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TIMORESE LANGUAGE STUDENTS' LEVELS OF METACOGNITIVE AWARENESS OF READING STRATEGIES

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ARTICLE INFO

ABSTRACT

Reading strategies are crucial in education. This research focused on Timorese language students' levels of reading strategies. It attempted to answer two research questions; (1) What are the levels of Timorese language students' metacognitive awareness of reading strategies? and (2) How do Timorese language students apply the reading strategies in their reading experiences? A mixed-method design was adopted. Mokhtari & Sheorey's (2002) Survey of Reading Strategies (SoRS) was used to collect quantitative data. The findings revealed two high levels; global reading strategies, with a mean value M=3.86, SD=1.1837, and support reading strategies, with a mean value of M=3.79 SD=1.2120. Problem-solving strategies were medium-level, with a mean value M=3.61, SD=1.1718. Highlighting keynotes, using google, discussing, controlling speed were revealed in the qualitative data as adopted reading strategies. Language teachers could use this research to improve language students' reading strategies, and future researchers should do extensive research to provide more findings.

Keywords: awarenes, metacognitive, reading strategies

INTRODUCTION

Language students learning languages at higher institutions and universities often encounter challenges in which strategies are effective in reading. This research could be one alternative to overcome the issues. Language students should be the best readers in all circumstances. To have appropriate and effective strategies, language students should be aware of metacognitive awareness of reading strategies. Flavell (1976) coined that in learning, metacognition awareness plays a role in one's technique of thinking about the learning itself (p. 232). Therefore, to be successful readers, metacognition awareness is the critical solution.

Readers who apply metacognitive awareness of reading strategies appropriately, effectively, and consistently in all reading tasks would achieve the highest level of success. For that reason, language students should be committed to the best readers who continually generate assumptions, anticipate assessments, and utilize their terms and language skills to create meaning as they read (Carrell, 1989; Zhang, 2001).

Dangin (2020) confirmed that students should know that metacognition is how thinking relates to information and strategies, management and consciousness in planning, repairing, monitoring, revising, summarizing, and evaluating. Therefore, this research also aimed at helping language teachers not only give texts to students to read, but could use the 30 statements from the survey of reading strategies (SoRS) to help students manage and prepare themselves for better reading. Helping students to apply effective reading strategies such as planning, monitoring, and assessment are meaningful in metacognitive strategies (Cao & Lin, 2020; Mbato,2013; Mokhtari & Sheorey, 2002).

The more effective students apply reading strategies, the better they build generic metacognitive knowledge in various domains, such as having an awareness of memory limitations and regulatory abilities, such as choosing appropriate learning methodologies across all academic fields (Schraw & Moshman, 1995). In that sense, language students should know how to read and synthesize different amounts of academic resources. Singh (2019) added that reading from academic sources such as books, journals, or other sources is a more formal and complex style of reading students can use that to extend their knowledge in their learning or research process. Therefore, language teachers also play crucial roles in helping students raise their awareness of reading strategies to make more accountable progress. The more students can integrate metacognitive awareness, the better they will be able to regulate their thinking process (Roebers, 2017).

There have been numerous researchers applied Survey of Reading Strategy (SoRS) to identify students' reading strategies. Dangin (2020) examined 50 Indonesian undergraduate students enrolled on English language studies. The result showed that problem-solving reading strategies was the highest level, global reading strategies was the medium level, and support reading strategies was the low level. Yuksel & Yuksel (2011) investigated 16 Turkish EFL students at Anadolu University in Turkey, and verified that problem-solving reading strategies was the highest level, then global reading strategies and support reading strategies were the medium level. However, Chutichaiwirath and Sitthitikul (2017) examined 15 undergraduate English major students in a university located in central Thailand, identifying that global reading strategies and problem-solving reading strategies were the highest level and support reading strategies was the medium level. In contrast, Tavakoli (2014) evaluated 100 English major students from different universities in Tehran, Iran, identified that support reading strategies was the highest, then global reading strategies was the medium level, and problem-solving reading strategies was the low level. However, Zhang and Wu (2009) examined 249 second-year students of senior high school in China, province of Hainan, and found that the three categories were the highest level.

The findings from previous research proved that language students' levels of metacognitive awareness of reading strategies varied from country to country due to the education system, teachers' and students' background, and curriculum. Because of the mixed research results about the implementations of metacognitive reading strategies in various countries and to enrich the discussion and understanding of the topic, the current research was conducted focusing on two research questions, namely: (1) what are the levels of Timorese language students' metacognitive awareness of reading strategies? and (2) how do Timorese language students apply the reading strategies in their reading experiences? The current study was the first study in Timor Leste that focused on the levels of Timorese language students' metacognitive awareness of reading strategies and how they applied those strategies in their reading experiences. This research was critical to empower Timorese language students who participated in this research to know their levels in order to sharpen their reading skills. Secondly, as a guide to other language students who were currently dealing with academic reading tasks to learn from Timorese language students' experiences.

LITERATURE REVIEW

Metacognition

In reading, metacognition is vital for language students to control and manage their thinking before reading, whilst-reading, and post-reading. Paris & Winograd (1990) contended that having metacognition strategies means knowing how cognitive states and capacities work that may be shared across individuals and simultaneously expanding the definition to cover emotive and motivational elements of thinking in terms of reading (p. 15). On the other hand, Zhang and Sheepho (2013) clarified that by using metacognitive strategies,

students are encouraged to engage in self-monitoring and self-regulating activities, as well as to pay attention to both the process and the results of the reading. Therefore, when language students know how their reading should be monitored and regulated, they will succeed and achieve their learning goals. Jacob and Paris (1987) divided metacognition into two fundamental categories; metacognitive knowledge, which refers to self-evaluation of cognition, and metacognitive control process, which refers to self-regulated thinking. Garner (1987) explained that the skill of cognition is required to complete a task, while metacognition is required to understand how the activity was performed. However, Flavell (1987) presented two aspects of metacognition that are essential in learning; knowledge of cognition and regulation of cognition. The researchers believed that when Timorese language students and language teachers emphasize more on applying the categories from the experts in reading to empower reading skill, the learning outcomes would be fully achieved.

Metacognitive Awareness

According to Anderson (2002), metacognitive awareness is the reader's approach, consciousness, consideration and supervision while reading. Without metacognitive awareness, students could not progressively monitor and supervise their reading.

Implementing metacognitive awareness in reading strategies, language students can apply Flavell's (1979) four types of related phenomena in the process of cognitive monitoring: (1) metacognition and cognitive monitoring, (2) goals (or tasks) actions, (3) metacognitive knowledge, and (4) metacognitive experiences. Despite that, language students should understand and define what reading is. Yuksel & Yuksel (2012) defined reading as a thinking process in that a reader has to interact with texts. Language students should know how to interact with their reading tasks by having a commitment and willingness to read, think, and produce new thoughts and ideas. The absence of appropriate strategies towards reading academic texts will affect language students to achieve their goals and objectives of the study. As Miholic (1998) states that we get annoyed when appearing to read an entire page, we cannot remember a single item. Deep breathing, wistful synaptic surfing, and daydreaming detach our otherwise committed cognitive controls (p. 84). To have effective reading strategies and higher metacognitive awareness, language students should be consistent in applying strategies. They should have clear strategies, and purpose, and become more productive and effective going through any challenges in reading. Singh (2017) stated that going through a difficult process is necessary to discover any meaning from any passage.

Reading Strategies

Reading is a crucial activity in life, learning, and education. Karami (2008) defined reading as an integral part of academic affairs and equally important outside the academic context (p.2). Through reading, a learner can discover new knowledge and skills. In the academic domain, students are required to read different texts. Johnson (2008) stated that reading is creating meaning by using texts (p. 3). While Hirsch (2003) stressed that reading helps learners access and acquire knowledge of language (p. 21). Students who actively read and set strategies to control their reading will be more successful in achieving learning goals. Pani (2004) asserted reading strategies as the readers' mental operations to make meaning from the texts they effectively read. Therefore, the good readers set more strategies productively than the poor ones. Students may have reading strategies; however, a lack of reading goals may be a factor in being effective readers. King (2008) emphasized that the reader, text, strategies, and goal are the four factors of text comprehension.

The ineffective strategies in reading will affect academic performance in learning. Kinzer (1987) stated that reading is a process of engagement to get new knowledge (p. 9). In addition, Carrell (1989) emphasized that to gain comprehensive knowledge through reading, one must change the principle of *'learning to read* into

'reading to learn in all programs of second language reading. Because of the diverse research findings on the use of metacognitive strategies across the globe, the current research was conducted. It collected data about implementing metacognitive strategies in the Timorese higher education context.

RESEARCH METHODS

This research adopted a mixed-method approach (Cresswell, 2012) which collected quantitative and qualitative data to investigate Timorese language students' levels of metacognitive awareness of reading strategies, and how they applied those reading strategies to their reading experiences. The researchers used Mokhtari and Sheorey (2002) Survey of Reading Strategies (SoRS), consisting of 30 items, to find out metacognitive awareness of reading strategies. There were 13 items of global reading strategies, 8 items of problem-reading stategies and 9 items of support reading strategies. Each item was labelled a five-point Likert's scale ranging from 1 for "never do" to 5 for "always do.". Table 1 shows the demographic information of the participants.

Table 1. Participants' demographic information

Demographic Items	Details	Frequency	Percentage (%)
Gender	Male	16	44
	Female	20	56
Age	19-24	28	78
	25-35	8	22

Table 1 indicates that the total participants of male is 16 (44%), and female is 20 (56%).The data proved that female participants were the majority population in this research. Comparing the participants' ages, 19–24 (78%) considered the dominant cluster compared to 25–35 (22%). The participants in this research were the Timorese students who are currently studying at language department at institutes and universities. Due to the distance and internet connection issues between the researchers and the participants, the survey of reading strategies (SoRS) was sent via Facebook & WhatsApp. There were 36 agreed to participate the survey. To protect respondents' privacy, pseudonyms were used; the researchers named male participants (3); M8, M11, M15, and the female participants (3); F1, F4, and F17. The slowest internet and package issues resulted semi-structured interview; questions were distributed to 6 respondents via WhatsApp to answer through writing and auto-recorded then send back to researchers via WhatsApp. Aung, Razak, Nazry (2021) described three steps in a semi-structured interview. In the first step, the pre-interview, the researchers distributed the interview questions and explained how to answer the questions through writing. In second step, the interview, the researchers asked the respondents to do auto-record their answers. The final step, the researchers concluded their answers and analyzed in Excel and SPSS frequency, descriptive statistical procedures.

FINDINGS AND DISCUSSION

Findings

This section presents the findings to answer the two postulated research questions; what are Timorese language students' levels of metacognitive awareness of reading strategies?' and how do Timorese language students apply those reading strategies on their daily academic reading experiences?' Table 2 shows the participants' levels of metacognitive awareness of reading strategies.

Levels of Metacognitive Awareness of Reading Strategies

Table 2. Participants' Levels of Reading Strategies

SoRS	N	Mean	Std. D
GLOB	13	3.86	1.1837
PROB	8	3.61	1.1718
SUP	9	3.79	1.2120

The responses from the questionnaire were tabulated and categorized according to Astriningsih & Mbato (2019), the highest level is (3.68-5), the medium level is (2.34 – 3.67), and the lowest level is (1-2.33). The findings of the research illustrate Timorese language students' levels of metacognitive awareness of reading strategies. Global Reading Strategies showed a mean value of M=3.86, SD=1.1837, and Support reading strategies showed a mean value of M=3.79 SD=1.2120, which are at the highest level. Meanwhile, problem-solving reading strategies indicated a mean of M=3.61, SD=1.1718, which is at the medium level. It means that participants had different levels of implementing metacognitive awareness of reading strategies while reading.

The following sections present finding from quantitative data (Table 3, 4, and 5) regarding the difference between male and female participants in using the three reading strategies; global reading strategies, problem-solving reading strategies and support reading strategies while dealing with their reading tasks.

Global Reading Strategies (GLOB)

Table 3 presents the difference between male and female participant' level of using global reading strategies.

Table 3. Mean values of global reading strategies

Q	STATEMENT	Mean Score		Std. deviation	
		Male	Female	Male	Female
1	Having purpose in reading	3.31	4.40	1.352	.883
2	Thinking about previous knowledge	3.63	4.00	1.310	.918
3	Previewing the text	3.75	4.05	1.125	1.099
4	Thinking about the content	3.75	4.80	1.238	.410
5	Skimming the text first	3.75	4.30	1.125	.923
6	Deciding what to read closely	3.56	3.90	1.365	1.165
7	Using tables, figures, and pictures	3.50	3.75	1.633	1.070
8	Using context clues to help me	4.13	3.95	1.025	.887
9	Using italics and boldface to find key notes	3.88	3.60	1.258	1.273
10	Critically analyzing and evaluating text	3.44	4.05	1.365	.999
11	Checking self-understanding	3.81	4.25	1.377	.967
12	Trying to guess the content	3.56	4.00	1.315	1.257
13	Checking my guesses on the text	2.81	3.85	1.328	1.424
	Total Average	3.61	4.07	1.294	1.021

Table 3 Global reading strategies (13 items) illustrates that *Using context clues* (Q8; M=4.1) is the most preferred strategy by males. *Thinking about the content* (Q4), *is* the most applied strategy by females (M= 4.8). In contrast, *checking my guesses on the text*, was the least used strategy by males (Q13, M=2.8), while females

(Q9) *used boldface and italics to find keynotes* (M=3.6). It means that males used context clues, while females students used content of the reading that fitted their purpose.

The application of global reading strategies

As the findings illustrated that global reading strategies and support reading strategies were the highest level and problem-solving reading strategies was the medium level. The respondents confirmed their global reading strategies usage in the open-ended questionnaire and semi-structured interview responses. F1 mentioned how she used GLOB in her reading experiences.

> *Having a purpose when reading is so important. I always focus on what I am reading by highlighting each main point, and going through the pages carefully until I find the answer keys for the given tasks. Highlighting and focusing is key to getting everything done on time (F1).*

From the open-ended questionnaire and semi-structured interview results, the participants also commented on other strategies they applied. F1 mentioned that she applied metacognitive reading strategies by highlighting and staying focused until finishing the tasks given. M8, in the open-ended questionnaire and semi-structured interview, used metacognitive reading strategies by using pictures and figures from google to get the points from the reading.

> *When I read challenging texts, I always look for pictures and figures to help me guess the whole information. I type the terms on google images to get pictures to get the points (M08).*

Support Reading Strategies (SUP)

Table 4 presents the difference between male and female participant' level of using support reading strategies.

Table 4. Mean values of support reading strategies

Q	STATEMENT	Mean		Std. Deviation	
		Male	Female	Male	Female
1	Taking notes while reading	3.69	4.45	1.250	.887
2	Reading loudly	3.50	4.00	1.265	1.170
3	Summarizing the text	3.38	4.00	1.310	.858
4	Discussing the texts with others	4.00	3.85	1.155	1.137
5	Underlining or circling while reading	3.38	3.80	1.204	1.105
6	Using dictionaries	3.50	4.10	1.366	1.071
7	Paraphrasing the text	3.38	3.85	1.455	.988
8	Going back and forth to find ideas relationship	3.25	3.75	1.528	1.164
9	Asking myself questions to have answers	3.31	4.05	1.352	1.050
	Total average	3.49	3.98	1.321	1.048

Table 4 support reading strategies (9 items) points out that *discussing the text with others* was used the most by males (Q4; M=4), and (Q1) *taking notes while reading* was mostly used by females (M=4.4). Surprisingly, males and females had the same least use of reading strategies (Q8); *Going back and forth to find ideas relationship,* males mean value (M=3.2) and females mean value (M=3.7). It verified that males applied more discussing with others while females used more note-taking to discover the content.

The application of support reading strategies

The respondent confirmed that support reading strategies uses in the open-ended questionnaire and semi-structured interview responses. F4 mentioned how she practiced support reading strategies.

If the text seems difficult, I always discuss it with my classmates to help me get the points. For me discussion is another important alternative to make sure that we have the same understanding of the tasks we are assigned to do (F4).

The respondent confirmed that their global reading strategies used in the open-ended questionnaire and semi-structured interview responses. F4 mentioned that she applied metacognitive reading strategies by openly discussing with classmates to get ideas and solve the reading tasks together. M11 mentioned how he practiced support reading strategies.

I always underline and circle main ideas and from each paragraph to help me remember what I am looking for. After that I paraphrase to understand better what I have underlined and circled (M11).

Problem-Solving Reading Strategies (PROB)

Table 5 presents the difference between male and female participant' level of using problem-solving reading strategies.

Table 5. Mean values of problem-solving reading strategies

Q	STATEMENT	Mean		Std. Deviation	
		Male	Female	Male	Female
1	Reading attentively	3.25	3.45	1.291	1.099
2	Trying to focus on the text	2.94	3.85	1.124	.988
3	Managing reading speed	3.81	4.75	1.223	.786
4	Paying closer attention to difficult text	3.44	4.00	1.263	1.026
5	Pause and reflecting the content	3.31	3.85	1.302	.988
6	Visualizing the information	3.31	3.60	1.078	1.188
7	Rereading to empower my comprehension	3.38	3.85	1.408	1.089
8	Guessing meaning of new terms	2.81	3.70	1.328	1.129
	Total average	3.28	3.88	1.252	1.037

Table 5 problem-solving reading strategies (8 items) shows that male and female students had the same mostly used reading strategies in (Q3) *Managing reading speed,* Males (M=3.8), and females (M=4.7). On the other hand, males least-reading strategy was *guessing meaning of new terms* (Q8; M=2.8). While *reading attentively* (Q1; M=3.45) was the least use strategy by females. It means that males and females control their reading speed according to the content they read.

The application of PROB

Problem-solving reading strategies (PROB)

As the result showed earlier on Table 2 that global reading strategies and support reading strategies are the highest level and problem-solving reading strategies is the medium level by the Timorese language students while reading academic texts, it means that the respondents in this research were aware of how they control reading speed, repetition to avoid misunderstanding, reflecting on challenging texts, guessing the content, visualizing the text, and rereading for better understanding.

The respondent confirmed that their global reading strategy use in the open-ended questionnaire and semi-structured interview responses. F17 mentioned how she practiced problem-solving reading strategies.

I sometimes read quickly to find out the topic and main points, but sometimes I read slowly to get the whole picture of the text.

In my opinion, rereading is the best way to check my understanding of what I have read (F17).

The respondent confirmed their global reading strategy use in the open-ended questionnaire and semi-structured interview responses. M15 mentioned how he practiced problem-solving reading strategies.

I usually read slowly to get the details of the information I am reading. I always read fast to scan and skim the main points and ideas.

Sometimes I reread. It depends on the texts I am reading. I normally reread for few times if I want to know the content in detail (M15).

The repondent confirmed that their global reading strategies uses in the open-ended questionnaire and semi-structured interview responses. F9 mentioned how she practiced problem-solving reading strategies.

I always read in a normal speed, not too fast and too slow. It is good to reread for several times to get the points and assure that there is no misunderstanding (F9).

Discussion

Mixed-method design was applied in this research to identify Timorese language students' level of metacognitive awareness of reading strategies in their academic reading. Mbato (2013) stressed that planning, monitoring, and evaluation are considered the metacognitive strategies. The results verified that global reading strategies and support reading strategies were at the highest level, and problem-solving reading strategies were at the medium level of reading strategies applied by Timorese language students. It means that Timorese language students were familiar with the practical use of reading strategies in their reading tasks. Wahyudi (2020) stated that before engaging in academic reading, students actively engaged in metacognitive reading techniques. The result of this research is in contradiction with several research findings. Dangin (2020) identified that problem-solving reading strategies were at the highest level, global reading strategies were at the medium level and support reading strategies were at the low level of reading strategies. However, Chutichaiwirath and Sitthitikul (2017) found that global reading strategies and problem-solving reading strategies were at the highest levels and support reading strategies were at the medium level of reading strategies. On the other hand, Tavakoli (2014) also discovered that support reading strategies were at the highest level, global reading strategies were at the medium level and problem-solving reading strategies were at the low levels of reading strategies.

Regarding the findings of global reading strategies between male and female participants, the result showed that male participants used more context clues to help them understand the reading texts with a mean value of M=4.1, italics and boldface to identify keynotes, with a mean value of M=3.8, and previewed the text to see the content before reading, with a mean value of M 3.7. On the other hand. female participants applied more thinking to the content to help them get the information, with a mean value of M=4.8. They also displayed a purpose in mind when reading, with a mean value of M=4.4, and skimmed the text to see its length and organization, with a mean value of M=4.3. There was no significant difference between male and female global reading strategies, with males having the mean value of M=3.6 and females having the mean value M=4. It means that female participants' level of using global reading strategies is higher than males.

In support reading strategies, the result showed that male participants used more discussion of the text with others, with a mean value of M=4, took notes while reading, with a mean value of M=3.6, and used a dictionary while reading, with a mean value M=3.5. In contrast, female participants used taking notes more while reading, with a mean value 4.4, used a dictionary, with a mean value of M=4.1, and summarised the text, with a mean value of M=4. The total values of support reading strategies showed that male participants displayed a mean value of M=3.4 and female participants, a mean value of M=3.9, which means that female support reading strategies were higher than male.

Finally, in problem-solving reading strategies, the result revealed that male students used more control of their speed of reading to help them discover the text, with a mean value of M=3.8. They paid closer attention to the most challenging reading to discover the information (a mean value, M=3.4, and used more reflection on the content to digest the meaning, with a mean value of M=3.3). Female participants also controlled the speed of reading while reading with a mean value of M=4.7. Similarly, they paid closer attention to a difficult text, with a mean value of M=4, using more rereading to get deep comprehension with a mean value M=3.8. The total values of problem reading strategies pointed out that males had a mean value of M=3.2 and females had a mean value of M=3.8. It implies that female participants' level of problem-reading strategies was better than males. The result of the three reading strategies illuminated that even though there was no significant difference in the level of reading strategies between male and female participants, female participants' level of reading strategies was higher than males. This result supports the study by Oxford (1993) that with higher proficiency in reading, ESL female students use learning strategies more regularly than males. It means that this research serves as motivation to male participants to continue to improve and empower their strategies to achieve their goals in learning.

Regarding open-ended and interview questions, male and female participants shared how they applied the three reading strategies in their academic lives. Two participants mentioned that underlining keynotes, rereading, and using a dictionary were the strategies they applied when they encountered difficult texts. On the other hand, four participants emphasized that guessing meaning was also important in the problem-solving strategy that led us to understand the text more profoundly. It is in line with Mokhtari and Sheorey (2002) who affirmed that a problem-solving strategy is used to sort out comprehension issues. On the other hand, four participants affirmed that skimming was also important to quickly access the required information as Chamot et al., (1999), and Mokhtari and Sheorey (2002) underlined that reading is carried out after a process of skimming. Male and female participants pointed out that they had been using most of the skills such as paraphrasing, underlining and highlighting keynotes in the texts, surfing the terms on google, google images, power points, discussing with friends, reading alone, reading pairs, reading quickly, read slowly to sort out the points, and to handle their reading challenges.

CONCLUSION AND SUGGESTIONS

This research aimed to identify Timorese language students' levels of metacognitive awareness of reading strategies and how Timorese language students apply those reading strategies on their reading experiences. The findings revealed that global reading strategies and support reading strategies of the Timorese language students are at the highest levels. Global reading strategies with a mean value (M=3.86, SD=1.18), support reading strategies with a mean value of (M=3.9, SD=1.21), and problem-solving reading strategies with a mean of (M=3.61, SD=1.17), are at the medium level. The result also shows the difference of total mean values between male and female participants related to each reading strategy. From global reading strategies, the total mean value of male is M=3.6 and female M=4. In support reading strategies, the total mean value of male is M=3.4 and female M=3.9. In problem solving strategies, the total mean value of male is M=3.2, and female M=3.8. It means that female participants' levels of the three reading strategies is higher than male counterparts.

Regarding the application of the three reading strategies, the participants assured that the speed of reading, paraphrasing and underlining key notes, visualizing the content, surfing the terms on google images, discussing with friends, focusing on challenging content, repetition of reading, quick reading, and slow reading are important techniques to achieve reading goals.

Reading is the key to unlocking the door to the new world. Students who can manage time appropriately for reading will likely to succeed and reach the highest point of intellectual superiority. The findings from this

research provides information about the participants' current level of reading strategy use. Language teachers could help students strengthen their reading strategies. In addition, future researchers could expand the topic to involve more participants to represent the country or classes. Finally, this research serves as a guide for any language students worldwide to use the strategies to empower their reading strategies.

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REFERENCES

Alderson, J. C. (1984). Reading in a Foreign Language: A Reading Problem or Language Problem? In J. C. Alderson, & A. H. Urquhart (Eds.), *Reading in a Foreign Language*. Longman.

Anderson, N. J. (2002). *The role of metacognition in second/foreign language teaching and learning*. ERIC Digest. Washington, DC: ERIC Clearinghouse on Languages and Linguistics.

Aung, K. T., Razak, R. A., and Nazry, N. N. M. (2021) Establishing validity and reliability of semi-structured interview questionnaire in developing risk communication module: A pilot study. *Edunesia : Jurnal Ilmiah Pendidikan,* 2(3), 600-606. http://doi.org/10.51276/edu.v2i3.177

Baker, L., & Brown, A. L. (1984). Metacognitive Skills and Reading. In P. D. Pearson, R. Barr, M. L. Kamil, & P. Mosenthal (Eds.), *Handbook of Reading Research* (pp. 353-394). New York: Longman.

Cao, Z., & Lin, Y. (2020). A study on metacognitive strategy use in listening comprehension by vocational college students. *English Language Teaching*, 13(4), 127-139. https://doi.org/10.5539/elt.v13n4p127

Carrell, P. L. (1989). Metacognitive Awareness and Second Language Reading. *Modern Language Journal,* vol. 73, pp. 121-134.

Chutichaiwirath, K., & Sitthitikul, P. (2017). The metacognitive awareness of reading strategies in Thai EFL learners. *Journal of Nusantara Studies (JONUS)*, *2*(2), 1. https://doi.org/10.24200/jonus.vol2iss2pp1-14

Cross, D. R. & Paris, S. G. (1988). Developmental and instructional analyses of children's metacognition and reading comprehension. *Journal of Educational Psychology*, 80(2), 131-142.

Dangin, D. (2020). Students' Awareness of Metacognitive Reading Strategies in Academic Reading. *Journal of English Teaching and Learning Issues*, *3*(1), 33. https://doi.org/10.21043/jetli.v3i1.7145

Flavell, J. H. (1976). Metacognitive aspects of problem-solving. In B. Resnick (Eds), *The nature of intelligence.* Hillsdale. N. J.:Erlbaum

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. American Psychologist, 34(10), 906-911.

Flavell, J.H. (1987). Speculations about the nature and development of metacognition. In F. Garner, R. (1987). *Metacognition and Reading Comprehension*. Norwood, NJ: Ablex Publishing.

Hennessey, M. G. (1999). *Probing the dimensions of metacognition: Implications for conceptual change teaching-learning*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Boston, MA.

Kuhn, D. & Dean, D. (2004). A bridge between cognitive psychology and educational practice. *Theory into Practice*, 43(4), 268-273.

Leu, D., & Kinzer, C. (1987). *Effective reading instruction in the elementary grades*. Columbus, OH: Merrill Publishing Company.

Madhumathi, P., & Ghosh, A. (2012). Awareness of reading strategy use of Indian ESL students and the relationship with reading comprehension achievement. *English Language Teaching*, *5*(12), 131–140. https://doi.org/10.5539/elt.v5n12p131

Martinez, M. E. (2006). *What is metacognition?* Phi Delta Kappan, 696-699.

Mbato, C. L. (2013). *Facilitating EFL learners' self-regulation in reading: implementing a the metacognitive approach in an Indonesian higher education context*, Southern Cross University, Australia.

Miholic, V. (1994). An Inventory to Pique Students' Metacognitive Awareness of Reading Strategies. *Journal of Reading, Oct., 1994, Vol. 38, No. 2 (Oct., 1994), pp. 84-86*. https://doi.org/https://www.jstor.org/stable/40032273

Mokhtari, K. & Sheorey, R. (2002). Measuring ESL Students' Awareness of Reading Strategies. *Journal of Developmental Education* Vol.25 pp. 2-10. Retrieved from: https://www.researchgate.net/publication/285641803

Paris, S. G., & Winograd, P. (1990). How metacognition can promote academic learning and instruction. In B. F. Jones & L. Idol (Eds.), *Dimensions of thinking and cognitive instruction* (pp.15–51). Lawrence Erlbaum Associates, Inc.

Roebers, C. M. (2017). Executive function and metacognition: toward a unifying framework of cognitive self-regulation. *Development Review, 45,* 31-51. https://doi.org/10.1016/j.dr.2017.04.001

Schraw, G. & Moshman, D. (1995). Metacognitive theories. *Educational Psychological Review 7*: 351-371.

Singh, M. K. M. (2017). International EFL/ESL master students' adaptation strategies for academic writing practices at the tertiary level. *Journal of International Students*, 7(3), 620–643. https://doi.org/10.5281/zenodo.570025

Tavakoli, H. (2014). The Effectiveness of Metacognitive Strategy Awareness in Reading Comprehension: The Case of Iranian University EFL Students, *14*(2), 314–336.

Weinert & R. Kluwe, eds., *Metacognition, motivation, and understanding* (pp. 21-29). Hillsdale, NJ: Erlbaum

Yüksel, İ. & Yüksel, İ (2011) *Metacognitive Awareness of Academic Reading Strategies*, pp. 894–898.

Zhang, L. J. & A. W. (2009). Chinese senior high school EFL students' metacognitive awareness and.pdf. *Chinese Senior High School EFL Students' Metacognitive Awareness and Reading-Strategy Use*, *21*(1), 37–59.

Zhang, L. J. (2001). Awareness in reading: EFL students' metacognitive knowledge of reading strategies in an acquisition-poor environment. *Language Awareness*, 10, 268–288.

APPENDIX

Appendix 1. Survey of reading Srategy (SoRS) by Mokhtari & Sheorey (2002)
1 = Never, 2 = Occasionally, 3 = Sometime, 4 = Usually, 5 = Always
After reading each statement, circle on the number, 1,2,3,4,5 which applies to you.

Item	Statements	N	O	S	U	A
GLOB	When I read, I have a goal in mind.	1	2	3	4	5
SUP	I make notes while I read.	1	2	3	4	5
GLOB	To better understand what I read, I consider what I already know.	1	2	3	4	5
GLOB	Before reading a text, I take a broad look at it to determine its subject.	1	2	3	4	5
SUP	I read aloud to better understand what I'm reading.	1	2	3	4	5
SUP	I consider whether the text's substance aligns with why I'm reading it.	1	2	3	4	5
GLOB	I read words carefully and deliberately	1	2	3	4	5
PROB	After reading the material, I make note of its qualities	1	2	3	4	5
SUP	When I lose focus, I make an effort to get back on track.	1	2	3	4	5
GLOB	I underline or encircle the information	1	2	3	4	5
PROB	I modify my reading speed according on the material I am reading.	1	2	3	4	5
SUP	I choose what I read carefully and what I overlook when I'm reading.	1	2	3	4	5
PROB	I consult reference materials (such as dictionaries).	1	2	3	4	5
GLOB	I pay better attention to what I'm reading	1	2	3	4	5
SUP	To better grasp a text, I use tables, figures, and illustrations.	1	2	3	4	5
PROB	I occasionally pause to reflect on what I am reading.	1	2	3	4	5
GLOB	I make use of context cues to make sense of what I'm reading.	1	2	3	4	5
PROB	I read, I paraphrase (restate concepts in my own words).	1	2	3	4	5
GLOB	I make an effort to envision or visualize the content.	1	2	3	4	5
SUP	I make use of typographic elements like boldface and italics.	1	2	3	4	5
PROB	I assess and critically analyze the material in the text.	1	2	3	4	5
GLOB	I reread the book to identify connections between its themes.	1	2	3	4	5
GLOB	After learning something new, I make sure I grasp it.	1	2	3	4	5
SUP	While I read, I make an effort to infer the text's subject matter.	1	2	3	4	5
GLOB	I reread texts to deepen my knowledge when they become challenging.	1	2	3	4	5
GLOB	I pose questions to myself that I would like the text to address.	1	2	3	4	5
PROB	I verify whether or not my inferences about the text were correct.	1	2	3	4	5
SUP	I infer the meaning of unfamiliar words or phrases when I read.	1	2	3	4	5
GLOB	I transcribe what I read from English into my native tongue.	1	2	3	4	5
PROB	While I read, I consider facts in both English and my native tongue.	1	2	3	4	5