The Correlation between EFL Students' Metacognitive Reading Strategy and their Reading

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Abstract

The study aimed at revealing the correlation between English as a Foreign Language (EFL) students' metacognive reading strategy and their reading comprehension on English expository text. The research applied quantitative method, particularly descriptive and correlational designs. The subjects were the students of Senior High School (SMAS) Buqátun Mubarakah Makassar. The instrument used to collect the data was questionnaire which was adapted from SORS inventory. The data were analyzed by using SPSS Version 22, particularly Pearson Product Moment Correlation Formula. The results of the study showed that the majority of the students in this current time were in possession of high metacognitive reading strategy. Furthermore, the metacognitive reading strategy profile of SMAS Buqátun Mubarakah students was problem solving strategy where the students used some actions and procedures while working directly with the text. Since metacognitive reading strategy included awareness and conscious willing of one or more strategies to monitor reading comprehension, there was tendency of metacognitive reading strategy influenced reading comprehension of the students. Therefore, based on the analysis result of this study, there was significant positive correlation between the EFL students' metacognitive reading strategy and their reading comprehension on English expository text.

Keywords: *metacognitive reading strategy; expository text; correlational study; students' reading comprehension*

Introduction

Reading is one of four language skills needed by students who learn English as a foreign language. The ability to read English as a foreign language is very important for students at school in every level because it will affect their productive skills such as writing and speaking. Therefore, many studies were focused on improving students reading comprehension through some approaches. One of them is

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metacognitive reading strategy.

In order to understand the concept of metacognition, the following section discusses the concept of metacognition in more detail.

a.   Theory of Metacognition

Issues about Metacognition or metacognitive knowledge are still important in English language teaching. The concept of Metacognition itself was introduced by the American psychologist, John Flavel in 1976. Flavell (1979) defined metacognition as an individual's ability to manage and monitor the input, storage, search and retrieval of the contents of his own memory, and consists of both monitoring and regulation aspects. Until this current era, descriptions about Metacognition or metacognitive strategy emerged in different ways.

Flavell (1979) described metacognition as awareness of how one learns; awareness of when one does and does not understand; knowledge of how to use available information to achieve a goal; ability to judge the cognitive demands of a particular task; knowledge of what strategies to use for what purposes; and assessment of one's progress both during and after performance.

b.   Definition of Metacognitive Strategy

Coskun (2010) defines Metacognition as someone's knowledge concerning about her/his own cognitive processes and products or anything related to them. In simpler statement, Boulware-Gooden et al. (2007) stated that metacognition basically refers as thinking about thinking; thoughts about thoughts; knowledge about knowledge or reflections about actions. Therefore, it can be concluded that metacognition is knowledge of how people are aware of their mental condition for controlling their cognitive process, and this awareness brings a wide range of benefits for them.

Depart from the theory of metacognition, metacognitive strategy is the process of formulating strategies to help the individual understands about their own motivations, assumptions, strengths, and weaknesses Haynie et al. (2010). As Takallou (2011) said, learners who are aware of their learning process tend to get better learning result. Supporting the ideas, Lee (2010) stated that learners with awareness of learning strategy in their study will become successful learners. Moreover, they said that applying metacognition will enhance learning process that is done by the learners. Therefore, metacognitive strategy is essential as it enables learners to recognize their learning pattern that will help them bettering their learning performance and result.

In language learning, metacognition is one of the most frequently used learning strategies. Metacognition, which is known more as metacognitive strategy, helps language learners improve their language skills through metacognitive instruction, such as listening diaries, process-based discussions, guided reflections, and self-report checklists Papleontiou-Louca (2003).

In order to measure metacognitive awareness and perceived use of reading strategies while reading academic or school-related materials, Mokhtari and Reichard (2002) developed an inventory called MARSI. This inventory was then

widely used by experts who intended to find out learners' metacognitive strategy in reading. Further, Mokhtari and Sheorey (2002) developed another inventory called SORS that has same purpose with MARSI, but is specially made for students whose English is as second or foreign language. Both MARSI and SORS measure three board categories of reading strategies namely Global Reading Strategies, Problem Solving Strategies, and Support Strategies.

1) Global Reading Strategies (GLOB)

Global Reading Strategies are those intentional, carefully planned techniques by which learners monitor or manage their reading, such as having a purpose in mind, previewing the text as to its length and organization, or using typographical aids, and tables and figures.

2) Problem Solving Strategies (PROB)

Problem Solving Strategies are the actions and procedures that readers use while working directly with the text. These are localized, focused techniques used when problems develop in understanding textual information; examples include adjusting one's speed of reading when the material becomes difficult or easy, guessing the meaning of unknown words, and rereading the text to improve comprehension.

3) Support Strategies (SUP)

Support Strategies are basic support mechanisms intended to aid the reader in comprehending the text such as using a dictionary, taking notes, underlining, or highlighting textual information.

Metacognitive reading strategy become one of crucial aspects for learners in comprehending the reading text because many studies have been conducted by experts for indicating the significance of learning strategy in improving students' learning process and outcomes, for example Chamot (2004) and Anderson (2004). Furthermore, Ahmadi et al. (2013) assert that reading comprehension is a complex process involving a combination of text and readers and refers to the ability of readers to understand the surface and the hidden meanings of the text using metacognitive reading strategies. The awareness of metacognitive reading strategy influences learner's comprehension because it controls the ways learners arrange their interaction with the context and also for how the use of strategies is related to effective reading comprehension.

Issues about metacognition or metacognitive knowledge are still important in English language teaching (ELT). Many studies have been conducted by experts for indicating the significance of this learning strategy in improving students' learning process and outcomes in English language class.

Takallou (2011), for example, conducted experimental research to test the effectiveness of metacognitive strategy to improve students' reading comprehension found that the students whom are taught based on metacognitive strategy had significantly better results on reading comprehension than the students whom are taught by usual way. In addition, Seker (2016) through his study found that although the participants reported moderate to low levels of metacognitive strategy use, it had significant correlations with the participants' English language

achievement. Furthermore, Pammu et al. (2017) discovered that the students have significant metacognitive awareness in reading academic English texts, and some factors that can influence the students' comprehension are first language interference, lack of vocabulary, limited reading experience, and linguistic competence. This finding indicated the importance of metacognitive strategy within English language teaching field.

In relation to psychological aspect, the study found that by applying metacognitive reading strategy, students also become more motivated in reading. It is supported by Roeschl-Heils et al. (2003) as well as Lau and Chan (2003) who revealed that there was strong correlation between motivational and metacognitive aspects related to reading. Students with high metacognitive aspect tended to have higher reading motivation.

Despite there have been several previous studies on the relationship between metacognitive strategy and students' English language achievement. However, to date there is no specific study has been conducted to discover the relationship between EFL students' metacognitive reading strategy and their reading comprehension of English expository text. Therefore, the current study would like to fill this gap by proposing several research questions:

1. What was the profile of the second grade EFL students' metacognitive reading strategy at SMAS Buq'atun Mubarakah?
2. What was the level of the EFL students' English reading comprehension on English expository text?
3. Was there any significant correlation between the EFL students' metacognitive reading strategy and their reading comprehension on English expository text?

Method

This study aims to reveal students' metacognitive reading strategy, their reading comprehension on expository text, and the correlation between students' metacognitive reading strategy and their reading comprehension of expository text. To address the mentioned goals, this study applied quantitative method, particularly descriptive and correlational designs. The population of this research was the 2nd grade students of SMAS Buq'atun Mubarakah Makassar in academic year of 2019/2020. There are three classes in the second grade which are divided into two science classes and one social class with the total number of students is approximately 73 students. The sampling technique that was applied in this research is cluster random sampling technique. It meant that each class had the same opportunity to be chosen as the sample of the study.

In order to obtain data needed for conducting this research, two kinds of instruments were used in this study. They were questionnaire to find out students' metacognitive reading strategy, as well as reading test to measure students' reading comprehension. In deciding the questionnaire to be used, the researcher had collected some inventories of metacognitive strategy. There have been two kinds of inventory developed to reveal metacognitive awareness in reading strategy, namely:

MARSI and SORS inventories. Both MARSI and SORS are kinds of inventory which are intended to identify a learner's metacognitive reading strategy, like what is concerned in this research. However, MARSI was originally developed by Mokhtari and Reichard (2002) as tool for measuring native English-speaking students. So, it is not suitable to be used for ESL or EFL learners. On the other hand, SORS, is MARSI inventory which was revised to make it suitable to be used for EFL and ESL learners. It is inventory which is intended to identify the EFL or ESL learner's metacognitive reading strategy (Mokhtari & Sheorey, 2002). Therefore, considering the subject and setting of this research, SORS inventory was selected as the instrument. The SORS inventory was adapted by the researcher based on the daily language used by the students, in this case Indonesian language. Reading test in this research is adapted from the latest National Examination (NE). In senior high school level, the National Examination of English subject consists of 2 sections which are listening section (Number 1-15) and reading section (Number 16-50). However, the items adopted for this study is specified into only reading test with expository text as what is required in this research.

Result and Discussion

1. Students' Metacognitive Reading Strategy

The analysis result of descriptive statistics of the students' metacognitive reading strategy is described in the following Table 1.

Table 1. Descriptive Statistics of Students' Metacognitive Reading Strategy

	Categories			Mean		Std. Deviation
	High	**Medium**	**Low**	**Value**	**Category**	
Metacognitive Awareness of Reading Strategy	56.6%	43.3%	0%	3.5	High	13.77

The table shows that 56.6% of the students had high metacognitive reading strategy, while merely 43.3% of the students were categorized in medium level and 0% was in low level. These showed that almost half of the students use reading strategies while reading English text which include mental plans, techniques, and actions. To see the students' metacognitive reading strategy in general, the mean score was obtained with the value of 3.5. It described that the students have high tendency to use reading strategies while reading English text. Further, the standard deviation was 13.77 which was below 5.25 (three times of mean score divided by two). It means the students' scores were significantly different from the mean score.

It indicates that almost half of the students use metacognitive reading strategy in the same level (high level).

To see further information about the students' metacognitive reading strategy, below is provided a table presenting the rate percentage of the students' metacognitive awareness in the tree categories of the strategy types (Global Reading Strategies, Problem-solving Reading Strategies, and Support Reading Strategies) along with the mean, standard deviation, and rank.

Table 2. Students' Metacognitive Strategy Based on the Strategy Types

Strategy Type	Categories			Mean	Std. Deviation	Rank
	High	Medium	Low			
GLOB	46.6%	53.3%	0%	3.4	6.75	3
PROB	83.3%	16.6%	0%	3.9	3.87	1
SUP	46.6%	53.3%	0%	3.5	4.78	2

It can be concluded from the mean scores of every strategy type that the students show strong preference for employing techniques used when they face problems in understanding text, like guessing the meaning of unknown word, rereading the text, etc. On the other hand, they showed moderate preference in using basic support strategies to help them comprehend the text, like using dictionary, taking notes, etc. Furthermore, the standard deviation shows that the students' use of the three strategy types is almost the same, especially in the use of Problem-solving Reading Strategies.

2. Students' Reading Comprehension on Expository Text

The second objective of this research was to find out the students' reading comprehension of Expository text at SMAS Buqátun Mubarakah Makassar in academic year of 2019/2020. To address the objective, the researcher conducted reading test toward the thirty students as the subject of this research. The reading test was adopted from the latest National Examination year 2018 and 2017, and consisted of thirty items of question with nine expository texts. The thirty items of the test are classified into twenty literal questions and ten inferential questions.

The result of the EFL students' reading test can be seen in the following Table 3

Table 3. Descriptive Statistics of Students' Reading Comprehension

	N	**Score**		**Mean**	**Std. Deviation**
		Minimum	**Maximum**		
Students' score in reading test	30	40	93	67.8	12.84

Table 3 above shows the descriptive statistics of the students' reading comprehension of expository text. It describes that the number of students who participated in the reading test was thirty students. The lowest score obtained by the students was 40 while the highest score was 93. Further, the mean of the students' scores was 67.8 with standard deviation of 12.84.

In addition, the rate percentage of reading comprehension achievement obtained by the students can also be seen in the distribution of data frequency as presented in the following Table 4.

Table 4. Distribution of Students' Reading Comprehension Achievement

Range	Categories	Frequency	Percentage (%)
91-100	Very Good	1	3
76-90	Good	8	27
61-75	Fair	12	40
51-60	Poor	5	17
< 50	Very Poor	4	13
Total		30	100

. It reveals that the majority of the students (40%) got fair score in reading comprehension of expository text. Only 1 student (3%) obtained very good score, 8 students (27%) got good score, 5 students (17%) got poor score and 4 students (13%) got very poor score.

The students scored were also analyzed more specifically based on the type of question. The result of the analysis is displayed in the following Table 5.

Table 5. Descriptive Statistics of Students' Score Based on Question Types

Question Types	Number of Question	Mean Score	Std. Deviation
Literal	10	63.3	17.87
Inferential	20	69.1	15.37

It indicates that the mean score of the students' literal comprehension was 63.3 with standard deviation 17.87. On the other hand, the mean score of the students' inferential comprehension was 69.1 with standard deviation 15.37. It can be concluded that the students' inferential comprehension is higher than the literal comprehension by a very small margin namely 5.7

3. The Correlation between EFL Students' Metacognitive Strategy and their Reading Comprehension on English Expository Text

In this part, there are two hypotheses that need to be answered. They are (H_1) that means there is significant correlation between students' metacognitive reading strategy and their reading comprehension of expository text and (H_0) that means there is no significant correlation between students' metacognitive reading strategy and their reading comprehension of expository text.

To test the hypothesis, the writer collected the students' result from the SORS questionnaire and their reading test, and then analyzed the data by using Person Product Moment Formula. The result can be seen in the following Table 6.

Table 6. The Result of Correlation Analysis between Students' Metacognitive Strategy and Reading Comprehension

		Metacognitive Strategy	Reading Comprehension
Metacognitive	Pearson correlation	1	.715
Strategy	Sig. (2-tailed)		.002
	N	30	30
Reading	Pearson correlation	.715	1
Comprehension	Sig. (2-tailed)	.002	
	N	30	30

Based on the statistical analysis as presented in Table 6, it can be seen that there are three kinds of value: Pearson Correlation (r) is 0.715, Sig. (2-tailed) is

0.002, and number of subject (N) is 30.

The Pearson Correlation (r) shows the relationship between the two variables. It can be seen in the table above that the Pearson Correlation (r) was 0.715. This indicates strong correlation because 0.715 is close to 1, and it also indicates positive correlation because 0.715 is positive number. So, it can be said that there is strong positive correlation between the two variables (metacognitive reading strategy and reading comprehension of expository text).

The Sig. (2-tailed) tells if there is statistically significant correlation between the two variables. If the Sig. (2-tailed) value is greater than 0.05, it can be concluded that there is no statistically significant correlation between the two variables, in other words, increase or decrease in one variable do not significantly relate to increase or decrease in the second variable. On the other hand, if the Sig. (2-tailed) value is less than or equal to 0.05, it can be concluded that there is statistically significant correlation between the two variables. As what can be seen in the table above, the Sig. (2-tailed) value is 0.002 which is lower than 0.05. So, it can be concluded that there is statistically significant correlation between the students' metacognitive reading strategy and reading comprehension of expository text.

The analysis result showed that the Pearson correlation coefficient of metacognitive reading strategy and reading comprehension of expository text (r) was 0.719 with the Sig. 0.002 which is lower than 0.05. It indicates that there was significant correlation between the two variables. The result also demonstrates that the correlation is positive as the value is in positive number (r = 0.719). Therefore, it can be interpreted that there is significant positive correlation between the students' metacognitive reading strategy and their reading comprehension of expository text. In other words, student who has high metacognitive reading strategy is likely to have good comprehension of expository text. This finding supports many previous findings that revealed the correlation between the two variables like Amani (2017), Rastegar et al. (2017) and Sutiyatno (2019).

Metacognitive strategies increase readers' meaning construction, monitoring of text and reading comprehension, and their ability to evaluate the text they are reading (Takallou, 2011). It evidently indicates the influence of metacognitive awareness on reading comprehension. As what had been discovered through this research, Van Gelderen et al. (2004) found that metacognitive knowledge about reading strategies is taken into account for the cognitive skills required to comprehend a text. Students should increase the understanding of metacognitive deeper to help them read English text books better (Memis & Bozkurt, 2013). Further, Alhaqbani and Riazi (2012) concluded that students' awareness of global and problem-solving strategy use correlated significantly with their reading ability, although the magnitudes of the correlation coefficients are not high. On the contrary, no correlation was found between students' reading ability and their awareness of support strategy use.

Contradicting the findings of this research, some studies did not agree with the correlation between metacognitive strategy and reading comprehension. For

different subjects, metacognitive strategy is not influential for comprehension of text. Çetinkaya and Erktin (2002) who applied reading comprehension success test and metacognitive inventory on 206 students suggested that there was not any significant relation between metacognition and reading comprehension. Similarly, Wahyuni et al. (2018) revealed that despite the students' awareness in using metacognitive reading strategies, their reading comprehension achievement was still below average, which means the students' level of metacognitive awareness is not associated with their understanding of text.

Conclusion

The statistical analysis result showed that by applying discovery learning method, EFL students' comprehension improved significantly. Furthermore, they believe that it improves their reading skills. These findings showed that the Discovery Learning Methods can do passed down by English teachers as an excellent alternative to developing students' reading comprehension in the classroom.

Based on the results of research on the implementation of the Discovery Learning Method in learning English, especially reading comprehension as well as students' perceptions of the implementation of the Discovery Learning method, the study proposes several suggestions:

a. For English Teacher

The process of learning English should follow the phase of the Discovery Learning method, namely stimulation where this phase will foster student curiosity. In other words, students will be ready to accept the learning process from the successful stimulation given. Then there is a problem statement, in this process, the teacher allows students to be able to sort out what problems exist in the material provided by the teacher. Then the next phase is data collection where at this phase students are invited to collect as much information as possible to be able to solve the problem. Then the next phase there is data processing. This phase requires students to process the problems and information they have been able to confidently believe in their findings. The next phase is verification, students review the results of their work. And the last phase is a generalization, students conclude their learning results from the first step to the last step on reading comprehension material. With the implementation of the Discovery Learning Method, it can have a good impact on students in the learning process to achieve the ultimate goal, in this case, reading comprehension skills, they are; support students' active participation in the learning process, motivate them, and foster student curiosity, develop independence and autonomy in students and develop creative and problem-solving skills.

b. For English Students

Using the Discovery Learning method encourages students to investigate for themselves, discover and build on their experiences and train them to think constructively.

c. For Future Researcher

In this study, the researcher also looked at student perceptions in implementing

the Discovery Learning Method using only four indicators; of course, this could still be a new step to be able to see student perceptions with other indicators. Such as with the personality of the respondent could be seen from the side of extroverted personality and it is hoped that this will become a useful recommendation for the future researcher.

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