

Metacognitive Reading Strategy Awareness and Reading Performance of Vocational Lecturers

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Abstract

In education, the functions of reading, among others, are to access knowledge, synthesize information, evaluate arguments, and learn new subjects. It is believed that successful readers employ various and proper reading strategies to comprehend a text. This study, quantitative and qualitative in its design, aims to investigate the reading performance and the major reading strategies of twenty-five vocational Indonesian lecturers from various institutions as the research respondents. Two research instruments were used: The reading Comprehension Test to obtain data on their reading performance and the Survey of Reading Strategies (SORS) to identify their preferred reading strategies. The research finding indicates that the respondents had varying levels of English reading performance. The result also shows that out of the three sub-categories of metacognitive reading strategies, problem-solving strategies were the most frequently used, followed by global strategies and support strategies respectively. The further statistical calculation, however, proves that there was no significant difference in the overall and the three sub-categories of the metacognitive reading strategies used between the high and low achievers. Furthermore, there was no significant relationship between the metacognitive reading strategies and the participants' reading performance.

Keywords: Metacognitive strategy, SORS, reading performance

INTRODUCTION

Nowadays, in the digital era with lots of information flowing everywhere, literacy skills play a crucial role in people's life. Lots of information are available in their surroundings, and people need to have good reading skills to be well informed. They must

be able to distinguish between facts and opinions, and this massive input of information will indeed shape their mind and way of thinking.

In education, the importance of reading is undeniable. Students have to do much reading while attending classes, doing their assignments, and sitting for tests and exams. In higher levels of education, students are also expected to have good reading skills. Students can use the reading ability to gain access to the world of knowledge, synthesize information from different sources, evaluate arguments, and learn new subjects (Murnane et al., 2012, p. 3). To this point, Küçükoğlu, (2013, p. 710) argues that "If students want to get the most out of the materials they are assigned, they have to learn to read critically or analytically". Reading is not just saying aloud what is printed on the page; it is thinking—a critical thinking process to construct meaning (Beck, 1989; Yu-hui et al., 2010).

There are some definitions of critical thinking in literature. For example, Ennis defines critical thinking as reasonable reflective thinking that is focused on deciding what to believe or do (Ennis, 1987, p. 10), which includes the idea of creative thinking. According to Dwyer et al., (2014), critical thinking as one of the required competencies in the twenty-first century, consists of high order thinking skills, namely analysis, evaluation, and inference, and the use of these subskills with purposeful and reflective judgment will increase the possibility of making logical conclusions to arguments as well as solutions to problems. In other words, readers need to apply reading strategies plan fully and purposefully throughout the critical thinking process to achieve comprehension of a text (French & Rhoder, 1992). A substantial amount of EFL research has reported that successful readers employ various and proper reading strategies to comprehend a text (Abidin & Riswanto, 2012; Kasemsap & Lee, 2015; Jounto & Mustapha, 2016; Rastegar et al., 2017; Aziz et al., 2019; Par, 2020). It is worth noting, however, that several factors such as language proficiency levels, task demands, and motivation should be considered in understanding the chosen strategies (O'Malley & Chamot, 1990).

Reading strategies can be classified into two broad categories, cognitive strategies and metacognitive strategies (Brown & Palinesar, 1982). The purpose of cognitive strategies is to investigate how much readers actively engage in their mental and physical processes while reading. In this type of strategy, readers take in information, infer meaning from the context, consult dictionaries, and memorize. Thus, cognitive strategies involve comprehension strategies, memory strategies, and retrieval strategies. On the other hand, metacognitive strategies are the methods that readers use to manage and monitor cognitive strategies. Metacognitive strategies are classified into planning or pre-reading strategies, monitoring or while-reading strategies, and evaluating or post-reading strategies (O'Malley & Chamot, 1990; Zhang & Seepho, 2013). Thus, metacognitive reading strategies refer to "those strategies designed to increase readers' knowledge of awareness and control, to improve their reading comprehension, and to evaluate whether their attempt at comprehension has been achieved" (Zhang & Seepho, 2013, p.

55). Since the present study deals mainly with metacognitive strategies in academic reading comprehension, further discussion will focus on metacognitive reading strategies.

Most researchers assessed students' metacognitive reading strategy used by the survey of readers' thinking in the process of reading (Zhang, 2018). Two kinds of widely used surveys are the Metacognitive Strategy Questionnaire (MSQ), which measures metacognitive reading strategies in terms of planning, monitoring, and evaluating (Zhang & Seepho, 2013), and the Survey of Reading Strategies (SORS), which is developed based on Metacognitive Awareness of Reading Strategies Inventory (MARI) and measures these three subscales: global reading strategies, problem-solving strategies, and support strategies (Mokhtari & Sheorey, 2002). Common issues addressed in metacognitive research were the investigation of the relationship between metacognitive strategies and reading performance, and the identification of the most frequent reading strategy use. Much of the research concerned elementary, secondary, or undergraduate students for example (Leon & Tarrayo, 2014; Pinninti, 2016; Fauziah et al., 2017; Samuel & Okonkwo, 2021; Chen & Chen, 2015; Mardianti & Wijayanti, 2020; Masoodi, 2019; Sasani et al., 2018; Annury et al., 2019; Okyar, 2021; Rabadi et al., 2020), yet only little was conducted with postgraduate students as the participants, such as the research by Seifoori (2015) and Azher et al. (2015).

Several experimental studies examined the effect of metacognitive strategy instructions on reading achievement. In general, the research results were similar in that they justified the significance of metacognitive strategy instruction to enhance reading comprehension skills (Razi, 2014; Zepeda et al., 2015; Zhang & Guo, 2019; Ambarita et al., 2022), also for young learners (Ozturk, 2015; Teng, 2019; Halim et al., 2020). Specifically, Dotsevych (2019) and Liaw (2017) highlighted that metacognitive strategy training empowered the learners to read scientific texts and online texts respectively.

Previous research findings have confirmed that metacognitive reading strategies should be considered as an essential factor in EFL reading ability. In fact, to pursue further study, university lecturers are also required to have good reading skills in English. Unfortunately, in the case of lecturers teaching at vocational schools in Indonesia, the data show that 61% of applicants got the LPDP scholarship for pursuing a doctorate. This figure equals only 27% of the scholarship quota offered (Directorate General of Vocational Education, 2021). The main problem of the low intake was reported due to the candidates' English language proficiency as represented by their TOEFL ITP scores. One of the crucial aspects of language proficiency is reading performance. The present study focuses on investigating the English reading proficiency and the dominant reading strategies of the vocational lecturers who will pursue a doctorate. The results of this study are expected to shed light on metacognitive strategy instructions which will facilitate the enhancement of reading performance.

METHOD

The present study is part of a larger study on *the mapping of the English language proficiency of vocational lecturers who are candidates for doctorate students*. The participants of the study are 25 Indonesian vocational lecturers aged between 26 and 47 who registered themselves to be the research respondents. The lecturers, planning to start pursuing a doctorate in 2022–2026, major in management, administration, tourism, accounting, nursing, neurorehabilitation, pharmacy, chemistry, electronics, or information technology, and they come from diverse institutions located in 10 provinces in Java, Kalimantan, Sulawesi, Sumatera and Nusa Tenggara islands. The design of the present study is a mixed-method. The quantitative method is used to calculate the average scores of each metacognitive reading strategy of the low and high achievers and the correlation between the reading performance and metacognitive strategy use. The qualitative analysis is used to reveal and understand the major metacognitive reading strategies used by the participants and the underlying reasons for their preferences.

Two instruments used in this study are the Reading Comprehension Test and Survey of Reading Strategies. The Reading Comprehension Test, which is the third section of the assessment instrument of the larger research, contains five texts, each accompanied by ten multiple-choice questions with four answer options. By categorizing the reading comprehension test items into six cognitive domains of the revised Bloom taxonomy (Anderson & Krathwohl, 2001), the researchers found that 46% of the questions (23 items) belong to low order thinking skills and 54% (27 items) require high order thinking skills. The internal reliability of the test is 0.83, indicating that 83% of the variability in the reading comprehension test scores is due to true scores differences among the participants. The second instrument, Survey of Reading Strategies (SORS), which was particularly designed to measure adult learners' metacognitive awareness while reading academic texts (Mokhtari & Sheorey, 2002), was adopted in this study. The SORS is a 30-item questionnaire using the 5-point Likert scale. It measures three categories of reading strategies: global reading strategies, problem-solving strategies, and support strategies. To facilitate those who might need help in understanding the items, the Indonesian translation was added to each item on the administration of the survey. The reliability of SORS was established by calculating Cronbach's alpha, and it estimated reliability of 0.84.

The data of the participants' reading performance were collected by administering the Reading Comprehension Test (as part of the main research's complete assessment covering Listening, Structure, Reading, and Writing tests) online for 55 minutes. Scoring was done by giving 1 point to each correct answer. Next, the quartiles of the reading scores were calculated using SPSS 28.0 in order to classify the participants into low achievers and high achievers. The participants who scored lower than the 25th percentile were grouped as low achievers, and those who scored equal or higher than the 75th percentile were

grouped as high achievers. The classification of low and high achievers was intended to observe whether one group indicates metacognitive reading strategies that differ from the other group.

The next step of data collection was delivering the SORS questionnaire. The averages of each subscale (global reading strategies, problem-solving strategies, and support strategies) and overall scores were calculated, and they were interpreted using the high, moderate, and low usage designations as shown in Table 1.

Table 1. Interpretation of SORS Subscale and Overall Scores (Mokhtari & Sheorey, 2002)

	Low	Moderate	High
Average Scores	2.4	2.5 - 3.4	3.5

Finally, the Pearson correlation was applied using SPSS 28.0 to find out whether there was a relationship between the participants' reading strategy use and their reading performance.

FINDING AND DISCUSSION

The Reading Comprehension test scores were first calculated to find the mean, which was 34.52 out of 50. The lowest score was 17, and the highest was 45, indicating a pretty wide range of scores. It means that the 25 participants had varying levels of reading performance. The quartiles of the score resulted in 26.5 as the 25th percentile and 41 as the 75th percentile. Accordingly, participants who scored lower than 26.5 were classified as low achievers and those scoring equal to or higher than 41 were high achievers. There were six low achievers and seven high achievers.

Table 2 shows the average scores of each subscale and overall metacognitive strategies. The average score of the overall strategies was 3.83, which means that in general, the participants were high users of the overall metacognitive reading strategies. This is also true with the three sub-categories of metacognitive reading strategies. In addition, Table 2 illustrates that problem-solving strategies were the most frequently used, global strategies ranked second, and support strategies were third in rank.

Table 2. Average Scores of Metacognitive Strategies

	Metacognitive Strategies		
	Global	Problem Solving	Support
Mean	3.84	4.05	3.62
			3.83

The average scores of each metacognitive strategy counted based on the low achiever and high achiever groups are presented in Table 3.

Table 3. Mean of Each Metacognitive Category for Low and High Achievers

Metacognitive Strategies	Achievement	Mean	Std. Deviation	t	Sig. (2-tailed)	Mean Difference
Global Strategies	Low	3.7033	.40525	-.142	.889	-.03524

	High	3.7386	.47495			
Problem-Solving Strategies	Low	3.8567	.45496	-.534	.604	-.12619
	High	3.9829	.39840			
Support Strategies	Low	3.6483	.39484	2.017	.069	.50690
	High	3.1414	.49418			
Overall Strategies	Low	3.7267	.36368	.509	.621	.10381
	High	3.6229	.36963			

The mean of overall strategy use for the low achievers (3.7267) was a bit higher than that of the high achievers (3.6229) at the significant level of .621 ($t=.509$). It means that the lecturers belonging to the low proficiency group used metacognitive reading strategies slightly more frequently than the high proficiency ones. However, there was no significant difference in their overall use of metacognitive strategies. This finding confirmed the result of the research conducted by Kasemsap & Lee (2015) that the high and low proficiency students did not show a significant difference in metacognitive reading strategy use. The participants of their study, however, all majored in accountancy. Regarding learners' field of study, the result of the present study supported the research findings of Yukselir (2014) and James & Bulusan (2020), which investigated the metacognitive strategy awareness of undergraduate students. They asserted that the learners' majors affected their reading strategy use.

Similarly, the data sets of all sub-categories show $p \geq .05$, indicating that the low and high achievers did not significantly differ in using each of the three metacognitive strategies. The two groups even showed precisely the same order of frequency in applying the strategies: problem-solving strategies in the first rank, followed by global strategies, and support strategies in the last. One remarkable finding regarding these mean scores is that the low proficiency participants employed support strategy fairly more frequently ($M=3.6483$) than the high proficiency participants ($M=3.1414$), whereas with the other two categories the high achievers employed the strategies somewhat more often. This finding was in line with what O'Malley & Chamot (1990) proposed that learners' may suit their metacognitive reading strategies to factors like their language proficiency levels, task demands, and motivation. It seems that the low proficiency participants find that taking notes, reading aloud, underlining or circling information, and translating ideas into their native language are some strategies that support them while reading academic materials.

Finally, Pearson correlation analysis was run to investigate whether the lecturers' metacognitive strategy use correlated with their reading comprehension test scores.

Table 4. Correlation between Reading Score and Metacognitive Strategy Use

Metacognitive Strategies	Analyses	Reading Performance
Global Strategies	Pearson Correlation Sig. (2-tailed)	.149 .476
Problem-Solving Strategies	Pearson Correlation	.296

	Sig. (2-tailed)	.151
Support Strategies	Pearson Correlation	-.203
	Sig. (2-tailed)	.331
Overall Strategies	Pearson Correlation	.067
	Sig. (2-tailed)	.752

As shown in Table 4, none of the perceived metacognitive strategies used correlated significantly with the reading comprehension score. It was very likely that, as stated previously, the lecturers' diverse levels of English proficiency and fields of study might be the determining factors. For instance, it could be detected in two peculiar cases in this study. The participant with the highest reading score reported the least frequent use of overall reading strategies, global strategy, and support strategy.

Despite the limitation that the study was designed without interviewing the respondents following the survey to reinforce the findings, this participant was asked to fill out the survey of reading strategies twice because his responses to several items were quite extreme on the first try. A week later, when he filled out the survey for the second time, it turned out that he was consistent in perceiving himself as never reading aloud, reviewing text's characteristics, underlining or circling information, and using tables, figures, and pictures to increase understanding of the text. This fact could indicate that the participant chose reading strategies following his English proficiency level. It also implied that high proficiency readers employed problem-solving strategies the most.

Another worth noting finding was that the participant with the most frequent use of overall metacognitive strategies was in the 40th percentile in reading performance. This finding showed that, instead of his medium level of English proficiency, he might have a strong motivation in understanding academic reading texts as reflected by the very high frequency of using reading strategies, possibly considering he was going to pursue a doctorate.

CONCLUSION

The present research deals with heterogeneous respondents of ages, fields of study, and residential areas. The research findings indicate that the respondents had varying levels of reading performance. Concerning the major reading strategies employed, the findings reveal that problem-solving strategies were the most frequently used, global strategies ranked second, and support strategies occupied the third rank. However, further statistical calculation proves that there was no significant difference in the overall use of the metacognitive strategies and the use of the three sub-categories of reading strategies between the high achievers and the low achievers. Indeed, the result of the correlation analysis shows that none of the perceived metacognitive strategies used correlated significantly with the reading comprehension score.

The results of this study have implications for EFL teaching and learning. EFL teachers can foster metacognitive strategies in reading comprehension classes. This practice can help

learners develop metacognitive strategy awareness when reading materials in their field of study, and make them effective readers. Adult learners are encouraged to develop metacognitive reading strategies as a powerful tool for learning and professional development through skillful reading. Moreover, the abundant information available online requires them to have reading skills to read fast, selectively, and effectively.

Further investigations on metacognitive reading strategies are encouraged by involving a relatively large number of heterogeneous respondents and then dividing them into homogeneous subgroups based on their fields of study to determine their preferred reading strategies. Such research may provide insights into how metacognitive strategies relates to thinking habits. It is also a great idea to consider the respondents' learning styles to find out whether this affects their preference for metacognitive reading strategies.

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