



Students' Metacognitive Reading Awareness and Academic English Reading Comprehension in EFL Context

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This research explores the correlation of first-year Indonesian university students' metacognitive reading awareness and their reading comprehension in academic English texts. This study was conducted in a regional university in Yogyakarta - Indonesia where students came from many parts of Indonesia and recognised English as an additional language. A mixed method explanatory design was used to answer the study's research questions administered to 373 student-participants of five humanities departments. Academic English reading tests were conducted using paraphrasing recall protocol and a survey on the students' metacognitive awareness was managed. The findings indicated that there is no significant correlation between the students' metacognitive reading awareness and their academic English reading comprehension. The students were categorised in low-cohort of reading proficiency although their metacognitive reading awareness scores were high. The students mainly used metacognitive reading awareness related to finding out the meaning of words which was confirmed in the focus group interviews with the students. This research is part of a PhD research at Charles Darwin University.

Keywords: metacognitive awareness, academic, reading comprehension, EFL, mixed methods

INTRODUCTION

In Indonesian academic context, Bahasa Indonesia is the instructional language, yet English is additionally used in regard to its domination in an international knowledge transfer. This means university students need to acquire both languages to optimize success in their study; however, many Indonesian university students may still consider English be challenging in spite of the opportunities afforded by open access to international academic reading materials (Rolls & Northedge, 2018).

In spite of the challenge in English proficiency, the students have to emerge themselves in the English academic reading activities by employing their strategies to comprehend the reading. The main element of emerging reading comprehension is metacognition, which is the reader's personal awareness to manage and monitor the cognition process.

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Previous studies reported that there was a positive relationship between metacognitive reading strategies and reading comprehension in EFL context (Ahmadi et al., 2013; Rastegar et al., 2017). Other research, however, suggested that there was no significant difference between the good and the poor readers. Fitriasia et al. (2015) reported that in Banda Aceh - Indonesia, good readers of secondary schools indicated the higher mean of metacognitive reading strategies than the poor readers although there was no significant difference between both the good and the poor readers.

Reading research which took place in Indonesia reported that less proficient university-student readers tended to use top-down strategies to comprehend reading academic texts. Additionally, they were more interested in using a dictionary to find the meaning of unfamiliar words during reading (Pammu et al., 2014). Indonesian students were also reported to use pragmatic reading strategies when reading English texts which are lower than analytic reading strategies with which they use in reading Bahasa Indonesia texts (Vianty, 2007).

Although the previous research shows some profiles of Indonesian undergraduate university students, research on metacognitive reading awareness performed by Indonesian first-year university students in reading English academic texts are limited. Therefore, this recent study looks at the readers' comprehension rate and their metacognitive reading awareness which may contribute to the profile of Indonesian first-year undergraduate students in reading English academic texts.

REVIEW OF LITERATURE

Metacognitive Reading Awareness

Metacognition and metacognitive reading awareness

Metacognition is a psychological individual capacity in regulating the thinking process to achieve the thinking process goal. It is the ability to establish a way of thinking or cognition (Asy'ari & Ikhsan, 2019). Additionally, metacognition is a psychological process monitoring the cognition which, in regard to literacy, refers to activating reading strategies (Braga & Busnardo, 2017).

In regard to metacognition, metacognitive reading awareness is an individual reader awareness of using his/her thinking process to achieve reading comprehension. This awareness is to control a reader's cognitive or thinking process which leads to his/her reading strategies (Ahmadi et al., 2013). Metacognitive reading awareness is also defined as the awareness of individuals in using their cognitive process which enables them to be more proficient readers (Girli & Öztürk, 2017).

Inventories to identify metacognitive awareness

There have been three survey instruments on metacognitive reading strategies awareness such as a Survey of Reading Strategies (SORS) created by Mokhtari and Sheorey (2002) which aims to assess adolescent and adult ESL students' metacognitive awareness. This instrument was inspired by Metacognitive Awareness of Reading Strategies Inventory (MARS) developed by Mokhtari and Reichard (2002) which aims to quantify

metacognitive awareness of adolescent and adult students of native English. Both surveys consist of 30 items which were validated using a large subject population from middle school to college in reading school-related or academic texts (Mokhtari & Sheorey, 2002).

An older survey, namely, Metacognitive Reading Awareness Inventory (MRAI) was designed by Miholic (1994) to perceive college students' awareness of reading strategies (Guo & Roehrig, 2011). Miholic developed a 10-item multiple-choice inventory intended to stimulate students' metacognitive awareness of reading strategies and projected for usage with students from junior high through college (1994). Mokhtari and Reichard (2002) questioned this instrument's limitations for research use because of the absence of reliability or validity data and scoring rubric. The limitation in Miholic's MRAI was tried to be completed and applied by Guo (2008) by examining 278 Chinese native speakers undergraduate students. The findings indicated significant differences between good and poor ones. Additionally, Padeliadu et al. (2000) also reported a significant correlation between MRAI and English reading comprehension. They used Miholic's MRAI to quest the reading strategies of 250 elementary school children and the result indicated a significant difference between good readers and poor ones. Further, Padeliadu et al. (2000) suggested that MRAI was developed to guide teachers and students in discussing effective reading strategies. They also suggested MRAI provides common reading strategies principally for inexperienced readers.

On the basis of Guo and Padeliadu's findings, this research applied Miholic's inventory in expectation of the readers' immaturity in reading academic English. Kolić-Vehovec et al. (2014) suggest that Miholic's MRAI asks short and simple questions which allow the readers to reflect on their reading behaviour so it is considered appropriate for university first-year students like the participants of this research.

Inventories to identify reading comprehension

As much as MRAI which intends to identify the unseen process of the way to comprehend, Bernhardt's immediate recall protocol proposes a way to assess the comprehension which is the result of an unseen reading process. Bernhardt's immediate recall protocol has readers to recall then retell/rewrite a reading texts in the readers' most convenient language to reduce language barriers in demonstrating comprehension (Bernhardt, 2011). It is argued that the recall protocol is effective to assess reading comprehension (Berkemeyer, 1989) and it does not influence a reader's comprehension of text (Brantmeier, 2006). To be compared with multiple choice or cloze tests, the recall protocol performs an integrative authentic-task measure for reading comprehension (Heinz, 2004, p. 97). Recall protocol was used in this study because it was "...evidently a productive and efficient means of assessing reading in a second language..." (Bernhardt, 2011, p. 109). This is also widely used in assessing reading comprehension in English as a second language setting (Huang, 2018). In this study, the term "recall" in Bernhardt's recall protocol has been rephrased as "paraphrase" in order to be unmistakably referred to as "translating" into the participants' language.

This study attempts to avoid lack of comprehension performance because of the language barriers and anxiety. In a study reported by Sellers (2000) students who experience high language anxiety recall fewer units in written recall protocol. This study tries to minimise this anxiety so that the assessment of reading comprehension will focus on the comprehension of texts. Because language anxiety is commonly related with discomfort with the usage of second and foreign languages, in particular, the use of the reader's language to assess their comprehension "is absolutely critical" (Bernhardt, 2011, p. 102). In this way, comprehension is acquired without the interference of second or foreign language anxiety.

Research Problem

Students are often not aware of the metacognition to control reading strategies so it is important to ascertain the metacognitive reading awareness they practically apply and also the correlation between the students' reading comprehension and their metacognitive reading awareness. To address this aim, this study articulates three problems that follow.

1. To what extent do the first-year university students of Indonesia comprehend academic English texts?
2. Is there any significant correlation between the students' comprehension of academic English texts with their metacognitive reading awareness?
3. How do the students apply their metacognitive reading awareness?

METHOD

Participants

Students who participated in this study were actively registered in the Sarjana (a four-year-undergraduate) study program and hold Indonesian citizenship when the study was being organized. They were fluent in Bahasa Indonesia although it was not the first language of most participants. Bahasa Indonesia was the official and instructional language in their schools. They came from four study programs of the Faculty of Teacher Training and Education and one study program of the Faculty of Psychology in a university in Yogyakarta, Indonesia as follows:

1. Bachelor of Education Secondary Teaching (Fine Arts).
2. Bachelor of Education (Primary).
3. Bachelor of Education Secondary Teaching (Bahasa Indonesia and Literature).
4. Bachelor of Education Secondary Teaching (English to Speakers of Other Languages).
5. Bachelor of Psychology.

There were 373 volunteered student participants in the quantitative stage from which were reduced into twenty volunteered participants to join the qualitative stage for focus group interviews.

Mixed-Method Approach

This study approaches the problems by applying mixed methods which is “the third methodological or research paradigm (along with qualitative and quantitative research)” (Johnson et al., 2007, p. 129) and by using pragmatism which accentuates the research questions and balancing between subjectivity and objectivity during the research process (Shannon-Baker, 2016). Mixed methods approach combines the elements in both quantitative and qualitative approach to answer the research questions as well as combining inductive and deductive reasoning (Teddlie, 2009).

By applying this approach, the research started with the quantitative data collection and analysis in the first stage which addresses the first and second research questions. Next, the findings of the quantitative stage were followed up by a qualitative data collection and analysis addressed in the third question. Finally, qualitative findings were used to explain the quantitative findings in the first stage (See Figure 1).

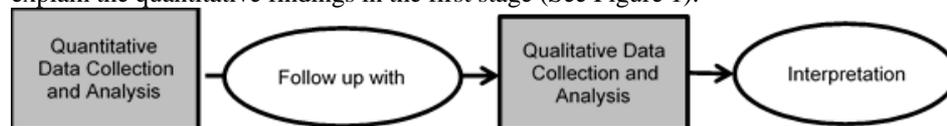


Figure 1

The Explanatory Sequential Design. Adapted from (Creswell & Clark, 2011, p. 69)

Reading Texts Selection

Text length is one element that affects the level of difficulty and suitability of the text for certain readers (McLaughlin, 2012; McNamara, 2005). In this study, the genre of science was chosen to assess reading texts because scientific texts consist of a series of facts. Longer scientific texts produce more facts or information which in turn the text will become more complex or difficult especially for English learners/students. This is the reason for choosing 100-150 words in the length of the Reading Comprehension Test in this study.

Two paragraphs, among the selected paragraphs in the two books chosen for this study, were selected based on Coh-Metrix (McNamara, 2005) results for close resemblance. The Coh-Metrix Web-tool indicated that the first reading text with the topic of nursing from a book entitled “Potter & Perry’s Fundamentals of Nursing” (Crisp & Potter, 2013) comprised 132 words and a readability level (RDL2) of 8.062. The second reading text with the topic of management from a book entitled “Management” (Robbins, 2000) comprised 121 words and a readability level (RDL2) of 7.451. These two reading texts were then selected as the reading texts for the Reading Comprehension Tests in this study.

Paraphrasing Recall Protocol

The quantitative data collection and analysis of this study applied paraphrasing protocol which was initially Bernhardt’s immediate recall protocol. This paraphrase protocol had the readers to rewrite in their language any detail of what they understood and remembered from the given reading texts to assess their reading comprehension

(Bernhardt, 2011, p. 101). Riley and Lee (1996) who compared recall and summary protocols for assessing second language reading comprehension suggested recall protocol was identified as having a higher percentage of details than main ideas. Additionally, Bernhardt argued that recalling in the first language aimed to holistically assess comprehension (2011). Thus, the test emphasized understanding of the text so the readers could not simply guess the answers as in multiple-choice tests.

The paraphrasing protocol in this study was conducted by asking students to read silently two reading texts. They were not permitted to have external material such as a dictionary. They were allowed to read as often as possible within five minutes to understand the reading text. Once they thought they understood the given reading text, they submitted the text. Then they were asked to write everything they remembered from the reading text in their most comfortable language (Indonesian). After applying the protocol for the first reading text, the students were asked to do the same protocol for the second reading text.

Scoring the paraphrasing recall protocol

Some scoring techniques might be applied to score recall protocol. Idea units and pausal-units are both highly associated and both techniques “tap into the same reading ability” (Brantmeier et al., 2014, p. 124). However, Alderson (2000, p. 230) claims that the idea unit is difficult to organise. Brantmeier et al. (2014) suggest a pausal-unit is less complicated thus, this study opted pausal-units to score the participants' reading comprehension.

The pausal-units technique suggests two scoring systems; weighted and unweighted scoring. Weighted scoring was graded on a 1-4 scale from the least important to the most important and unweighted scoring adds the same point on every unit (Bernhardt, 2011). In agreement with Bernhardt (2011), there is statistically no significant difference among both weighted and unweighted scoring. Thus, this study used unweighted scoring for more practicality and each pausal-unit recalled was scored 1 (one). Each pausal-unit that was not recalled was scored 0 (null).

Scoring the metacognitive reading awareness

There were ten questions about the participants' metacognitive reading awareness when they came upon reading challenges. Each question was followed by four possible answers. The participants were allowed to select only one answer for each of the questions which they found the most effective reading strategies, although there was more than one possible correct answer to each question. In order to avoid language challenges which might distract the participants' responses, the questionnaire was translated into the participants' language, Bahasa Indonesia. Back-translation technique was applied to ascertain the validity of the translation. Each correct answer was scored 1 (one) and each wrong answer was scored 0 (null).

Focus Group Interviews

Focus group interviews were conducted to confirm the survey findings of metacognitive reading awareness with the students' actual reading strategies when facing reading

challenges and the interviews also searched for the students' reason for using certain reading strategies. Five participants from each department were randomly invited to voluntarily participate in the focus group interviews. Accordingly, there were totally twenty participants. Each group comprised two or four students depending on their availability. The interviews were conducted in groups as students asked and they felt more comfortable being in groups during interviews.

Data Collection and Analysis

Data of this study comprise reading comprehension scores, students' scores of Metacognitive Reading Awareness Inventory, and focus group interviews with the students on reading strategies. The reading comprehension scores were collected by applying paraphrasing recall protocol. To ascertain the objectivity, two scorers were involved and interrater reliability was tested. The students' scores of Miholic's Metacognitive Reading Awareness Inventory were achieved by having the students answered Metacognitive Reading Awareness Inventory survey and scored the responses. A Spearman's correlation was run to assess the relationship between the students' academic English reading comprehension and metacognitive reading awareness. Focus group interviews with the students on their metacognitive reading awareness inquiring their reading strategies were conducted and then analyzed by using thematic analysis to search for their concrete practice and the reasons for applying certain reading strategies.

FINDINGS

Reading Comprehension Score Framework

Responses of 373 students to the paraphrasing protocol suggest the highest mean score is 3.62 achieved by Bachelor of Education Secondary Teaching (English to Speakers of Other Languages- TESOL). The details for each department's mean scores are presented in Table 1 as follows.

Table 1

Reading-Comprehension Mean-Scores, Skewness and Kurtosis

Departments (Bachelor of...)	Number of participants	Pausal unit Means	Skewness	Kurtosis
Education Secondary Teaching (Fine Arts)	43	1.16	1.068 (SE=.361)	2.550 (SE.709)
Psychology	72	1.41	1.233 (SE=.283)	1.335 (SE.559)
Education (Primary)	88	2.51	1.205 (SE=.257)	1.262 (SE.508)
Education Secondary Teaching (Bahasa Indonesia and Literature)	95	2.48	1.510 (SE=.247)	1.987 (SE.490)
Education Secondary Teaching (English to Speakers of Other Languages)	75	3.62	1.532 (SE=.277)	2.662 (SE.548)

Along with the scoring system for reading English as a second or foreign language proposed by Bernhardt (2011, p. 105), "recalling around 50% of the propositions in any given text is a high-level achievement". Thus, adapting Bernhardt's achievement, the researcher developed five ratings of achievement by calculating; 50% of 65 total pausal-

units of two texts in this study which is 32.5. On the basis of this account, this study divided the achievement into 5 ratings. Where 32.5 pausal-units are considered to be the highest achievement, the five ratings of achievement, from low to high are shown in Table 2 as follows.

Table 2

Five Ratings of Achievement

Comprehension ratings	Pausal unit means
Low	≤ 6.5
Below Average	6.6-13.1
Average	13.2-19.7
Above average	19.8-26.3
High	≥ 26.4

Conforming to this rating of achievement, the highest mean score of 3.62 is rated as low which implies that the students' reading comprehension belongs to a low cohort of comprehension.

Academic reading comprehension and metacognitive reading awareness

This study questions if there is a correlation between the students' academic reading comprehension (AErc) with their metacognitive reading awareness (MRA). A Spearman's correlation was run to determine the relationship between AErc and MRA as can be seen in Table 3 as follows.

Table 3

Reading Comprehension and Metacognitive Reading Awareness

	Metacognitive Reading Awareness	Correlation Coefficient	Reading Comprehension
Spearman's rho			.083
		Sig. (2-tailed)	.111

As figured out in Table 3, There was no correlation between MRA and AErc ($r_s = .083$, $n = 373$, $p > .01$). This study found that the Metacognitive Reading Awareness does not correlate significantly with the students' academic English reading comprehension.

Metacognitive reading awareness

This section presents the data related to the Miholic's Metacognitive Reading Awareness Inventory of which was used to identify the reading strategies of the 373 students who took part in this study. Table 4 shows ten questions and students' responses that portray the students' metacognitive reading awareness. As can be noticed in the table, awareness 1b (Use an outside source, such as a dictionary or expert) is chosen by 269 students. This reading strategy is selected the most by the students. The second place is 6a which reveals the awareness that they "may not have developed adequate links or associations for new words or concepts introduced in the sentence".

Table 4
Students' Metacognitive Reading Awareness

Metacognitive Reading Awareness and Codes	Number of responses
1. What do you do if you encounter a word and you don't know what it means?	
1a. Use the word around it to figure it out.	82
1b. Use an outside source, such as a dictionary or expert.	269
1c. Temporary ignore it and wait for clarification.	12
2. What do you do if you don't know what an entire sentence means?	
2a. Read it again.	214
2c. Think about the other sentences in the paragraph.	128
3. If you are reading science or social studies material, what would you do to remember the important information you've read?	
3b. Ask yourself questions about the important ideas.	63
3c. Realise you need to remember one point rather than another.	95
3d. Relate it to something you already know.	186
4. Before you start to read, what kind of plans do you make to help you read better?	
4b. Think about what you know about the subject.	182
4c. Think about why you are reading.	130
5. Why would you go back and read an entire passage over again?	
5a. You didn't understand it.	113
5c. It seemed important to remember.	29
5d. To underline or summarise for study.	63
6. Knowing that you don't understand a particular sentence while reading involves understanding that	
6a. the reader may not have developed adequate links or associations for new words or concepts introduced in the sentence.	247
6b. the writer may not have conveyed the ideas clearly.	33
6c. two sentences may purposely contradict each other.	19
7. As you read a textbook, which of these do you do?	
7a. Adjust your pace depending on the difficulty of the material.	84
7d. Continually make predictions about what you are reading.	73
8. While you read, which of these are important?	
8a. Know when you know and when you don't know key ideas.	73
8b. Know what it is that you know in relation to what is being read.	200
8d. Know that different strategies can be used to aid understanding.	90
9. When you come across a part of the text that is confusing, what do you do?	
9a. Keep on reading until the text is clarified.	93
9b. Read ahead and then look back if the text is still unclear.	234
9d. Check to see if the ideas expressed are consistent with one another.	36
10. Which sentences are the most important in the chapter?	
10b. The sentences that contain the important details or facts.	96
10c. The sentences that are directly related to the main idea.	231
TOTAL RESPONSES	3075

Findings of the focus group interviews on metacognitive reading awareness

Focus group interviews were conducted to confirm the survey findings of metacognitive reading awareness with the students. There were one theme and four subthemes emerged in the focus group interviews listed in Table 5 as follow.

Table 5
Themes of Focus Group Interview on Metacognitive Reading Awareness with the Students

Theme:	Subthemes
Word for word or literal translation	asking somebody about word meaning mobile phone dictionary google translate reading strategies

Focus group interviews discovered the students' low vocabulary mastery as the participants were aware that they did not know the meaning of many English words. They tried to comprehend reading English academic reading texts by translating word for word and then they did not get the texts' ideas. They overcome this limitation by asking somebody about the words' meanings, usage of mobile phone dictionary, google translate, and reading strategies as their approaches to understand English texts. During focus group interviews, the majority of twenty students mentioned these three approaches while only four of them mentioned reading strategies such as scanning, skimming, and guessing the meaning from the contexts.

In case of uncertainty of the meaning of words, they inclined to ask someone they recognized as someone who understood English better. They felt more comfortable to ask their peer students than their teachers. Based on the interview, this approach usually was done the earliest before looking at the word in the dictionary or google translate.

The students used electronic dictionary installed on their mobile phone as they said that this mode was practical. However, the application they were using provided a word for word translation with which the students were pleased about that. They ignored the multi-meaning of words, as a result, they misinterpreted the idea of the reading texts.

They used google translate application to translate longer reading texts given by their teachers. By so doing, they tried to comprehend the assigned reading texts and answered the questions following the reading activities. They, in fact, were aware that the translation was not accurate accordingly they speculated the meaning and grasped the idea of the reading texts based on the inaccurate translation of the application.

Another way to find the meaning of the words was by applying reading strategies such as scanning, skimming, and guessing the meaning from the context they had recognized from their previous studies. However, only four of twenty participants in this study recalled these reading strategies.

DISCUSSION

The purpose of this study was to investigate if the academic reading comprehension of the first-year university students in EFL contexts correlated with their metacognitive reading awareness and to investigate the students' real approach to comprehend English reading texts. The findings suggest that reading comprehension does not significantly correlate to metacognitive reading awareness. The reading comprehension scores indicate a low cohort of comprehension but the metacognitive reading awareness scores indicate students' high awareness of reading strategies. It implies that the students have sufficient knowledge of metacognitive reading awareness however they have a problem

comprehending the reading texts. This is consistent with Fitriisa et al. (2015) who acclaimed that the students did not necessarily achieve a good reading comprehension even though their scores of metacognitive awareness for reading strategies are good. Further, it was found a weak positive relationship between metacognitive awareness and reading comprehension of the final year of secondary school in Banda Aceh, Indonesia. In other contexts, metacognitive awareness and reading research findings show that there is no significant reading comprehension difference between the use of reading strategies applied by students in Oman (Al-Mekhlafi, 2018). On the contrary, a significant correlation between metacognitive awareness and reading comprehension was reported. Students with good metacognitive awareness perform better reading proficiency both in their first and second language (Hassan, 2017). This is supported by Al-Ghazo (2016) who stated that explicit instruction of metacognitive awareness had a significant effect on Jordanian university students' vocabulary mastery to support reading proficiency.

The focus group interviews following the metacognitive reading awareness survey in this recent study further revealed that the majority of students used dictionary, google translate, or asking somebody when they did not know the meaning of words while they were trying to understand the readings. These three approaches confirmed their Miholic's Metacognitive Reading Awareness Inventory (MRAI) which pointed out metacognitive awareness number 1b (Use an outside source, such as a dictionary or expert) at most. This is in line with Pammu et al. (2014) who suggested that the university students in their research taking place in Makassar, Indonesia were more concerned with the meaning of words while reading by means of the dictionaries. These findings imply that the first-year university students in this study used limited reading strategies as stated in Anderson (2003) who claimed EFL learners used more limited reading strategies than ESL. Since both findings of MRAI and the interviews point out reading strategies associated with words meaning, it is assumed that the students' problem in reading comprehension is English vocabulary. This is in consonance with Li and Chun (2012) who conveyed that metacognitive knowledge supported the EFL readers' reading comprehension when the vocabulary level reached above 3,000 words threshold. In line with it, Supriani and Dardjito (2018) suggested a lack of vocabulary among Indonesian students so that comprehending an English reading was challenging.

This recent study has looked at the exploring English academic reading comprehension achievement and metacognitive reading awareness of the first-year undergraduate university students in an EFL context. It, however, focused on only five study programs of a university in Yogyakarta. It may be the situation that students from other universities in Indonesia or other countries in EFL contexts would perform differently. As the students in this recent study performed in a low cohort of reading comprehension, the findings of this recent study may be different by involving more students with the expectation of more varied cohort of reading comprehension proficiency/achievement. The approach of this study should be replicated with other students of different study programs, as well as in other universities in a similar context to be able to suggest other findings. The effect of vocabulary acquisition on academic reading comprehension and the metacognitive reading awareness needs to be examined any further.

CONCLUSIONS

It is generally noted that communicating ideas through writing such as reading academic texts play a key role in students' academic success. In the contexts of EFL particularly in university, this situation is challenging because students should be able to comprehend the readings in a foreign language. They may have used some metacognitive awareness for reading strategies to understand the given readings; however, there has been limited research on the real metacognitive reading awareness used by the students and the correlation to their reading comprehension. The aim of the current study was therefore to ascertain the correlation of metacognitive reading awareness and academic reading comprehension of the first-year university students in EFL contexts. The findings suggest that there is no significant correlation between metacognitive reading awareness and academic reading comprehension of the first-year university students in this study. The students' metacognitive awareness was high, but the comprehension was low. This concludes that the students in this study were aware of the metacognitive awareness, but its application was limited. The students' metacognitive awareness indicated that the use of reading strategies mainly for word meaning. It implies students' English academic vocabulary mastery caused the limitation. Instruction on metacognitive awareness to enrich reading strategies need to be encouraged. Nevertheless, further research with more population, more range of area, and more level of reading comprehension proficiency is needed to ascertain more reliable findings. Research on the correlation between vocabulary acquisition, metacognitive reading awareness, and reading comprehension is recommended.

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