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Metacognitive Awareness of Postgraduate Students' Reading Strategies

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Abstract

As a fundamental component of language acquisition, reading facilitates the synthesis of new knowledge and enhances information processing through cognitive engagement (Hilmi, 2024). This study investigated the metacognitive reading strategy awareness of postgraduate students when interacting with English academic texts. Sixteen L2 postgraduate learners (nine females and seven males) participated by completing the 30-item "Metacognitive Awareness of Reading Strategies Inventory" (MARSI) (Mokhtari & Sheorey, 2002). Quantitative analysis, conducted via SPSS version 25, revealed that participants prioritized problem-solving strategies over global and support strategies. Furthermore, the findings indicated no statistically significant differences in strategy use between male and female students. The results are discussed in relation to metacognitive theory, pedagogical implications, and the specific demands of postgraduate education.

Keywords: Metacognitive Reading Strategies, Global Reading Strategies, Problem-Solving Strategies, Support Reading Strategies

Introduction

In the increasingly globalized landscape of higher education, proficiency in English for Academic Purposes (EAP) serves as the primary gateway to scholarly success. For postgraduate students, reading is not merely a passive act of decoding language but a sophisticated cognitive process of synthesizing complex information, evaluating arguments, and constructing new knowledge (Hilmi, 2024). At the doctoral and master's levels, the sheer volume and density of specialized literature demand more than foundational fluency; they require metacognitive competence.

Metacognition is the ability to monitor, regulate, and orchestrate one's own cognitive processes which is the hallmark of an expert reader. While many postgraduate learners possess high linguistic proficiency, they often face a "comprehension gap" when navigating multifaceted academic texts. This area of study is critical because the transition from general English to academic English involves a shift from understanding what a text says to strategically managing how one interacts with it. Investigating metacognitive awareness is

essential to identify whether students are merely "reading" or "strategically processing." Without empirical data on these behaviours, pedagogical approaches remain speculative, often failing to address the specific executive-function needs of L2 researchers who must compete in a global "publish or perish" environment.

In light of these challenges, this study was designed to investigate the perceived use of metacognitive reading strategies among L2 postgraduate learners. Specifically, the researcher intended to determine which strategic behaviours—global, problem-solving, or support are prioritized in an academic context and whether gender serves as a significant variable in strategy selection. Such an investigation is a vital step toward bridging the comprehension gap and fostering the academic autonomy required at the postgraduate level.

Literature Review

Metacognitive Strategies

Within academic environments, reading is often cited as the most critical skill for learners of a second language (Grabe, 1991). Because comprehension is vital across both primary and secondary languages, researchers have focused heavily on the role of reading strategies. A central concept in this field is metacognition, which describes the awareness and authority individuals have over their own cognitive functions. This includes the ability to plan, monitor, fix, and assess one's own learning process. Baker and Brown (1984) further divide this into two branches: knowledge of cognition (one's self-awareness of thought) and regulation of cognition (the active management of those thoughts to achieve a goal). Ultimately, these strategies allow students to consciously oversee their learning and select the most effective study methods (O'Malley & Chamot, 1990; Schmitt, 2000). The shift toward digital and hypermedia learning environments has only heightened the necessity of these skills (Lee & Baylor, 2006; Verezub et al., 2008). According to Lee and Baylor (2006), effective web-based learning relies on four pillars originally proposed by Brown (1987):

1- Planning: Designing a learning roadmap.
2- Monitoring: Checking progress during the task.
3- Evaluating: Judging the quality of the learning outcome.
4- Revising: Adjusting methods and correcting errors.

To support these actions in digital spaces, the use of "metacognitive maps" is recommended to help students stay focused and minimize the risk of becoming overwhelmed or disoriented (Lee & Baylor, 2006).

Metacognitive Reading Strategies

Reading can be understood as the interaction among several elements: the reader, the text, reading fluency which defined as the ability to read at an appropriate speed with sufficient comprehension, and strategic reading, which refers to the reader's ability to employ various strategies to achieve a specific reading purpose (Anderson, 2003). Research on reading strategies primarily aims to identify the most effective methods and processes that learners use to comprehend texts. Reading is a core skill in foreign language learning, as it underpins many instructional activities such as working with textbooks, completing writing tasks, reviewing lessons, and developing vocabulary and grammar, as well as engaging with computer-assisted language learning tools (Mikulecky, 2008).

Grabe (1991) highlights that reading is not only essential but perhaps the most crucial skill for second language learners, particularly in academic settings. Given the central role of reading comprehension in both first and second/foreign languages, it has attracted significant attention in research. Studies have explored areas such as learners' metacognitive awareness, their perceptions of reading strategies, and the effectiveness of strategy instruction in enhancing comprehension. Importantly, reading comprehension enables ESL/EFL learners to better understand both the world and themselves, helping them think critically and respond meaningfully to texts (Tierney, 2005).

In reading contexts, metacognitive strategies refer to the actions that help learners become aware of their own thinking processes while performing reading tasks (Meniado, 2016). These strategies consist of two main components: analytic-cognitive and pragmatic-behavioral (Taraban, Rynearson, & Kerr, 2004). The analytic-cognitive component is vital for comprehension and includes skills such as identifying reading purposes, evaluating texts, and making predictions and inferences. In contrast, the pragmatic-behavioral component supports academic achievement and memory retention through practices like organizing the reading environment, highlighting key information, taking notes, and visualizing content. Together, these components enable learners to focus on important details, connect prior knowledge with new information, infer meanings that are not explicitly stated, interpret texts, use contextual clues to understand unfamiliar vocabulary, identify main ideas, and determine the author's intent (Mokhtari & Reichard, 2002; Singhal, 2001). Additionally, metacognitive reading strategies positively influence learners' motivation, encouraging not only the use of cognitive skills but also deeper comprehension (Başaran, 2013). By enhancing both the quality of reading and overall academic performance, these strategies foster active engagement in reading, increase enjoyment, and motivate students to participate more in reading activities. This demonstrates that both cognitive and motivational factors are essential for effective reading comprehension (Wang & Guthrie, 2004; Yıldız & Akyol, 2011, as cited in Öztürk & Aydoğmuş, 2021).

Sheorey and Mokhtari (2001) describe metacognitive reading strategies as deliberate and carefully planned techniques that learners use to monitor and regulate their reading processes. Researchers in both first and second language contexts have emphasized their importance in language learning. O'Malley and Chamot (1990) argue that learners who lack metacognitive strategies often struggle to plan, monitor, and evaluate their learning effectively. Furthermore, skilled readers are better able to reflect on and control their cognitive processes during reading (Sheorey & Mokhtari, 2001). Zhang and Seepho (2012) also affirm that metacognitive strategies are crucial for achieving success in second and foreign language reading.

Researches Related to the Variables of Recent Study

Do and Phan (2021) examined learners' awareness of metacognitive reading strategies. A total of 123 English-major undergraduates from Hong Bang International University participated in an online questionnaire that measured how often they used problem-solving, global, and support strategies while reading. The participants then completed a TOEIC-style reading comprehension test, and based on their results, they were categorized into three groups: high, medium, and low proficiency readers. The researchers compared the mean scores of strategies use across the three types and among the different proficiency groups.

The findings indicated that students employed reading strategies at a moderate overall level, with problem-solving strategies used most frequently, followed by support and then global strategies. Additionally, female students reported using support strategies more often than male students. The study also revealed that learners' reading proficiency significantly influenced their metacognitive awareness, as higher-proficiency readers tended to employ tactics more often than those with poorer proficiency. These findings suggest that instructors should incorporate all three types of reading strategies into instruction, with particular emphasis on increasing students' awareness and use of global and support strategies, especially among Vietnamese learners.

Mokhtari et al. (2018) conducted a study involving 1,164 students from grades 6 to 12, representing diverse groups including Caucasian, Hispanic, and African American learners, to examine factorial invariance. Their results showed that pupils' awareness of reading techniques was consistent across gender and ethnic backgrounds. Based on these results, the authors recommend that future studies employ MARSI to assess learners' levels of metacognitive reading strategy use.

In terms of gender differences in the use of reading strategies, Arrastia et al. (2016) examined the metacognitive awareness of 160 Egyptian university students learning English as a second language. By conducting a series of t-tests to compare the mean scores across the three types of reading strategies, the researchers found that female students reported higher usage of these strategies than male students in all categories. This result is in agreement with studies by Mokhtari and Sheorey (2002) and Temur and Bahar (2011).

Despite the high linguistic demands of postgraduate education, many second language (L2) learners in Tertiary English Programs (TEP) struggle to autonomously navigate the complexities of academic texts. While these students often possess foundational English proficiency, there remains a significant "comprehension gap" when they are required to synthesize dense, specialized scholarly materials.

Current pedagogical approaches often assume that postgraduate students have already developed sophisticated reading habits; however, empirical evidence suggests that many learners continue to rely on passive reading styles rather than active, metacognitive engagement. Furthermore, while gender is a documented variable in general language acquisition, there is a lack of specialized research within the context of learners of English as a second language to determine if gender significantly influences strategy selection among high-level academic researchers. Without identifying the specific strategies and the potential disparities in their use - educators cannot provide the targeted, explicit strategy training necessary to foster learner autonomy. Therefore, this study is conducted to address these gaps by evaluating the metacognitive awareness of TEP students and determining the efficacy of structured strategy intervention across different learner profiles.

Study Objectives

This study intends to investigate Tertiary English Program students' perceived use English reading strategies as a second language. Moreover, it aims to indicate if there are significant differences between genders. This study aims to address its objectives by exploring the following research questions:

1- What are the most and least commonly employed strategies among postgraduate students?
2- Are there statistically significant differences in reading strategy scores across male and female participants?

Study Hypothesis

This study addressed the following hypothesis:

1- There is no statistically significant difference in comparison with male and female participants' reading strategies scores.

Significance of the Study

The significance of this study lies in its shift away from broad pedagogical generalizations toward a targeted analysis of high-level L2 learners at a critical career juncture. Moreover, this research is significant as it contributes to the limited body of literature focusing specifically on the metacognitive behaviours of postgraduate researchers, thereby addressing a notable gap in current academic discourse. Its importance and utility are further evidenced in three primary dimensions:

1- Instructional Utility for EAP Educators: This research provides a diagnostic roadmap for curriculum designers and English for Academic Purposes (EAP) instructors. By identifying that, postgraduate students prioritize problem-solving strategies over global or support strategies, educators can pivot from teaching "how to read" to teaching "how to plan and support" reading. This allows for the development of evidence-based interventions that address specific strategic deficits, such as text previewing or the effective use of auxiliary tools.

2- Institutional Impact and Learner Autonomy: For institutions such as Universiti Putra Malaysia (UPM), which host a diverse international student body, these findings facilitate the creation of more effective "Tertiary English Programs." By fostering metacognitive awareness, institutions can increase postgraduate retention and success rates, empowering students to navigate academic rigors autonomously without constant remedial support.

3- Theoretical Contribution to Gender and SLA: This study offers a critical contribution to Second Language Acquisition (SLA) theory by investigating the "gender-proficiency equalizer." By exploring whether academic maturity and high-level proficiency mitigate traditional gender differences in strategy use, the research challenges or reinforces sociolinguistic paradigms, suggesting that at the postgraduate level, academic demand may be a more significant driver of behaviour than gendered learning styles.

4- Support for Multi-National Cohorts and Academic Integration: Given the diverse demographic of the participants spanning Iraq, Libya, Japan, and China, this study provides a unique cross-cultural snapshot of how L2 researchers from various linguistic backgrounds adapt to the rigorous demands of Western-style academic inquiry. Significantly, from the perspective of the researcher as a Libyan scholar, these findings offer a critical diagnostic tool for postgraduate program coordinators. Administrators, particularly within the Libyan higher education context, can leverage these empirical results to design targeted pedagogical interventions that assist graduate students in navigating the complexities of academic literature across diverse disciplines. By identifying specific strategic deficits, institutions can better equip students to overcome the formidable linguistic and cognitive barriers inherent in specialized scholarly texts, thereby fostering greater academic equity and ensuring scholarly success within internationalized higher education.

Methodology

This section includes the participants, Data Collection Instruments, Procedures of the Reading Strategies Program, Data Analysis Procedures, and results.

Participants

The study involved 16 postgraduate students from University Putra Malaysia, including nine females and seven males. All participants were adult non-native speakers of English who had successfully completed the Tertiary English Program (TEP) at the same university. In terms of nationality, 31.3% were from Iraq, 18.8% from Libya, 6.3% from Egypt, 6.3% from Yemen, 6.3% from Palestine, 6.3% from Jordan, 6.3% from Japan, 6.3% from Indonesia, 6.3% from China, and 6.3% from Afghanistan. Their ages ranged from 23 to 41 years, with an average age of 30.13 years. The participants were enrolled in various faculties and academic levels, with 62.5% pursuing a Master's degree and 37.5% enrolled in PhD programs.

Data Collection Instruments

Two questionnaires were employed to collect the necessary data. The first was an adapted version of the background questionnaire developed by Mokhtari (2008: 159–160), which was used to obtain information about participants' nationality, age, and experience with the English language. The second instrument was the Metacognitive Awareness of Reading Strategies Inventory (MARSI) developed by Mokhtari and Sheorey (2002). This instrument comprises 30 items rated on a five-point Likert scale ranging from "never or almost never" to "always or almost always." It is divided into three categories of reading strategies:

1- **Global Reading Strategies (13 items):** These involve overall planning and setting the context for reading, such as establishing a purpose for reading and previewing the text.
2- **Problem-Solving Strategies (8 items):** These are strategies used to address difficulties encountered during reading in order to enhance comprehension, such as re-reading or checking understanding.
3- **Support Reading Strategies (9 items):** These include auxiliary techniques that assist comprehension, such as note-taking, reading aloud, and using a dictionary.

The study was conducted at the end of the 2019 academic year at University Putra Malaysia, where the participants were enrolled. During the data collection process, the purpose of the study was explained to the participants, and any questions they had were addressed. Participants then completed the questionnaire, which focused on reading strategies. They were instructed to read each item carefully and select the response that best reflected their perceived reading behaviour when engaging with English academic texts. They were also informed that there were no correct or incorrect answers. All participants completed the questionnaire and submitted it via email. The collected data were analysed using both descriptive and inferential statistics through SPSS version 25.

Procedures of the Reading Strategies Program

The structured reading strategies training program encompassed all sixteen participating students. It was implemented during the semester of the 2020 academic year and comprised 12 weekly sessions spanning three months. Instruction was provided by a single teacher throughout. Participants engaged in reading comprehension exercises utilizing the strategy training program. At the conclusion of each month, students were required to read

designated passages and allotted time to respond to the associated comprehension questions, after which the teacher provided feedback on their performance.

Data Analysis Procedures

The collected data were analysed using the following procedures:

1- Descriptive statistics were computed for each strategy item and category.
2- An independent samples t-test was conducted to examine differences between female and male participants.

Findings

Reading strategies used by the participants

Table 1

Descriptive Statistics for all items of the questionnaire used by the participants

Strategy	N	Mean	Std. Deviation	Strategy	N	Mean	Std. Deviation
GLOB1	16	3.6250	.88506	SUP6	16	2.8125	1.10868
GLOB3	16	3.7500	1.06458	SUP9	16	2.7500	1.43759
GLOB4	16	3.6875	1.01448	SUP12	16	4.1250	.95743
GLOB7	16	2.9375	.77190	1QA	16	3.8750	1.31022
GLOB10	16	2.9375	1.06262	SUP20	16	3.1250	1.14746
GLOB14	16	3.0625	.99791	SUP24	16	3.5625	.72744
GLOB17	16	2.8125	1.72119	SUP28	16	3.1250	1.14746
GLOB19	16	3.1250	1.45488	PROB8	16	3.8125	1.04682
GLOB22	16	3.1250	1.36015	PROB11	16	3.5000	1.09545
GLOB23	16	3.0625	.92871	PROB13	16	3.8750	.88506
GLOB25	16	3.8125	.75000	PROB16	16	3.6875	1.25000
GLOB26	16	3.5000	.81650	PROB18	16	3.0000	1.15470
GLOB29	16	3.1250	1.14746	PROB21	16	3.5625	1.09354
SUP2	16	4.0625	1.06262	PROB27	16	3.9375	1.23659
SUP5	16	2.6250	1.31022	PROB30	16	4.0625	.92871
				Valid N (listwise)	16		

Table 2
The most and least strategies used by the participants:

Strategy	Mean	Std. Deviation
1- SUP 12. "I underline or circle information in the text to help me remember it".	4.1250	.95743
2- SUP 2. "I take notes while reading to help me understand what I read".	4.0625	1.06262
3- PROB 30. "I try to guess the meaning of unknown words or phrases".	4.0625	.92871
4- PROB 27. "When text becomes difficult, I re-read to increase my understanding".	3.9375	1.23659
5- PROB 13. "I adjust my reading speed according to what I'm reading".	3.8750	.88506
6- SUP 5. "When text becomes difficult, I read aloud to help me understand what I read".	2.6250	1.31022
7- SUP 9. "I discuss what I read with others to check my understanding".	2.7500	1.43759
8- SUP 6.I "summarize what I read to reflect on important information in the text".	2.8125	1.10868
9- GLOB 17. "I use tables, figures, and pictures in text to increase my understanding".	2.8125	1.72119
10- GLOB 10. "I skim the text first by noting characteristics like length and organization".	2.9375	1.06262

The data (Table 1&2) reveals a clear hierarchy in strategy preference among participants: Problem-Solving (PROB) strategies were most prominent, followed by Global (GLOB) and Support (SUP) strategies. Notably, the top five most frequent strategies were primarily categorized as PROB, while the five least frequent were largely SUP. These results suggest that postgraduate students possess a heightened awareness of problem-solving techniques when navigating academic texts. The findings indicate that these students are equipped with a diverse toolkit of strategies to effectively manage and overcome comprehension challenges.

The differences between female and male participants' reading strategies scores

Table 3
The differences between female and male participants' reading strategies scores

Group Statistics

	gender	N	Mean	Std. Deviation	Std. Error Mean
post_test1	female	9	13.00	2.291	.764
	Male	7	14.86	2.193	.829
post_test2	female	9	14.56	3.504	1.168
	Male	7	15.57	1.902	.719
post_test3	female	9	29.00	6.000	2.000
	Male	7	30.43	4.541	1.716

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
post_test1	Equal variances assumed	.077	.785	-1.638	14	.124	-1.857		-4.289	.575
	Equal variances not assumed			-1.648	13.315	.123	-1.857	1.127	-4.286	.572
post_test2	Equal variances assumed	1.111	.310	-.689	14	.502	-1.016	1.475	-4.180	2.148
	Equal variances not assumed			-.741	12.768	.472		1.372	-3.984	1.953
post_test3	Equal variances assumed	.601	.451	-.523	14	.609	-1.429	2.733	-7.290	4.433
	Equal variances not assumed			-.542	13.999	.596	-1.429	2.635	-7.081	4.224

All the variables are normally distributed since the values are within ± 1 .Overall male students in posttests (*M* = 14.86, *SD* = 2.193; *M* = 15.57, *SD* = 1.902; *M* = 30.43, *SD* = 4.541) scored slightly higher than female (*M* = 13.00, *SD* = 2.291; *M* = 14.57, *SD* = 3.504; *M* = 29.00, *SD* = 6.000). Based on the results of independent samples t-test, the significant value of 'Levene's Test for Equality of Variances' is greater than .05, it means that the variances are equal, *t*(14) = .124,.502, .609 (*p* = -1.638, -.689, -.523) 95% CI [-4.289, .575] [-4.180, 2.148] [-7.290,4.433] respectively, because the p-value exceeded the 0.05 threshold, the null hypothesis could not be rejected. Consequently, the data suggests no statistically significant disparity between the achievement scores of male and female students. This indicates that gender did not significantly influence the acquisition or application of reading strategies, suggesting the intervention was equitable across the participant group.

Conclusion

This study investigated the perceived use of English reading strategies among postgraduate students in the Tertiary English Program (TEP) and examined the influence of gender on strategy employment. The findings reveal that postgraduate students are highly strategic readers, demonstrating a strong preference for Problem-Solving (PROB) strategies. Techniques such as guessing word meanings and re-reading difficult sections were most prevalent, suggesting that advanced learners prioritize cognitive fixes when encountering comprehension breakdowns. Conversely, Support (SUP) strategies, such as reading aloud or discussing texts with others, were the least utilized, indicating a shift toward silent, independent, and internalised processing at the postgraduate level.

Regarding gender, the study found that while male participants recorded slightly higher mean scores across the post-tests, the difference was not statistically significant ($p > .05$). Therefore, the null hypothesis was retained, suggesting that at the tertiary level, academic maturity and language proficiency may supersede gender as a determinant of reading strategy choice.

The findings of this study offer several important pedagogical implications for the design and implementation of reading strategy instruction. Since the data revealed no statistically significant disparity between male and female participants, it suggests that the instructional framework employed was gender-neutral and accessible to all students regardless of their gender identity. Educators can therefore feel confident in utilizing these specific strategies to promote literacy without the immediate need for gender-segregated or gender-specific modifications to the curriculum. However, the consistent numerical lead in male scores, alongside the slightly higher variance observed among female students, indicates that instructors should remain vigilant in providing differentiated support. While the intervention proved equitable on a broad scale, future pedagogical approaches might benefit from targeted scaffolding for individual students who deviate from the mean, ensuring that the diverse range of reading behaviours noted in the female cohort is addressed through personalized feedback and adaptive learning tools.

Consequently, future research should aim to replicate this study with a larger, more diverse demographic to enhance the generalizability of the findings across different educational eds. Expanding the participant pool would also allow for more sophisticated multivariate analyses, such as exploring how gender interacts with other variables like prior reading proficiency. Furthermore, longitudinal studies could be beneficial to determine if the narrow performance gap between male and female students remains stable or diverges as reading strategies become more complex over an extended academic period.

References

Anderson, N. J. (2003). *Teaching reading. In* Nunan, D. (2003). *Practical English language teaching* (Vol. 57). New York: McGraw-Hill.

Arrastia, M. C., Zayed, A. M., & Elnagar, H. Z. (2016). Metacognitive awareness of reading strategies among English as a Foreign Language (EFL) preservice teachers: An exploration of gender and developmental differences. *International Research in Higher Education*, *1*(2), 46-55.

Baker, L., & Brown, A. L. (1980). Metacognitive Skills and Reading. Technical Report No. 188.

Başaran, M. (2013). 4. sınıf öğrencilerinin üstbilişsel okuma stratejilerini kullanma durumları ve bu stratejilerle okuduğunu anlama arasındaki ilişki. *Turkish Studies*, *8*(8), 225.

Do, H., & Le Thu Phan, H. (2021). Metacognitive awareness of reading strategies on second language Vietnamese undergraduates. *Arab World English Journal (AWEJ) Volume*, *12*.

Grabe, W. (1991). Current developments in second language reading research. *TESOL quarterly*, *25*(3), 375-406.

Hilmi, M. (2024). The influence of reading strategies on comprehension skills in English language learners. MASALIQ: Jurnal Pendidikan dan Sains, 5(1), 37–49.

Lee, M., & Baylor, A. L. (2006). Designing Metacognitive maps for Web-Based Learning educational Technology & society. 9(1), 344 - 348.

Lian, Z. H. A. N. G., & Seepho, S. (2012). Effects of MST (metacognitive strategy training) on academic reading comprehension of Chinese EFL students. *US-China Foreign Language*, *10*(2), 933-943.

Meniado, J. C. (2016). Metacognitive reading strategies, motivation, and reading comprehension performance of Saudi EFL students. *English language teaching*, *9*(3), 117-129.

Mikulecky, B. S. (2008). Teaching reading in a second language. *Recuperado de http://longmanhomeusa. com*.

Mokhtari, K. (2008). Perceived and real-time use of reading strategies by three proficient triliterate readers: A case study. *Reading strategies of first-and second-language learners: See how they read*, 143-160.

Mokhtari, K., & Reichard, C. A. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of educational psychology*, *94*(2), 249.

Mokhtari, K., & Sheorey, R. (2002). Measuring ESL students' awareness of reading strategies. *Journal of developmental education*, *25*(3), 2-11.

Mokhtari, K., Dimitrov, D. M., & Reichard, C. A. (2018). Revising the" Metacognitive Awareness of Reading Strategies Inventory"(MARSI) and Testing for Factorial Invariance. *Studies in Second Language Learning and Teaching*, *8*(2), 219-246.

O'malley, J. M., & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. Cambridge university press.

Öztürk, M. B., & Aydogmus, M. (2021). Relational Assessment of Metacognitive Reading Strategies and Reading Motivation. *International Journal of Progressive Education*, *17*(1), 357-375.

Schmitt, N., & Schmitt, D. (2020). *Vocabulary in language teaching*. Cambridge university press.

Sheorey, R., & Mokhtari, K. (2001). Differences in the metacognitive awareness of reading strategies among native and non-native readers. *System*, *29*(4), 431-449.

Singhal, M. (2001). Reading proficiency, reading strategies, metacognitive awareness and L2 readers. *The Reading Matrix*, *1*(1).

Taraban, R., Kerr, M., & Rynearson, K. (2004). ANALYTIC AND PRAGMATIC FACTORS IN COLLEGE STUDENTS'METACOGNITIVE READING STRATEGIES. *Reading psychology*, *25*(2), 67-81.

Temur, T. U. R. A. N., & Bahar, O. Z. G. E. (2011). Metacognitive awareness of reading strategies of Turkish learners who learn English as a foreign language. *European Journal of Educational Studies*, *3*(2), 421-427.

Tierney, J. E. (Ed.). (2005*). Reading strategies and practices* (6th ed.). Boston, MA: Pearson Education, Inc

Verezub, E., Grossi, V., Howard, K., & Watkins, P. (2008). Building e-based literacy for vocational education and training students. *Australasian Journal of Educational Technology*, *24*(3).