirath, K., & Sitthitikul, P. (2017). The metacognitive awareness of reading strategies in Thai EFL learners. *Journal of Nusantara Studies (JONUS)*, 2(2), 1-14.
- Clarke, M. A. (1980). The short circuit hypothesis of ESL reading-or when language competence interferes with reading performance. *The modern language journal*, 64(2), 203-209.

- Cromley, J. G. (2005). Metacognition, cognitive strategy instruction, and reading in adult literacy. *Review of adult learning and literacy, 5*(7), 187-205.
- Cummins, J. (1991). Interdependence of first- and second-language proficiency in bilingual children. In E. Bialystok (Ed.), *Language Processing in Bilingual Children* (pp. 70-89). Cambridge University Press.
- Dhieb-Henia, N. (2003). Evaluating the effectiveness of metacognitive strategy training for reading research articles in an ESP context. *English for specific purposes, 22*, 387-417.
- Dhieb-Henia, N. (2006). Applying metacognitive strategies to skimming research articles in an ESP context. *English Teaching Forum, 44* (1), 2-7.
- Dornyei, Z. (2007). *Research methods in applied linguistics*. Oxford University Press.
- Duke, N. K., & Pearson, P. (2002). Effective practices for developing reading comprehension. In A. E. Farstrup & S. J. Samuels (Eds.), *What Research Has to Say About Reading Instruction* (3rd ed., pp. 205-242). International Reading Association, Inc.
- Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report, 8*(4), 597-606.
- Grabe, W. (2012). *Reading in a second language: Moving from theory to practice*. Cambridge University Press.
- Habibian, M. (2015). The impact of training metacognitive strategies on reading comprehension among ESL Learner's. *Journal of Education and Practice, 6*(28), 61-69.
- Iwai, Y. (2011). The effects of metacognitive reading strategies: Pedagogical implications for EFL/ESL teachers. *The Reading Matrix, 11*(2), 150-159.
- Jacobs, J. E., & Paris, S. G. (1987). Children's metacognition about reading: Issues in definition, measurement, and instruction. *Educational Psychologist, 22*, 255-278.
- Jitendra, A. K., & Gajria, M. (2011). Main idea and summarization instruction to improve reading comprehension. In E.O. Rollanda & F.V. Patricia (Eds.), *Handbook of reading interventions*

- (pp. 198-219). The Guildford Press.
- Khoshsima, H., & Samani, E. A. (2015). The most frequent metacognitive strategies used in reading comprehension among ESP learners. *Advances in Language and Literary Studies*, 6(1), 180-188.
- Knight, S. L., Padron, Y. N., & Waxman, H. C. (1985). The cognitive reading strategies of ESL students. *TESOL Quarterly*, 19(4), 789-792.
- Kulaç, D., & Walters, J. (2016). The effect of contextual inferencing strategies on EFL learners' attitudes towards reading. *Procedia-social and behavioral sciences*, 232, 486-493.
- Lin, C.M. (2018). Asian students' reading models. *The Asian ESP Journal*, 14(4), 8-30.
- McLaughlin, M. (2012). Reading comprehension: What every teacher needs to know. *The Reading Teacher*, 65(7), 432-440.
- Mokhtari, K., & Reichard, C. A. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of educational psychology*, 94(2), 249-259.
- Munsakorn, N. (2012). Awareness of reading strategies among EFL learners at Bangkok University. *International Journal of Cognitive and Language Sciences*, 6(5), 821-824.
- Oxford, R.L. (1990). *Language learning strategies: What every teacher should know*. Heinle & Heinle Publishers.
- Ozek, Y., & Civelek, M. (2006). A study on the use of cognitive reading strategies by ELT students. *Asian EFL Journal*, 14(1), 1-26.
- Pascual, G. R. (2019). Awareness of metacognitive reading strategies among the public elementary school teachers in Lal-Lo. *Asian EFL Journal* 23(3.3), 460-482
- Pae, T. (2018). A simultaneous analysis of relations between L1 and L2 skills in reading and writing. *Reading research quarterly*, 54(1), 109-124.
- Pani, S. (2004). Reading strategy instruction through mental modeling. *ELT Journal*, 58(4), 355-362.
- Pirsl, D., Popovska, S., & Pirsl, T. (2013). Critical thinking, autonomous learning and metacognitive strategies in ESP science teaching. *International Journal of Scientific Engineering and Research* 1(2), 1-6.

- Rastegar, M., Kermani, E., & Khabir, M. (2017). The relationship between metacognitive reading strategies use and reading comprehension achievement of EFL Learners. *Open Journal of Modern Linguistics*, 7, 65-74.
- Saeidi, M., & Ahmadi, H. (2016). The effects of watching videos in pre-reading on EFL learners' reading comprehension and attitudes. *TESOL International Journal*, 11(2), 15-44.
- Setyaningsih, E. (2019). Bringing critical literacy into tertiary EFL reading class. *Indonesian Journal of Applied Linguistics*, 9(2), 297-307.
- Singh, S. (2019). Developing reading comprehension through metacognitive strategy training. *Asian EFL Journal*, 23(3.3), 264-277.
- Tabataba'ian, M. S., & Zabihi, R. (2011). Strategies used by four Iranian EFL learners in reading ESP and GPE texts: A think-aloud case study. *World Journal of English Language*, 1(1), 53-62.
- Talebi, S. (2012). Reading in L2 (English) and L1 (Persian): an investigation into reverses transfer of reading strategies. *English Language Teaching*, 5(3), 217-229.
- Terzić, B. B. (2015). Metacognitive awareness of reading strategies among ESP students regarding their prior education. *Journal of Teaching English for Specific and Academic Purposes*, 3(2), 257-268.
- Ur, P. (2012). *A course in English language teaching*. Cambridge University Press.
- Van Kraayenoord, C. E. (2010). The role of metacognition in reading comprehension. *Focal points of the research and development of pedagogically-psychological perspectives*, 277-302.
- Walker, B. J. (2005). Thinking aloud: Struggling readers often require more than a model. *The reading teacher*, 58(7), 688-692.
- Wichadee, S. (2011). The effects of metacognitive strategy instruction on EFL Thai students' reading comprehension ability. *Journal of College Teaching & Learning*, 8(5), 31-40.
- Zhang, L., & Seepho, S. (2013). Metacognitive strategy use and academic reading achievement: Insights from a Chinese context. *Electronic Journal of Foreign Language Teaching*, 10(1), 54-69.