

THE CORRELATION BETWEEN STUDENTS' COGNITIVE READING STRATEGIES AND THEIR READING COMPREHENSION

Aurynnatasya Nurfidzah Nabilah

Universitas Negeri Surabaya

aurynnatasya.17020084002@mhs.unesa.ac.id

Abstrak

Tujuan dari penelitian ini adalah untuk menemukan hubungan korelasi antara strategi kognitif membaca siswa dan pemahaman membaca siswa. Selain itu tujuan dari penelitian ini juga untuk menemukan strategi kognitif membaca apakah yang siswa gunakan dalam membaca. Penelitian ini menggunakan metode kuantitatif dengan menggunakan SORS dan tes pemahaman membaca. Semua sampel diminta untuk mengisi kuisioner dan mengerjakan tes pemahaman membaca. Data penelitian ini didapatkan melalui kuisioner online dan untuk tes pemahaman membaca dilakukan secara *offline* di sekolah. Jumlah sampel pada penelitian ini sebanyak 64 siswa pada salah satu sekolah menengah pertama di Sumenep. Selain itu, hasil dari penelitian ini menunjukkan bahwa strategi kognitif membaca yang digunakan siswa adalah mengatur kecepatan membaca saat teks bacaan sulit, membaca teks berulang kali untuk meningkatkan pemahaman membaca, mencoba untuk tetap fokus pada teks bacaan, dan siswa menerjemahkan teks bacaan kedalam Bahasa asli mereka saat membaca teks bacaan. Dan juga ditemukan korelasi positif (p -value= 0.003, r = .371) antara dua variabel dari penelitian ini, dimana ditemukan *coefficient correlation* nya termasuk dalam golongan moderat.

Kata Kunci: Strategi Kognitif, Pemahaman Membaca

Abstract

The purpose of this research was to find out the correlation students' cognitive reading strategy and students' reading comprehension. Another aim of this study was to find the cognitive reading strategies do the students use. The research employs a quantitative method using SORS and Reading Test Comprehension. All the samples were asked to fill the questionnaire and were taken reading test comprehension. The data gained through online questionnaire and for the reading test was done in offline at school. The sample of the study was 64 students in one of the secondary schools at Sumenep. Moreover, the result of this research revealed that the cognitive strategies that the students use were managing their reading speed when the text becomes difficult, reading the text several times to increase their comprehension to the text, back to track when they lose concentration, and the students translating the text into their native language while reading. It was found a positive correlation (p -value= 0.003, r = .371) between two variables of this research, in which the correlation coefficient was categorized as moderate.

Keywords: Cognitive Strategies, Reading Comprehension.

INTRODUCTION

Reading is a skill that has an essential role for EFL learners to reach successful learning in educational contexts (Nasri & Biria, 2016). The significant contribution of reading is helping the student to complete their studies because reading can make the students think about and respond to what they read (Suyitno, 2017). By reading process, the students can gain any knowledge and information for their learning which is useful for completing their assignment. Moreover Harmer (2007) claimed that reading is a useful skill for acquiring a second language in which the more they read, they better acquire it. It means, when the students have a lot in reading, they will acquire any knowledge from what they have read. Thus, as Suyitno

(2017) stated that reading ability is important skill that influence students' success in both study and life.

Intan Sari (2016) claimed that having a good reading comprehension also will make any benefit for students to acquire a language. Reading comprehension can be crucial because it is affecting the student's success in their academic (Wigfield, Gladstone, & Turci, 2016). They believed that to increase the students' skill, flexibility, and insight, they are expected to read because reading makes the students not only understand the direct meaning of the text but also comprehend the context as well. Thus, the way to aid the students having a good reading comprehension in English texts by applying reading strategies.

Reading strategies is the procedures used by readers for enhancing the text comprehension deliberately and consciously (Sheorey & Mokhtari, 2001). As Brown (2000)(Brown, 2000) stated that reading strategies has an important role to be a powerful motivator in which this culture can play an active role in students' literacy. By applying reading strategies, it can minimize students' difficulties in comprehending the text because the students know what they have to do to fulfill the needs of their reading. In addition, Oxford (1990) defined learning strategies that can be employed in four language skills is operations used by students to help increase their reading comprehension. Pani (2004) also argued that the good readers are applying more strategies than the poor reader. She stated that reading strategies is involving the mental process when the reader read the text to make sense of what they read. Furthermore, many researchers mentioned factor that can support the students in comprehending the text by applying the reading strategies (O'Malley, Barnwell, & Chamot, 1991; Oxford, 1990; Sheorey & Mokhtari, 2001). Thus, it is needed to apply reading strategies in order to comprehend L2 text easily

Recent research studies have indicated that students applied reading strategies for improving their reading comprehension (Al-Mekhlafi, 2018; Alsuhaihani, 2019; Fotovatian & Shokrpour, 2007; Habók, Magyar, & Hui, 2019; Nasri & Biria, 2016; Nazurty et al., 2019; Suyitno, 2017). Habók, Magyar, & Hui (2019) explained that the effective reading strategies can make the students become a person who have self- directed and self-regulated for taking duty in their learning especially in developing their L2 skill.

According to Oxford (1990) learning strategies that can be implemented in reading are direct and indirect strategies. As Oxford (1990) explained that direct strategies involve cognitive, memory, and compensation strategies. Then, indirect strategies are divided into metacognitive, affective, and social strategies. From these variety of strategies, the learning strategies can be sorted into cognitive, metacognitive, and socio- affective strategies (O'Malley et al., 1991). Metacognitive, Cognitive, and Socio- Affective reading strategies having a different role in students 'reading process.

O'Malley et al. (1991) stated that Metacognitive is a strategy that utilize by students to improve their reading comprehension by doing planning, monitoring, and evaluating. He also explained that socio- affective is strategy that consist of cooperation, question for clarification, and self- talk. Then, Cognitive is an internal process that control the learning process, it consists of rehearsing, organizing, inferring, summarizing, deducing, imaging, transferring, elaborating (O'Malley et al., 1991)

This study is focusing on students' cognitive reading strategies in reading comprehension. Compared with metacognitive and socio-affective that focus on students' planning, monitoring, evaluating in learning and students' interaction with another person to aid their learning, cognitive reading strategies is considered as important strategies that have various strategy on it which believed can motivate students to comprehend the text (Marzuki, Alim, & Wekke, 2018). Cognitive reading strategies is focusing with the students' ability in using their knowledge by repeating, analyzing, and summarizing (Nazurty et al., 2019). (Ali & Razali, 2019; Ghavamnia, Ketabi, & Tavakoli, 2013; Solak & Altay, 2014) also identified that reading slowly, read aloud when text becomes difficult, stay concentrating on reading, adjusting reading pace, pausing and thinking about reading were belonging to cognitive strategies. In reading, cognitive strategies is an internal process that involves of the process of understanding the problem, learning, remembering, and thinking (Suyitno, 2017). He explained that by using cognitive reading strategies, the students will be able to solve their own problem and deliver the ideas while reading.

O'malley and Chamot (1991) divide the representative strategies of cognitive reading strategies into: (1) Rehearsal which means remembering some words or object by repeating it. (2) Organizing is grouping to their semantic and syntactic attributes of the words, terminology and concepts that have been classified. (3) Inferencing is about utilizing data or information of the contents or text to guess and predict the new linguistic items. (4) Summarizing is synthesizing the outcome information to make sure that it has been retained. It is about how to differentiate the important ideas on text and how to ignore the in irrelevant information on the text. (5) Deducing is taking the logical conclusion based on the information of the text that can be linked to the one's personal experience and knowledge of the world. (6) Imagery is about asking students to imagine or create a mental image to remember the new information. (O'Malley et al., 1991) stated that the strategies that effective to enhance students comprehend the vocabulary by attempting visually. (7) Transferring is facilitating a new learning task by using known linguistic information. (8) Elaboration is taking a role in describing the deduction and transfer.

According to Oxford (1990) cognitive strategies are separated into four, there are practicing, receiving and sending messages, analyzing and reasoning, and creating a structure for input and output. The first is set of practicing that containing five strategies. (a)First is *Repeating* that can be applied by repeating the reading

passage several times to get the main ideas, specific information, listing the questions in purpose to make the reader have better understanding in text. (b)Second is *Formally Practicing with Sounds and Writing Systems*, it is not included on reading strategies because it focuses on perception of sounds like the pronunciation and intonation. (c)Third is *Recognizing and Using Formulas and Patterns*, Formulas means expression which is unanalyzed, and patterns have a slot that can be filled by the alternative word. (d)Fourth is *Recombining* that cannot be used in reading because this strategy is appropriate with speaking and writing in which involves creating a meaningful sentence in new way by assigning together with prominent elements. (e)Fifth is *Practicing Naturalistically*, the strategy can influence the students in practicing. Students can have practicing opportunities reading target language in everywhere such as book, magazine, brochures, menus, advertisement outside the class to enhance their reading comprehension. Thus, there are three among five that can be applied in reading.

The second is set of receiving and sending messages that containing two strategies. (a)First is *Getting the Idea Quickly*, this strategy is appropriate with reading since it helps the students to get what they want and need. Also, skimming and scanning are the constituting techniques of this strategy. (b)Second is *Using Resources for Receiving and Sending Messages*, it means the students need resources such as dictionary, grammar book, words list and so on, in order to find the meaning of words on the text for enhancing the understanding to what they read.

The third is set of analyzing and reasoning that containing five strategies. (a)First is *Reasoning Deductively*, this strategy is about hypothesizing the meaning of the sentence that the students have read by interprets to general rules that the students have known. (b)Second is *Analyzing Expressions* that involves the students when getting difficult in interpreting a phrase, a sentence, or even paragraph. (c)Third is *Analyzing Contrastively*, the strategy is comparing the new language elements such as sounds, words, and syntax to the students' native language. (d)Fourth is *Translating*, this strategy will be helpful when the students used it properly because the students are allowing used their own language to interpret a new language. (e)The Fifth is *Transferring* in which this strategy requires prior knowledge to be applied in new knowledge in the target language. Thus, the five strategies of analyzing and reasoning can be applied in reading.

The last is to create the framework for input and output, which is made up of three strategies. (a)The first is *Taking notes* Focus of taking notes is making better understanding for the reader not only writing word by word as in dictation. (b)The second is *Summarizing* that involves the

students to make short passage that they have read to get students trained in using the target language. (c)The third is *Highlighting* in which involves the students to coloring, underlining, use circle and boxes to point out the important thing about what they read. Thus, the three strategies of creating for input and output can be applied in reading.

There are some researchers who carry out the research about the correlation of cognitive reading strategies and students' reading comprehension.

Suyitno (2017) conducted a research about the use of cognitive reading strategies for helping students in comprehending the Indonesia texts. The result showed that based on the score of questionnaires, the students used a variety of cognitive reading strategies in comprehending the text and the correlation of cognitive reading strategies and students' comprehension are depending on students' accuracy of choosing strategy based on the text that they read. Thus, the strategy that students used need to appropriate with the characteristics of the text that is being read.

Wahyono (2019) conducted a study about finding the correlation between students' cognitive reading strategies and reading comprehension which was using questionnaire and students' reading comprehension score as data collection with the fourth- semester university students of English Education as his research participants. The research finding showed that the students normally used four cognitive reading strategies such as skimming the text, predicting the meaning of the word in the context, note-taking of the important part of the text, and linking the text to the background information. The positive correlation is found between cognitive reading strategies and students' reading comprehension

Padrón (1992) conducted a research about finding the effect of ESL students' perception of cognitive strategies on reading achievement. The participant of this research is elementary school ESL students in the third, fourth, and fifth grades. The data collection which is used by the researcher is students' reading comprehension score and Reading strategy Questionnaire (RSQ) that adapted from Hans (1984) that consists of 14 Likert- scale items. It is found that 7 of 14 items from the questionnaire negatively related to students' reading achievement. The research finding result found that the instruments that the researcher used can ensure the students' understanding of significance of using cognitive reading strategies in their reading.

Marzuki et al. (2018) focusing their research in enhancing the reading comprehension over cognitive reading strategies in language class. The participant of this research was university students from Islamic university. The method of this research was using classroom action research (CAR) to solve the reading comprehension of

EFL students by applying the cognitive reading strategies. The result finding result found that the cognitive reading strategies could enrich the students reading comprehension in the EFL class.

Then, Thang & Anh (2019) conducted a research to find the effects of cognitive reading strategies instruction (CRSI) on students' reading comprehension. The participant of this research is non-English major students of the university in a language school. The data collection which used by researchers is a test and questionnaire that adapted from Phakiti (2003). The research finding result found that students' reading comprehension can be improved by using cognitive strategies.

All the researchers found that the use of cognitive strategies can look up the students reading comprehension and discovered a positive correlation between cognitive reading strategies and the students' reading comprehension. However, the participants of the previous studies were university and elementary students. Because the previous studies already conducted the participants of university and elementary students, thus, the participant of secondary school is needed to explore this research about the correlation between cognitive reading strategies and their reading comprehension. Therefore, the present research uses the secondary school students as subjects. In addition, the researcher of this current research thinks that a more comprehensive questionnaire is needed. While the previous study used the questionnaire that adapted from Hans (1984) that consists of 14 Likert- scale items and Phakiti (2003), this current research uses the questionnaire that is adapted from (Mokhtari & Sheorey, 2002). This questionnaire is chosen because it includes classification both of Oxford (1990) and O'Malley et al. (1991) about Cognitive reading strategies classification. Thus, this study is about to discover the correlation between students' cognitive reading strategies and students' performance in reading comprehension in secondary school.

This research is expected can give a role to the teaching- learning English, especially for reading comprehension learning. Hence, it is significant for teacher to be aware of the use reading strategy especially cognitive reading strategies, the teacher can implement or promote the cognitive strategy impliedly to the students and maximize the students' potential on it in the learning process in order to make the students have better comprehension to the text that they read. The researcher hopes that this research will be beneficial as a reference for the teacher and researchers who conduct the same research.

In the light of the background of the study above, this research tries to answer research questions, as follows: (1)

What cognitive reading strategies do the students use? (2) Is there a correlation between students' cognitive reading strategies and their reading comprehension?

The two hypotheses of this study are: (H_0) There is no correlation between students' cognitive reading strategies and students' reading comprehension. (H_a) There is a correlation between students' cognitive reading strategies and students' reading comprehension.

METHOD

This study is quantitative design because it intended to investigate the kinds of cognitive reading strategies that the students use and the correlation between students' cognitive reading strategies and students' reading comprehension. The total of sample of this research is 64 students from 9 grade of one of secondary school in Sumenep which was chosen by convenience sampling.

There were two instruments used in this research such as questionnaire and reading comprehension test. The questionnaire used Survey of Reading Strategy (SORS) that was adapted from (Mokhtari & Sheorey, 2002). The first instrument, SORS, consists of 30 Likert-type items combination of metacognitive and cognitive reading strategy. Thus, the present study only takes 18 items of the cognitive reading strategy from SORS. Each item of SORS is rated into four Likert scales from '1' means that 'I never or almost never do this', '2' means that I do this only occasionally, '3' means I usually do this, and '4' means that 'I always or almost always do this'. Moreover, to avoid the difficulties of comprehending the questionnaire, it was translated into the Indonesia language. The validation of the questionnaire was validated by the expert since the questionnaire was translated into the Indonesia language. Cronbach's alpha was used to determine the questionnaire's reliability, which was found to be 0.815. According to (Cohen, 2007), if the Cronbach's Alpha was above from 0.70, it means that the questionnaire was reliable

Meanwhile, for answering the second research question that is about the correlation between students' cognitive reading strategies and their reading comprehension, the students' reading comprehension score were needed. The second instrument used Reading Comprehension Test adopted from *TOEFL Junior®* Tests from ETS (Educational Testing Service) consists of 42 questions of multiple choice with four possible answers and the duration of doing the test was an hour. The reading comprehension test was using *TOEFL Junior®* because it intended for students ages 11+ in which it appropriates for students nine graders of secondary school. The reading test was done in offline at school. Then, for scoring the

reading test comprehension, the researcher used simple formula that can be shown below:

$$\text{Reading test score: } \frac{\text{N correct answer}}{\text{N questions}} \times 100$$

Then, the reading test score will be classified as interval that has been categorized by (Hartina, et.al, 2018) as below:

Table 1. Score Interval for Reading Comprehension by Hartina, et.al, 2018

Grade Interval	Classification
86-100	Very good
71-85	Good
56-70	Moderate
41-55	Low
0-40	Fail

For the analysis, the consequence of SORS was analyzed by using descriptive statistic through SPSS. The result of likert-scale of the questionnaire was determined and presented in the form of mean score (M) and standard deviation (σ).

For answering the second research question, before calculating the correlation, the researcher had to check the normality of the data by using One Kolmogorov-Smirnov Test to check the data was distributed normally or not. It was discovered that the data was not distributed normally. The probability value of the data was 0.009, in which according to (Cohen, 2007) the data could be normal if the probability value upper than 0.05. Since the data is not normal, the researcher used Spearman Rho Coefficient Correlation as a way to analyze the coefficient correlation of the students' cognitive reading strategies and students' reading comprehension. According to (Cohen, 2007), there are 4 level for the degree of correlation coefficient that can be shown as below.

Table 2. Degree of Correlation Coefficient by Cohen, 2007

Correlation Value	Degree of Correlation Coefficient
0,20 - 0,35	low
0,35 - 0,65	moderate
0,65 - 0,85	high
>0,85	very high

RESULTS AND DISCUSSION

Results

Students' cognitive reading strategies

The 18 items of Survey of Reading Strategies (SORS) were distributed to 64 students at secondary school to examine the cognitive reading strategies when they read academic materials in English. The SORS was rated into 4 Likert scales from '1' means that 'I never or almost never do this' to '4' means that 'I always or almost always do this.'

Table 3. EFL Learners Cognitive Strategies

Cognitive Reading Strategies	Means (M)
1. I takes notes while reading to help me understand what I read	2.56
2. When text becomes difficult, I read aloud to help me understand what I read	2.19
3. I read slowly and carefully to make sure I understand what I am reading	3.31
4. I try to get back on track when I lose concentration	3.27
5. I underline or circle information in the text to help me remember it	2.56
6. I adjust my reading speed according to what I am reading	2.67
7. I use reference materials (e.g. a dictionary) to help me understand what I read	3.09
8. When text becomes difficult, I pay closer attention to what I am reading	2.97
9. I stop from time to time and think about what I am reading	3.00
10. I paraphrase (restate ideas in my own words) to better understand what I read	2.81
11. I try to picture or visualize information to help remember what I read	2.91
12. I critically analyze and evaluate the information presented in the text	2.30
13. I go back and forth in the text to find relationship among ideas in it	3.19
14. I check my understanding when I come across new information	2.94
15. When text becomes difficult, I re-read it to increase my understanding	3.30
16. When I read, I guess the meaning of unknown words or phrases	3.09
17. When reading, I translate from English into my native language	3.23
18. When reading, I think about information in both English and my mother tongue	3.05
Overall Means	2.91

As (O'Malley et al., 1991) 's definition, cognitive reading strategies is an internal process that control the learning process. Then, It can be concluded from the table that the overall means of the SORS is 2.19. While the top four of the most used strategies are item number 3 ($M=3.31$), item number 15 ($M=3.30$), item number 4 ($M=3.27$), and item number 17 ($M=3.23$). Whereas the most used strategy is the item number 3 ($M=3.31$) 'I read slowly and carefully to make sure I understand what I am reading', it means the students tend to read slowly and carefully to make sure they understand they text. Another used strategy is indicated item number 15 ($M=3.30$) 'When text becomes difficult, I re-read it to increase my understanding', it means the students try to re-read the text to increase their understanding when the text becomes difficult. Moreover, the students also try to keep their concentration, it showed by item number 4 with the means ($M=3.27$) 'I try to get back on track when I lose concentration'. The item number 17 also showed the high means ($M=3.23$) 'When reading, I translate from English into my native language' it means reading the text the students tend to translate the English text into their native language. In conclude, while the students read the English text, the students tend to read the text slowly and carefully, also re- read the text to increase their comprehension. Moreover, to understand the text, the students try to focus while reading the English text and translate the English text into their native language while reading.

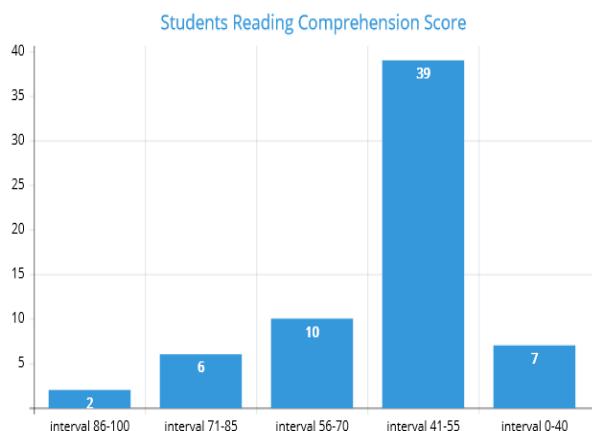
The least strategy used by students is item number 2 ($M=2.19$). The statement is 'When text becomes difficult, I read aloud to help me understand what I read', it means that the students will read the passage loudly if the text becomes difficult.

The correlation between students' cognitive reading strategies and their reading comprehension

For knowing the correlation between students' cognitive reading strategies and their reading comprehension, then, it was needed to gain the students' reading score in which it was obtained from test that was adopted from TOEFL junior.

It was found that the lower score of reading comprehension test was 38, and the higher score was 86. Whereas the means of the students' result showed 52,7. It was concluded that the level of students' reading comprehension according to (Hartina, et.al, 2018) was categorized as a "Low"

Chart 1. Students Reading Comprehension Score



The result from the Spearman Rho Correlation Coefficient between students' cognitive reading strategy and students' reading comprehension score are shown in table below.

Table 4. The Correlation Between Students' Cognitive Reading Strategies and Their Reading Comprehensions

Spearman's rho	COGNITIVE STRATEGY	Correlation Coefficient	1.000	.371**
		Sig. (2-tailed)	.	.003
	N	64	64	
	READING SCORE	Correlation Coefficient	.371**	1.000
	Sig. (2-tailed)	.	.003	.
	N	64	64	

**. Correlation is significant at the 0.01 level (2-tailed).

The table shows that the p -value was 0.003. According to Cohen (2007), if the p -value <0.05 , it indicated that there is a correlation between two variables. Thus, according to the findings, there was a correlation between students' cognitive reading strategies and reading comprehension. Therefore, it could be said that the null hypothesis was accepted, and the alternative hypothesis was rejected. The

correlation coefficient was $r=.371$, in the range of correlation coefficient between 0.35 to 0.63. Thus, it can be done that the correlation between two variables was categorized as moderate.

Discussion

The students' cognitive reading strategies use

Regarding to the result of what cognitive strategies that the students use, it was found that the most used cognitive reading strategies was item 3 ($M=3.31$). This item states that the students tend to understand the text by reading the context slowly and carefully to ensure that they comprehend the text. In (Oxford, 1990) classification, there was getting the idea quickly in which it helped the students to get what they need. In this case, the students tend to read the passage slowly and carefully to get the aim of the passage. Miller (2017) stated that the students will change their reading speed into rigorous and slow if they face a difficult text. He claimed that when the reader read slowly, it was because they want to construct the meaning well. Because they thought that reading the text slowly will help them to comprehend the text as well. Dabarera, Renandya, & Zhang (2014) explained that this case happened because of learners' background knowledge, learning context and environment, grade level, and personal factors. Then, the statement of item number 3 related with statement item number 2 ($M=2.19$), in which item number 3 said that the students tend to read slowly and carefully to understand the passage, and item number 2 said that the students tend to read aloud when text becomes difficult. Those two statements were not only correlated but also in line with the result, because item 3 got the higher means in which the students tend to read slowly and carefully, so item number 2 tend to be the strategies that the students rarely used because the students tried to comprehend the text by reading the text slowly and carefully rather than reading the text loudly.

The second most use cognitive strategies is item number 15 ($M=3.30$) in which when the text becomes difficult, the students try to re-read the text to gain a better understanding. This finding was consistence with (Oxford, 1990)'s statement in which the students were repeating the reading passage several times to get the main ideas, specific information, listing the question in purpose to make the reader have better understanding in text. In (O'Malley et al., 1991) classification, it was classified as rehearsals which means remembering some words or object by repeating it. Anastasiou & Griva (2014) also claimed that the EFL learners tend to read several times to build their understanding to get the point of the passage.

It also found from the result in item 4 ($M=3.27$) that the students tend to stay on track when they lose their concentration. Mokhtari & Sheorey (2002) clarified that students with a lack of English proficiency tended to rise their consciousness of using reading strategies in order to enhance their comprehension and they are not only aware of what strategies that they use but also try to be better regulating those strategies when reading the passage. Moreover, the statement of the students tends to stay on track when they lose their concentration is consistent with Mokhtari & Sheorey (2002) explanation in which the students try to use the cognitive strategy to increase their comprehension of the passage.

The item number 17 ($M=3.23$) in which the student tends to translate the English text into native language is in line with (Oxford, 1990)'s statement, she explained that when the EFL learners use that strategy properly, it will be useful because they are allowing to use their native language to interpret a new language. Moreover, it because the text is formed of English text, thus the students try to comprehend it by translating into their native language. However, (Oxford, 1990) stated that sometimes the students got wrong interpretation to the target language because they used word by word translation.

The correlation between students' cognitive reading strategies and students' reading comprehension

The result of correlation between students' cognitive reading strategies and reading comprehension was significantly found correlated. Whereas the correlation coefficient of this research was found ($r = .371$). Thus, it can be concluded that students' cognitive reading strategies and students' reading comprehension was positively correlated.

The result of this research was convenient with the finding of the previous study (Wahyono, 2019), investigating the relationship between cognitive reading strategies and reading comprehension with fourth-semester university students. It was found the positive correlation with correlation coefficient ($r = .61$). Then, it was in tune with (Suyitno, 2017) finding that he found a positive correlation between cognitive reading strategy and the students' achievement. It was also convenient with (Marzuki et al., 2018) and (Thang & Anh, 2019)'s finding, in which the result of their research was found that cognitive reading strategies that the EFL students applied could help them have better reading comprehension.

Marzuki et al. (2018) stated that cognitive reading strategies has a various strategy which considered can make the students be a proficient reader. Because the cognitive strategy is an internal process that control the learning process such as rehearsing, organizing, inferring, summarizing, deducing, imaging, transferring, elaborating

(O'Malley et al., 1991). Hence, if the students can control the internal process well, they will be able to comprehend the text easily. Then, it was found in this research that cognitive reading strategies correlate with students' reading comprehension. Suyitno (2017) explained that applying cognitive reading strategies will help the students solve their own problem and deliver the ideas while reading. It was showed on the most strategies that the students used in which the students tend to read slowly and read the text several times to ensure that they understand what the text about. It means that the students were aware of their use of cognitive reading strategies and can make them have better reading comprehension.

CONCLUSION

The current research seeks to reveal the strategies the students mostly employed while reading the English text and the correlation between students' cognitive reading strategies and students' reading comprehension in secondary school. The result from the SORS showed that the cognitive strategies that the students most used are the item number 3 ($M=3.31$), item 15 ($M=3.30$), item 4 ($M=3.27$), and item 17 ($M=3.23$). Those items were the students tended to use some reading strategies while reading such as reading slowly and carefully when the text becomes difficult, read the text several times to increase their comprehension to the text, back to track when they lose concentration, and the students translate the text into their native language while reading. Therefore, it was also found the item number 2 ($M=2.19$) as the least strategy that the students used with statements the students tend to read aloud when text becomes difficult.

The students cognitive reading strategies and reading comprehension were significantly correlated because the p -value was found 0.003. According to (Cohen, 2007), it can be significantly correlated if the p -value less than 0.05. The degree correlation coefficient was found ($r=.371$), in which the range of correlation coefficient among 0.35 to 0.63 was categorized as moderate. Therefore, as with (Marzuki et al., 2018) and (Thang & Anh, 2019)'s finding, they implied that applying the cognitive reading strategies while reading can be helpful.

Suggestion

Based on the conclusion about the result of this research, the suggestion is addressed to the English Foreign Language (EFL) instructor and future research. For the EFL teacher, they can apply the cognitive reading strategies while teaching reading to make the students have better reading comprehension. Then, future research is suggested to conduct the same research but focusing on different skills such as listening, speaking, and writing. Then, they can use large sampling and different levels as

the participant. Also, future research can use the other questionnaire that also related to the research to seek more about students' thought of applying cognitive reading strategies. Furthermore, the result of this research can be used as additional information to conduct further research.

REFERENCES

- Al-Mekhlafi, A. M. (2018). EFL learners metacognitive awareness of reading strategies. *International Journal of Instruction*, 11(2), 297–308. <https://doi.org/10.12973/iji.2018.11220a>
- Ali, A. M., & Razali, A. B. (2019). A Review of Studies on Cognitive and Metacognitive Reading Strategies in Teaching Reading Comprehension for ESL/EFL Learners. *English Language Teaching*, 12(6), 94. <https://doi.org/10.5539/elt.v12n6p94>
- Alsuhaibani, Z. (2019). The relationship between female EFL students' use of reading strategies and their reading self-efficacy. *International Journal of Arabic-English Studies*, 19(2), 373–394. <https://doi.org/10.33806/ijaes2000.19.2.8>
- Anastasiou, D., & Griva, E. (2014). Awareness of reading strategy use and reading comprehension among poor and good readers. *İlköğretim Online*, 8(2), 283–297. <https://doi.org/10.17051/io.65230>
- Brown, H. dougla. (2000). [H._Douglas_Brown]_Teaching_by_Principles,_Second_(BookFi.org).pdf. *Teaching by Principles An Interactive Approach to Language Pedagogy*, p. 491.
- Cohen, L. (2007). Research Methods in Education. In *Research Methods in Education*. <https://doi.org/10.4324/9780203029053>
- Dabarera, C., Renandya, W. A., & Zhang, L. J. (2014). The impact of metacognitive scaffolding and monitoring on reading comprehension. *System*, 42(1), 462–473. <https://doi.org/10.1016/j.system.2013.12.020>
- Fotovatian, S., & Shokrpour, N. (2007). Comparison of the efficiency of reading comprehension strategies on iranian university students' comprehension. *Journal of College Reading and Learning*, 37(2), 47–63. <https://doi.org/10.1080/10790195.2007.10850197>
- Ghavamnia, M., Ketabi, S., & Tavakoli, M. (2013). L2 Reading Strategies Used by Iranian EFL Learners: A Think-Aloud Study. *Reading Psychology*, 34(4), 355–378. <https://doi.org/10.1080/02702711.2011.640097>
- Habók, A., Magyar, A., & Hui, S. K. F. (2019). The effects of EFL reading comprehension and certain learning-related factors on EFL learners' reading strategy use. *Cogent Education*, 6(1). <https://doi.org/10.1080/2331186X.2019.1616522>
- Harmer, J. (2007). *How to teach English*.
- Hartina, S. S., Vianty, M., & Inderawati, R. (2018). Correlation Between Students' Metacognitive Strategy Used in Writing Process and Essay Writing

- Performance. *The Journal of English Literacy Education*, 5(2), 158–167.
- Intan Sari, M. (2016). Cognitive and Metacognitive Reading Strategy Use and Reading Comprehension Performance of Indonesian EFL Pre-service Teachers. *Journal of Foreign Languange Teaching and Learning*, 1(2). <https://doi.org/10.18196/ftl.1213>
- Marzuki, A. G., Alim, N., & Wekke, I. S. (2018). Improving the reading comprehension through cognitive reading strategies in language class of coastal area in indonesia. *IOP Conference Series: Earth and Environmental Science*, 156(1). <https://doi.org/10.1088/1755-1315/156/1/012050>
- Miller, G. (2017). Metacognitive Awareness and Reading Strategy use : Investigating the Intermediate Level ESL Students ' Awareness of Metacognitive Reading Strategies. *Culminating Projects in English*, 115, 1–90.
- Mokhtari, K., & Sheorey, R. (2002). Measuring ESL Students' Awareness of Reading Strategies. *Journal of Developmental Education*, 25(3), 2–10.
- Nasri, M., & Biria, R. (2016). Integrating Multiple and Focused Strategies for Improving Reading Comprehension and L2 Lexical Development of Iranian Intermediate EFL Learners. *International Journal of Applied Linguistics and English Literature*, 6(1), 311. <https://doi.org/10.7575/aiac.ijalel.v.6n.1p.311>
- Nazury, Rustam, Priyanto, Nurullaningsih, Pratiwi, A., Sarmandan, ... Mukminin, A. (2019). Learning strategies in reading: The case of Indonesian language education student teachers. *Universal Journal of Educational Research*, 7(11), 2536–2543. <https://doi.org/10.13189/ujer.2019.071133>
- O'Malley, J. M., Barnwell, D., & Chamot, A. U. (1991). Learning Strategies in Second Language Acquisition. In *Language* (Vol. 67). <https://doi.org/10.2307/415153>
- Oxford, R. . (1990). [Rebecca_L.(Rebecca_L._Oxford)_Oxford]_Language_Le(BookFi.org).pdf (p. 136). p. 136.
- Padrón, Y. N. (1992). The Effect Of Strategy Instruction On Bilingual Students' Cognitive Strategy Use In Reading. *Bilingual Research Journal*, 16(3–4), 35–51. <https://doi.org/10.1080/15235882.1992.10162636>
- Pani, S. (2004). Reading strategy instruction through mental modelling. *ELT Journal*, 58(4), 355–362. <https://doi.org/10.1093/elt/58.4.355>
- Sheorey, R., & Mokhtari, K. (2001). Differences in the metacognitive awareness of reading strategies among native and non-native readers. *System*, 29(4), 431–449. [https://doi.org/10.1016/S0346-251X\(01\)00039-2](https://doi.org/10.1016/S0346-251X(01)00039-2)
- Solak, E., & Altay, F. (2014). the Reading Strategies Used By Prospective English Teachers in Turkish ELT Context. *International Online Journal of Education and Teaching*, 1(3), 159–174.
- Suyitno, I. (2017). Cognitive Strategies Use in Reading Comprehension and Its Contributions to Students' Achievement. *IAFOR Journal of Education*, 5(3), 107–121.
- Thang, N. Van, & Anh, B. H. (2019). *THE EFFECTS OF COGNITIVE READING STRATEGIES INSTRUCTION (CRSI) ON STUDENTS ' READING COMPREHENSION AND THEIR ATTITUDES TOWARDS CRSI AT*.
- Wahyono, E. (2019). Correlation between Students' Cognitive Reading Strategies and Reading Comprehension. *Jurnal Studi Guru Dan Pembelajaran*, 2(3), 256–263. <https://doi.org/10.30605/jsgp.2.3.2019.61>
- Wigfield, A., Gladstone, J. R., & Turci, L. (2016). Beyond Cognition: Reading Motivation and Reading Comprehension. *Child Development Perspectives*, 10(3), 190–195. <https://doi.org/10.1111/cdep.12184>