

## READING STRATEGIES USED BY 12 GRADERS IN AN EFL CONTEXT: A CORRELATIONAL STUDY

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### ABSTRACT

This correlation study investigates three major strategies of cognitive, metacognitive, and socio-affective as the strategies that are generally applied in reading comprehension and reading achievement at secondary level in Indonesia. The participants were 127 of 12 graders. The reading strategy questionnaire adopted from Strategy Inventory for Language learning (SILL, ESL/EFL version 7.0) and reading comprehension test were the used instruments. Using one-way analysis of variance, the results reveal that there was significant correlation of metacognitive strategies and reading comprehension achievement but not with cognitive and socio-affective strategies. In addition, metacognitive was the most frequent strategies employed to reading comprehension.

**Keywords:** reading strategies, comprehension, secondary level

### INTRODUCTION

Since a model of English teaching and learning process at senior high schools (grade 10-12) in Indonesia is texts or genre-based learning, most of reading materials are in the texts form like narrative, review, discussion, explanation, descriptive, exposition, short functional text; letter, brochure, advertisement or banner, announcement and message. Students read the texts to understand the information before they are able to produce similar texts in writing or speaking activity. Teachers teach the students some strategies to enhance their reading comprehension achievement and the students must read many texts and answer the questions based on the texts they have read (National Education Department, 2006).

Comprehension as the main purpose of reading is very important in learning a foreign language (Duffy, 2009; Koda, 2005; Smith et al., 2021) find it acquiring and mastering this skill seems complex to many students and they often find difficult to exploit this skill in their learning experience (Ghonsooly & Eghtesadee, 2010). Lack of interest from readers, inappropriate texts, or readers do not employing strategies needed to achieve the meaning contribute to comprehension. It has been identified that one factor that contributes to learners' success in reading is reading strategies. For effective comprehension, further, Hernandez & Bulnes (2009) claim that being aware of reading comprehension strategies such as cognitive, metacognitive, and socio-affective, will allow students to become effective readers (Sun et al., 2021, Thuy, 2018; Wang, 2016; Yapp et al., 2021)

Reading strategies are defined as conscious actions employed to complete reading tasks particularly for comprehension (Barnett, 1989; Cohen, 1990; Garner, 1987; Lehtonen, 2000). Hernandez and Bulnes (2009) assert that reading comprehension strategies are

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procedures involving objectives, plans and evaluations. The strategies could be cognition, metacognition and socio-affective processes that have a significant role in comprehension. Meanwhile Wong (2005) has emphasized that reading strategies are an intentional way to signify and scrutinize difficulties and then search for solution in reading. For non-native readers who have lack of language competency, applying reading strategies would assist better reading achievement especially on language proficiency test.

Cognitive strategies are mental processes related to how information is processed including how that information is obtained, stored, retrieved, and used. These strategies could be note taking, outlining, inferencing, utilizing former learning, applying background knowledge, examining, and utilizing connection pieces of information (Oxford, 1999; Williams & Burden, 1997; Wu, 2008). Further, Pintrich (1999) highlighted that the cognitive strategies are recognized as vital identified with scholastic execution in the classroom in light of the fact that they can be connected to basic memory undertakings or to more complex assignments that require more understanding of the information. Samida (2012) accentuates that cognitive strategies are maybe the most prominent strategies for language learners. Using repetition, analysis and summary, they manipulate and alter the target language.

Dissimilar with cognitive, metacognitive strategies in reading are actions to regulate the cognitive strategies and learners are able to monitor their learning. Some phases the learners take to oversee or manage their adapting, for example, arranging and organizing learning assignments, setting objectives and goals, checking the learning procedure for blunders, and assessing advancement. These could assist them to arrange and learn language in an effective way. Therefore, when the learners are puzzled with difficult words, grammatical rules, and writing procedures, they could employ metacognitive strategies to be efficacious language learners (Samida, 2012; Soodla, 2017; Wu, 2008). Oxford (1990) proposes that metacognitive strategies included three strategies sets: Centering, arranging and planning, as well as evaluating the learning. Further, O'Malley and Chamot (1990) contend that metacognitive systems are higher request official abilities that may involve getting ready for checking or assessing achievement of the learning exercises. They are administration procedures by which the learners control his or her learning procedure through arranging, checking, assessing and altering his or her learning strategies (Zhang and Wu, 2009). Chamot (2004) has affirmed that students need to employ various reading strategies, including the metacognitive to develop and monitor their learning. In addition, Cromley (2005) accentuated that poor comprehenders tend to use fewer metacognitive reading strategies of monitoring such as summarizing, predicting, asking questions.

Meanwhile, socio-affective strategies are fundamental in learning a language because language is used to communicate. Oxford (1990) underlined that social strategies are linked with interpersonal behavior and affective deals with being able to take control of the emotional conditions and experiences that construct the learner's subjective association in learning. Further, Samida (2012) claimed that the socio-affective strategies are: making inquiries, coordinating with others, relating to others, control the states of mind, and feelings and comprehend those negative emotions retard learning. As indicated by Wu (2008) socio-affective strategies are the strategies that offer learners some assistance with gaining control over their feeling, states of mind and inspiration identified with dialect learning. Such systems incorporate empowering oneself through positive self-talk, chatting with somebody about her inclination about taking in the objective dialect, and so forth. Wu (2008) additionally has brought up that socio-emotional procedures are activities that include other individuals, for example, making inquiries, coordinating with others, and getting to be mindful of others' considerations and feelings.

To help EFL learners to construct reading strategies, the educators need to offer different kinds of reading materials for their learners which should be conducted through unequivocal clarification and demonstrating (Wong, 2005; Brevik, 2014), Making clear explanation would provide guidance for readers, particularly the poor ones, to show them what

needs to be done, improved, and evaluated. It is also necessary to train them to use different types of strategies they could employ. Using demonstration will provide learners examples of how to apply the strategies. Chamot, et al. (1985) asserted that the educators ought to be prepared to utilize the learning strategies and materials and expand the use of strategies of the students' learning. This needs to be part of learning exercise that allows the learners to use the strategies by themselves. Consequently, they would independently use the strategies without teachers' guidance. Therefore, it is suggested that EFL or L2 instructors ought to consider different approaches to direct methodology guidelines in their class. For a few educators it may be ideal to begin with little methodology mediations, for example, helping EFL/L2 learners figure out how to dissect words and figure implications from connection, as opposed to with full-scale systems-based instruction including different kinds of language learning strategies (Oxford, 2003).

Studies have indicated that language learners gathered some benefits on reading strategies. Investigation of the relationship between four reading strategies; cognitive, metacognitive, compensation and testing strategy on reading outcomes at tertiary level was conducted by Shang (2011). To investigate the reading strategies used by the participants, the SILL (Strategy Inventory for Language Learning) was applied. They were asked to take a comprehension test and the comprehension was assessed using the Reading Comprehension section of the simulated TOEFL test. The result revealed that both cognitive and testing strategies were significantly correlated with reading score. However, it was found that there was no significant correlation between metacognitive and compensation strategies on reading outcomes.

With similar participants at collage level, Wu (2008) examined the relationship of six reading strategies with three language skills. The strategies used were memory strategies, cognitive strategies, compensation strategies, metacognitive strategies, affective strategies, and social strategies to the students' listening score, reading score, and writing score. The participants who were recruited from a university in Taiwan were categorized into two groups according to the scores on the entrance exam. Using Strategy Inventory for Language Learning (SILL) questionnaire ESL/EFL Version 7.0 by Oxford (1990), the findings showed that there was the most significant correlation between the use of cognitive strategies and English proficiency. In addition, listening and reading proficiency was more affected by the use of cognitive strategies.

Research by Thuy (2018) with EFL and ESL students found that reading strategies play positive roles in English reading comprehension as they facilitate learning to read effectively. The students preferred to use cognitive strategy rather than metacognitive and socio affective ones. Additionally, Mohamed (2023) found that reading strategies of cognitive and metacognitive can be embedded with reciprocal teaching that empowered students to engage in reading and enable them to monitor their comprehension.

In Indonesia context, investigation by Erni (2021) found that students critically using cognitive, metacognitive, and affective methods. They use a variety of strategies when reading academic texts and these were used alternatively. Technology's impact on self-concept, abilities, experiences, and timing led to a preference for cognitive methods over metacognitive and affective strategies.

With the participants of teachers and their ninth graders, Soodla et al. (2017) investigate the teachers' metacognitive knowledge of reading strategies and their students' metacognitive knowledge and reading comprehension. The study found that students' metacognitive knowledge of reading methods correlated with their reading comprehension, supporting earlier findings. The primary discovery was that teachers' metacognitive understanding of reading methods significantly related to their students' metacognitive understanding but not reading comprehension. Improving students' metacognitive awareness of reading methods can enhance their reading comprehension, according to the findings. The study emphasizes how teachers' metacognitive expertise impacts students' metacognitive knowledge.

With primary students at the fifth grade as participants of the study, Teng (2019) found that metacognitive strategy education benefits primary school students. Although they can explain their approach and task understanding of reading, their knowledge is limited and need further development. This study highlights introspection and process-based conversations as one method. Young learners would benefit from explicit training of metacognitive skills. This study found that young learners had the potential to adopt new reading comprehension methods despite having a restricted repertory.

Previous research has revealed that reading strategies are beneficial for learners at tertiary and primary education including their teachers. However, there is limited research that investigates reading strategies at secondary level. This study with small scope only in one small city in East Kalimantan (known as Borneo) examines the most frequent reading comprehension strategies used by the twelfth-year students and a correlation between the three reading strategies; cognitive, metacognitive, and socio-affective. It is expected that the results of this study, although conducted in a small city, could provide knowledge for teachers and students to strengthen reading strategies to assist students to become effective readers.

## METHODS

The design of this research is correlational study. The participants of this study were 127 students of the 12th grade in one of public senior high schools in Samarinda – the capital city of East Kalimantan (known as Borneo). A consent form was given to each student prior the research. They were also informed that their performance would be kept confidentially and would not have any effects on their English score at school or on their report. Two primary data were used in this study: reading comprehension test and questionnaires of Strategy Inventory for Language Learning (SILL) questionnaire ESL/EFL Version 7.0 by Oxford (1990).

The test of reading comprehension was taken from the extra reading component of English National Examination. There were 31 questions with a 2-score point for each right answer completed within about 80 minutes. The reading passages used in this test involved short functional texts; message, letter/e-mail, advertisement/brochure, announcement. Each text consisted of one to two multiple-choice questions with five options.

Since the answer key of national final examination test was never published, verification of answer key from two senior English teachers and one lecturer of English Language Education was employed to achieve valid answer key of the test. After verification, the test was administered in six rooms with one teacher in each room and was strictly monitored.

The students' strategies-using effect was evaluated based on reading strategy questionnaire adopted from SILL. A 5-point Likert-scale that ranged from 1 (never or almost never true of me), 2 (usually not true of me), 3 (Somewhat true of me), 4 (usually true of me), 5 (always or almost true of me) was applied. The questionnaire administration was conducted after the students completed the reading comprehension test.

The questionnaire comprised 43 statements involving three strategies. Each strategy consists of three sets of reading strategies. Cognitive strategy entailed 15 items in three main sets; rehearsal three items, elaboration 6 items and organization 6 items. The example of the statement of rehearsal was "I try to remember key words to understand the main idea of the text". Metacognitive strategy contained 17 items of three main sets: planning with eight items, monitoring four items and regulating with five items. The example of statement of planning was "I read the topic or heading of the passage". Socio-affective strategy involved 11 items of three main sets: three items of cooperating, five items of clarifying and three items of self-talk. The example of statement of cooperating was "I ask the teacher about my doubts concerning what was not clear to me in the reading".

Try-out of the reading strategy questionnaire was completed to validate statement of each item as the questionnaires were translated into Indonesian to avoid misunderstanding.

The 43 items of SILL were administered to 20 students for 45 minutes. The reliability analysis result of Cronbach's alpha coefficient was 0.972 which was considered as an excellent one.

Statistical Package for Social Sciences (SPSS) version 20 was employed for one-way analysis of variance (1x4 ANOVA). Descriptive statistics, the Mean (M), the maximum, minimum, and frequency distribution of the variables were computed as a preliminary analysis.

## FINDINGS AND DISCUSSION

The students reading achievement were classified into the levels of excellent, good, fair, poor and very poor based on the scoring criteria determined by Department of National Education and Culture to see the percentage of the students' achievement. Calculation of the mean reading score (M) of the students who used cognitive, metacognitive and socio-affective strategies is first presented.

### *The computation of the questionnaire*

Descriptive statistics of each strategy and the reading scores were employed as a preliminary analysis.

**Table 1. Mean score of cognitive strategy-using**

Number of Students	Rehearsal	Elaboration	Organization	Mean
42	3.88	2.96	3.27	3.37
Rank	1	3	2	

In this research, the mean score of cognitive strategy is 3.37. From the three main sets of cognitive strategy, rehearsal comes to the most employed strategy followed by organization and elaboration with 3.88, 3.27 and 2.92 respectively. It indicated that the twelfth-year students quite often used rehearsal while the used of organization and elaboration strategies were quite similar.

**Table 2. Mean score of metacognitive strategy-using**

Number of Students	Planning	Monitoring	Regulating	Mean
42	3.85	3.95	3.66	3.82
Rank	2	1	3	

The questionnaire findings of metacognitive strategy-using shows that monitoring got the highest mean score with 3.95. It is followed by planning with and regulating with 3.66. It could be said that the three strategies of metacognitive were employed equally. Meanwhile, socio-affective strategy-use is presented in Table 3.

**Table 3. Mean score of socio-affective strategy-using**

Number of Students	Cooperative	Clarification	Self-talk	Mean
43	2.99	3.83	3.19	3.34
Rank	3	1	2	

In this research, the mean score of socio-affective strategy is 3.34. From the three main sets of socio-affective strategy, clarification with 3.83 were mostly applied, while self-talk and cooperative were quite similar as the mean scores were 3.19 and 2.99.

The descriptive statistics regarding the means score of the three strategies has shown that the most frequency strategy the students used in the reading strategy was metacognitive

strategy (M = 3.82), followed by cognitive strategy (M = 3.37), and socio-affective strategy (M = 3.34).

The findings in this study indicated that metacognitive strategy is the most frequently employed by the students and cognitive strategy was at the second position with a score is 3.37. The finding of the present research is similar with previous research (Shang, 2010) that found the most frequent use of reading strategy was found to be metacognitive strategy. From the three main sets of metacognitive strategy (planning, monitoring and regulating) it was found that monitoring is the most frequently used by students. From the three main sets of cognitive strategy (rehearsal, elaboration, and organizational) rehearsal is the most frequent use by students. This indicates that the students employ more strategies such as underlining the text, saying a word or phrase aloud, or using a mnemonic.

Socio-affective strategy was in third position after metacognitive and cognitive strategy with the score of 3.34. Among the three sets of socio-affective strategies namely cooperation, clarification and self-talk, clarification is the most frequent strategy used by the students. It is very common for teachers in the reading lesson to ask their students to answer the reading questions and confirm the answers to their classmates'. O'Malley and Chamot (1990) have proposed that students often clarify their doubts with classmates and teacher and compare their answer with classmates. Self-talk is also often used by students. They often feel anxious and discouraged to read. They felt so because they could not understand the text well and are worried if their friends will mock them. They do not very often to cooperate in their reading tasks because some students might feel that it is useless to discuss the reading topic and work in group with their friends because their friends do not know much they might talk about the other topic beyond the lesson (Hernandez and Bulnes, 2009).

It could be said that the findings in this study are do not support previous research by Thuy (2018) and Erni (2021) that the students employed more cognitive strategies rather than metacognitive and socio affective ones since this study found that metacognitive was the most strategy that students use over cognitive and socio affective strategies.

**Reading comprehension score**

Based on the scoring criteria determined by the Ministry of National Education and Culture, it is found that students' reading score was dominated by the level of fair to very poor one. The reading score of cognitive-strategy-using is the highest of the three-reading strategy-using.

The table indicates that the lowest percentage is the excellent and the highest percentage is the very poor. This means that only a few students achieved excellent score with the cognitive strategy-using. Table 5 presents the reading score of metacognitive-strategy-using.

**Table 4. Reading comprehension score of cognitive strategy-using**

No	Score Range	Number of Students	Level	Percentage
1	80 - 100	5	Excellent	12 %
2	70 - 79	10	Good	24 %
3	60 - 69	7	Fair	16 %
4	50 - 59	7	Poor	16 %
5	0 - 49	13	Very Poor	31 %
Total		42		

**Table 5. Reading comprehension score of metacognitive strategy-using**

No	Score Range	Number of Students	Level	Percentage
1	80 - 100	1	Excellent	2 %
2	70 - 79	5	Good	12 %
3	60 - 69	11	Fair	26 %
4	50 - 59	10	Poor	24 %
5	0 - 49	15	Very Poor	36 %
Total		42		

The score of reading comprehension test of metacognitive strategy-using is dominated with the level of fair to very poor. The level of very poor has the highest percentage with 36% while the excellent one is only with 2%. Next is table 6 that shows the reading score of socio-affective-strategy-using.

**Table 6. Reading comprehension score of socio-affective strategy-using**

No	Score Range	Number of Students	Level	Percentage
1	80 - 100	1	Excellent	2 %
2	70 - 79	3	Good	7 %
3	60 - 69	6	Fair	14 %
4	50 - 59	6	Poor	14 %
5	0 - 49	27	Very Poor	63 %
Total		43		

The score of socio-affective strategy-using is dominated by the very poor level with 63%. Overall, the findings reveal that the reading score of the students were mostly in the level of fair to very poor level based on the scoring criteria determined by Department of National Education and Culture.

Overall, cognitive strategy is the highest (58.88) followed by metacognitive (53.26) and the last is socio-affective (45.05) of the three-reading comprehension strategy-using.

### ***Relationship between reading strategy used and the reading score***

Before one-way ANOVA was employed to examine the difference and the relationship between the three reading comprehension strategies to the students' reading comprehension score, a test of the homogeneity of variance was applied.

The hypothesis of the test of the homogeneity of variance is that H0: the three variance of reading strategies are same, and H1: the three variance of reading strategies are different. Table 1 shows that the significant is .592. Since  $H_0 > 0.05$ , so H0 is accepted and H1 is rejected. It means that the three variances of reading strategies are homogenous, and one way ANOVA can be used to investigate the relationship of reading strategies to the students' score of reading comprehension test.

**Table 7. Test of homogeneity of variance**

Levene Statistic	df1	df2	Sig.
.526	2	124	.592

\*Significant at the 0.05 level

**Table 8. The relationship between the three reading strategies and reading score**

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Cognitive	42	58.88	16.713	2.579	53.67	64.09
Metacognitive	42	53.26	15.111	2.332	48.55	57.97

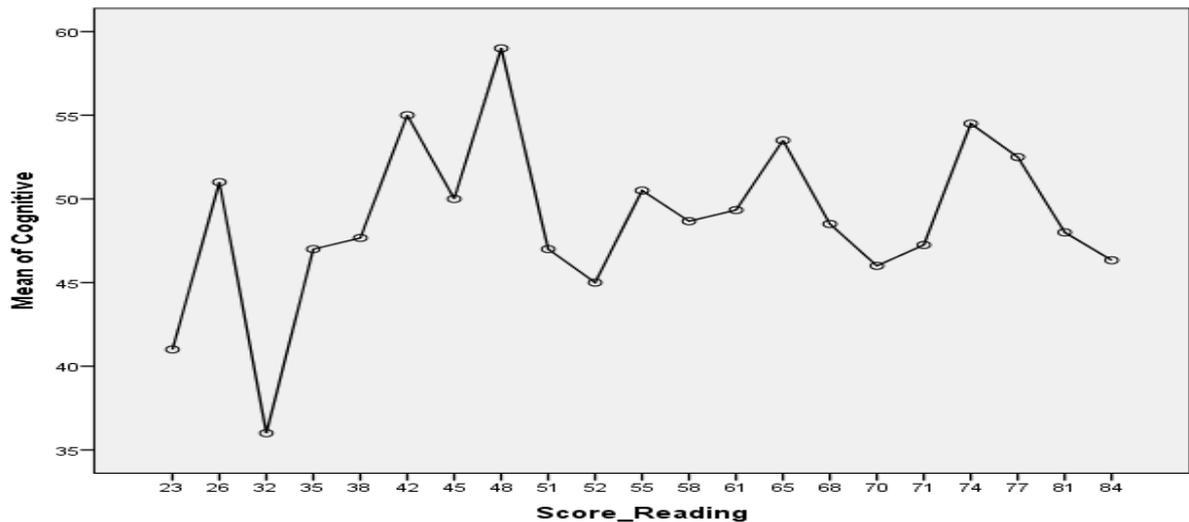
Socio Affective	43	45.05	17.410	2.655	39.69	50.40
Total	127	52.34	17.289	1.534	49.30	55.37

Table 8 shows that 42 students who used cognitive and metacognitive strategy got the average score of 58.88 and 53.26 respectively, while 43 students who implemented socio-affective strategy achieved 45.05 of the average reading score. The finding shows that from the three-reading comprehension strategy-using, cognitive strategy is the highest followed by metacognitive and the last is socio-affective strategy.

**Table 9. Relationship between reading strategy and minimum and maximum of reading score**

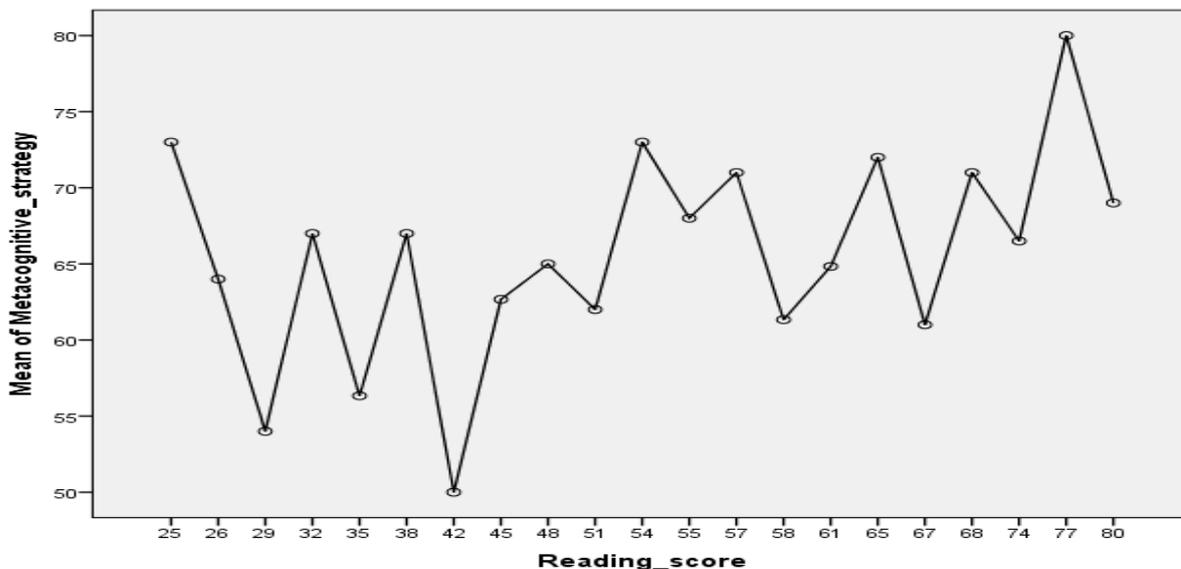
	Minimum	Maximum
Cognitive	23	84
Metacognitive	25	80
Socio-affective	16	87
Total	16	87

Table 9 shows that the minimum score of students who use cognitive strategy is 23 and the maximum score is 84. The minimum score of students who use metacognitive strategy is 25 and the maximum score is 80. The minimum score of students who use socio-affective strategy is 16 and the maximum score is 87. Of the three reading strategies, socio-affective has the most minimum and the maximum score. To make it clear, the researchers depict the range of score of each strategy into graphics as follow:



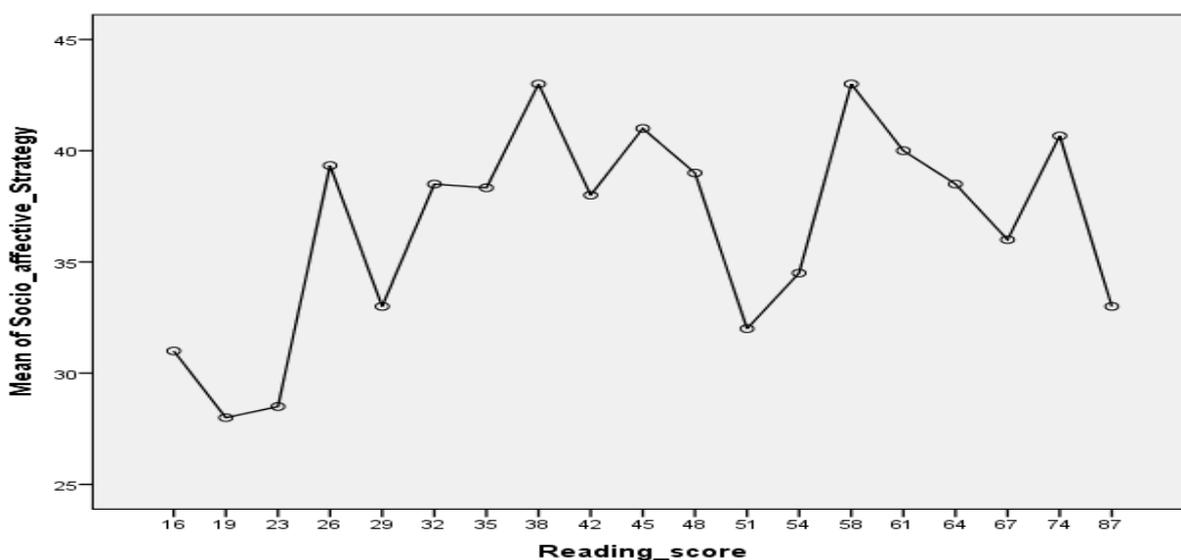
**Figure 1. Cognitive strategy and the range of reading score**

Figure 1 shows that cognitive strategy has the minimum score of reading comprehension 23 and the maximum score 84. The range score is 58.88. Based on the scoring criteria by the Department of National Education and Culture, the level of the scores is very poor to good one and the letter grade is E to A. Meanwhile the metacognitive strategy and the range of reading score is illustrated in Figure 2.



**Figure 2. Metacognitive strategy and the range of reading score**

Figure 2 presents that metacognitive strategy has the minimum score of reading comprehension 25 and the maximum score 80. The range score is 53.26. The level of the scores is similar to the cognitive strategies that is very poor to good, and the letter grade is E to A.



**Figure 3. Socio-affective strategy and the range of reading score**

Figure 3 displays that socio-affective strategy has the minimum score of reading comprehension 16 and the maximum score 87. The range score is 45.05 and the level of the scores is very poor to good one and the letter grade is E to A.

The relationship between the reading strategies and the reading scores is presented in the following table.

**Table 10. Relationship between reading strategy and reading score in multi comparison**

(I) Reading_Strategy	(J) Reading_Strategy	Mean Difference (I-J)	Std. Error	Sig.	95% Interval Lower Bound	Confidence Upper Bound
Cognitive	Metacognitive	5.619	3.477	.245	-2.68	13.92
	Socio Affective	13.834*	3.701	.001	5.00	22.67
Metacognitive	Cognitive	-5.619	3.477	.245	-13.92	2.68
	Socio Affective	8.215	3.533	.058	-.22	16.65
Socio Affective	Cognitive	-13.834*	3.701	.001	-22.67	-5.00
	Metacognitive	-8.215	3.533	.058	-16.65	.22

\*Correlation is significant at the 0.05 level

Table 10 shows that the significant correlation between cognitive strategy and metacognitive strategy is 0.245; cognitive strategy and socio-affective strategy is .001; metacognitive and socio-affective strategy is 0.058. It indicates that there was no significant relationship between cognitive strategy and metacognitive strategy because of  $0.245 > 0.05$ . There was significant relationship between cognitive strategy and socio-affective strategy because of  $.001 < 0.05$ , and there was no significant relationship between metacognitive and socio-affective because of  $.058 > 0.05$ .

**Table 11. Relationship between cognitive strategy and reading score**

		Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	(Combined)	626.083	20	31.304	.586	.881	
	Linear Term	Weighted	9.280	1	9.280	.174	.681
		Deviation	616.804	19	32.463	.608	.860
Within Groups		1121.917	21	53.425			
Total		1748.000	41				

\*Correlation is significant at the 0.05 level

Table 10. Shows that the significant between cognitive strategy and the reading score is 0.881. It means that there is no significant relationship between cognitive strategy and students' reading score because of  $0.881 > 0.05$ .

Table 11 shows that the significant between metacognitive strategy and the reading score is 0.049 meaning that that there was significant relationship between metacognitive strategy and students' reading score because of  $0.049 < 0.05$ .

Table 11 reveals that the significant between socio-affective strategy and the reading score is 0.123. This implies that that there was no significant relationship between socio-affective strategy and students' reading score because of  $0.123 > 0.05$ .

**Table 12. Relationship between metacognitive strategy and reading score**

		Sum of Squares	df	Mean Square	F	Sig.	
Between Groups	(Combined)	1302.952	20	65.148	2.105	.049	
	Linear Term	Weighted	233.896	1	233.896	7.559	.012
		Deviation	1069.056	19	56.266	1.818	.093
Within Groups		649.833	21	30.944			
Total		1952.786	41				

\*Correlation is significant at the 0.05 level

**Table 13. Relationship between socio-affective strategy and reading score**

			Sum of Squares	df	Mean Square	F	Sig.
Between Groups	(Combined)		666.775	18	37.043	1.657	.123
	Linear Term	Weighted	110.617	1	110.617	4.947	.036
		Deviation	556.158	17	32.715	1.463	.192
Within Groups			536.667	24	22.361		
Total			1203.442	42			

\*Correlation is significant at the 0.05 level

Using One-way ANOVA, it was found that cognitive strategy had no significant relationship to students' reading comprehension score, although cognitive strategy has an important role in reading comprehension that is, it enables students to manipulate the language materials in direct ways. This finding was slightly different from other studies which reported that cognitive strategy use has significant relationship to the students' reading comprehension score (e.g. Erni, 2021; Shang, 2011; Thuy, 2018; Ozek & Civelek, 2006;).

Metacognitive strategy use was found to have significant relationship with the students' reading score ( $0.049 < 0.05$ ). This finding echoes similar findings found in Hernandez and Bulnes (2009); Lee (2010), Shang (2010), Soodla et al. (2017), and Teng (2019). In addition, although metacognitive is the most frequent strategy used by students, they did not employ some of the strategies such as: plan schedule to study English, look for opportunities to read as much as possible English text and review the materials while studying for examination.

In this research, there was no significant relationship between socio-affective strategy and the students reading score. This finding does not support previous research (e.g. Hismanoglu, 2000; Hernandez and Bulnes, 2009; Lien, 2011) who found that socio-affective has significant correlation to the learners' reading achievement. Related to this, the students often ask their friends to clarify their doubts about the text they are reading but seldom do similar thing to their teacher. In addition, age, gender, personality, motivation, self-concept, life-experience, learning style, excitement, anxiety may affect the way in which the students apply the strategies to read English (Hismanoglu, 2000).

## CONCLUSION

The findings in this study have indicated that metacognitive strategy (planning and regulating) is the most frequently employed by the students. Cognitive strategy (rehearsal, organization and elaboration) is the second most strategy use. Socio-affective strategy (clarification, self-talk and cooperation) is the least frequent strategy that the students use.

This study shows that metacognitive strategy use has significant relationship with the students' reading score while cognitive and socio affective strategy has no significant relationship to students' reading comprehension score.

This present research has shown that students only employed some of the reading strategies and did not employ some of the three reading strategies effectively and properly on their reading tasks. This might occur because they knew very limited strategies to improve reading comprehension. Since the students mostly relied on their teachers, it is necessary for teachers to empower the students with adequate knowledge and skills about reading strategies. Reading many books, articles, or journals, and attending professional conferences and seminars or taking relevant courses or workshops could be a helpful strategy to improve reading.

This correlation study is limited to students as the participants, therefore future research with similar interest could in depth investigation to include students' and teachers' voice about the use of the strategies in a more qualitative way. It will enhance the information to get deeper insight and understanding about the applying of the strategies not only from the students' perspective but also from the teachers. Since this study focused on investigating students past experience on reading comprehension, it is better to investigate the strategies used by the students as soon as they have read some texts so the information will be more accurate.

## REFERENCES

- Barnett, M. A. 1989. *More than meets the eye*. Englewood Cliffs, NJ: Prentice Hall Regents.
- Brevick, L.M., 2014. Making implicit practice explicit: How do upper secondary teachers describe their teaching reading comprehension strategies instruction? *International Journal of Educational Research*, 67, 52-66.
- Chamot, A.U., O'Malley, J.M., Kupper, L., & Impink-Hernandez, M.V. 1987. *A study of learning strategies I foreign language instruction: First Year Report*. Rosslyn, VA: Inter American Research Association.
- Chamot, A. U. 2004. Issues in language learning strategy research and teaching. *Electronic Journal of Foreign Language Teaching*, 1(1), 14-26.
- Cohen, A.D.1990. *Language learning: Insight for learners, teachers, and researchers*. New York: Newbury House.
- Cromley, J.G. 2005. *Metacognition, Cognitive Strategy Instruction and Reading in Adult Literacy*. Retrieved June 8, 2012 from [http://www.ncsall.net/fileadmin/resources/ann\\_supp.pdf](http://www.ncsall.net/fileadmin/resources/ann_supp.pdf).
- Duffy, G.G. 2009. *Explaining reading: A resource for teaching concepts, skills, and strategies*. 2<sup>nd</sup> Edition. The Guilford Press. London.
- Erni, E. (2021). The use of reading strategies in academic reading by Indonesian learners. *International Journal of Educational Best Practices (IJEBCP)*, 5(1), 39-59
- Garner, R. 1978. *Metacognitive and reading comprehension*. Norwood, NJ: Ablex.
- Ghonsooly, B. & Egtesadee. 2006. Role of cognitive style of field-dependence/independence in metacognitive and cognitive reading strategies by a group of skilled and novice Iranian students of English literature. *The Asian EFL Journal*. Retrieved November 11, 2012, from <http://www.asian-elf-journal.com>
- Hernandez, J.M.R., & Bulnes, G.R. 2009. *Reading comprehension strategies: A case study in bilingual high school*. Retrieved November 11, 2012 from <https://www.google.com/search?q=www.Revistamatices.unal.+edu.co&ie=utf-8&oe=utf-8>
- Hismanoglu, M. 2000. Language learning strategies on foreign language learning and teaching. *The Internet TESL Journal*. Retrieved July 11, 2013 from <http://iteslj.org/Articles/Hismanoglu-Strategies.html>
- Koda, K. (2005). *Insights into second language reading: A cross-linguistic approach*. Cambridge: Cambridge University Press.

- Lee, C.K. 2010. An overview of language learning strategies. *ARECLS*, 7, 132-152 retrieved June 5, 2013 from <http://research.ncl.ac.uk/ARECLS/Volume7/lee-Vol7.Pdf>
- Lehtonen, T, 2000. Awareness of strategies is not enough. How learners can give each other confidence to use them. *Language Awareness*, 9(2), 64-77.
- Lien, H.Y. 2011. EFL learners reading strategies use in relation to reading anxiety. *Language Education in Asia*, 2(2), 199-212.
- National Education Department. 2006. *Standar kompetensi mata pelajaran Bahasa Inggris*, Jakarta: Pusat Kurikulum Departemen pendidikan Nasional. Retrieved June 16, 2012 from [https://www.academia.edu/34964654/K\\_U\\_R\\_I\\_K\\_U\\_L\\_U\\_M\\_2\\_0\\_0\\_4\\_STANDAR\\_KOMPETENSI](https://www.academia.edu/34964654/K_U_R_I_K_U_L_U_M_2_0_0_4_STANDAR_KOMPETENSI)
- O'Maley, J. M., & Chamot, A. 1990. *Learning strategies in second language acquisition*. Cambridge: Cambridge University Press.
- O'Maley, J. M., Chamot, A. U., Stewner-Manzanares, G., Kupper, L., & Russo, R.P. 1985. *Learning strategies used by the beginning and intermediate ESL students' language learning*, 35(1), 21-46.
- Oxford, R. L. 1990. *Language learning strategies: What every teacher should know*. Toronto, Canada: Heinle & Heinle Publishers.
- Oxford, R.L. 1999. Relationship between learning strategy use and language proficiency in the context of learner autonomy and self-regulation. In L. Bobb (Ed.), *Learner Autonomy as a Central Concept of Foreign Language Learning*, Special Issues of *Revisa Canaria d Estudios Ingleses*, 38, 109-126. Retrieved June 5, 2013 from <http://hyxy.nankai.edu.cn/jingpinke/buchongyuedu/learningstrategy>
- Oxford, R. L. 2003. *Language learning style strategies: An overview*. Retrieved June 5, 2013 from <https://www.google.com/search?q=www.Revistamatices.unal.+edu.co&ie=utf-8&oe=utf-8#q=Language+Learning+Style+Strategies:+An+Overview>
- Ozek, Y., & Civelek, M. 2006. A study on the use of cognitive reading strategies by ELT students. *The Asian EFL Journal*. Professional Teachers Articles. Retrieved August 5, 2013, from [www.asian-efl-journal.com/PTA\\_August\\_06\\_ozec&civelek.pdf](http://www.asian-efl-journal.com/PTA_August_06_ozec&civelek.pdf)
- Pintrich, P.R. 1990. The Role of motivation in promoting and sustaining self-regulated learning. *International Journal of Educational Research*, 31, 459-470
- Purpura, J. 1997. An analysis of the relationships between test takers' cognitive and metacognitive strategy use and second language test performance. *Language Learning*, 42(2), 289-325.
- Samida, D. K. 2012. *Language learning strategies*. Retrieved June 5, 2012 from [http://www.academia.edu/8265044/LANGUAGE\\_LEARNING\\_STRATEGIES](http://www.academia.edu/8265044/LANGUAGE_LEARNING_STRATEGIES)
- Shang, H. F. 2010. Reading strategy use, self-efficacy and EFL reading comprehension. *The Asian EFL Journal*, Retrieved November 11, 2012 from <http://asian-efl-journal.com/760/quarterly-journal/2010/06/reading-strategy-use-self-efficacy-and-efl-reading-comprehension/>
- Shang, H. F. 2011. *Exploring the relationship between EFL proficiency level and reading strategy use*. Retrieved November 11, 2012, from [https://www.researchgate.net/publication/268003414\\_Exploring\\_the\\_Relationship\\_between\\_EFL\\_Proficiency\\_Level\\_and\\_Reading\\_Strategy\\_Use](https://www.researchgate.net/publication/268003414_Exploring_the_Relationship_between_EFL_Proficiency_Level_and_Reading_Strategy_Use)

- Smith, R., Snow, P., Serry, T., Hammond, L., 2021. The role of background knowledge in reading comprehension: a critical review. *Reading Psychology*. 42(3), 214–240. <https://doi.org/10.1080/02702711.2021.1888348>.
- Soodla, P., Jögi, AL. & Kikas, E. (2017). Relationships between teachers' metacognitive knowledge and students' metacognitive knowledge and reading achievement. *Eur J Psychol Educ* 32, 201–218. <https://doi.org/10.1007/s10212-016-0293-x>
- Sun, Y., Wang, J., Dong, Y., Zheng, H., Yamg, J., Zhao, Y., Dong, W., 2021. The relationship between reading strategy and reading comprehension: a meta-analysis. *Frontiers in Psychology*. 12, 1–11. <https://doi.org/10.3389/fpsyg.2021.635289>
- Teng, F. (2019). The benefits of metacognitive reading strategy awareness instruction for young learners of English as a second language. *Literacy*, 54(1), 29-39.
- Thuy, N.T.B. (2018). Reading strategies used by Vietnamese EFL and ESL university students. *VNU Journal of Foreign Studies*, 34(2), 111-124.
- Wang, Y. (2016). Reading Strategy Use and Comprehension Performance of More Successful and Less Successful Readers: A Think-Aloud Study. *Kuram Ve Uygulamada Egitim Bilimleri*, 16(5), 1789-1813.
- Williams, M. & Burden, R.L. 1997. *Psychology for language teachers: A social constructivist approach*. Cambridge: Cambridge University Press.
- Wong, M. S. 2005. Language learning strategies and language self-efficacy. *Regional Language Centre Journal*, 36(3), 245-269
- Wu, Y. L. 2008. Language learning strategies used by students at different proficiency level. *The Asian EFL Journal*, Retrieved November 11, 2012 from <http://asian-efl-journal.com/1004/quarterly-journal/2008/12/language-learning-strategies-used-by-students-at-different-proficiency-levels/>
- Yapp, D., De Graaff, R., van den Bergh, H., 2021. Effects of reading strategy instruction in English as a second language on students' academic reading comprehension. *Language Teaching Research*, 27(6), 1–24. <https://doi.org/10.1177/2F1362168820985236>.
- Zhang, L.J. & Wu, A. 2009. *Chinese senior high school EFL students' metacognitive Awareness and reading-strategy use*. Retrieved November 11, 2012, from <http://nflrc.hawaii.edu/FFL/April2009/articles/zhang.pdf>