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(IJEPC)**www.ijepe.com**IS THERE A RELATIONSHIP BETWEEN READING
DIFFICULTIES AND READING STRATEGIES IN ONLINE
READING?**

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Abstract:

In this digital age, reading online materials is one of the challenges commonly faced by undergraduates, thus it is essential to understand how learners perceive their reading difficulties and the strategies they use to overcome them. This study aims to explore motivation factors for learning among undergraduates by determining their perception of online reading difficulties and reading strategies namely, global, problem-solving, and support strategies. It also investigates if there is a relationship between reading difficulties and all reading strategies for online reading. The instrument used was a 5- Likert-scale survey, divided into five sections: the demographic profile, reading difficulties, Global strategies, Problem-solving strategies, and Support strategies disseminated via Google Form. The questionnaire of 42 items is rooted in Abeeleh and Al-Sobh (2021) on reading comprehension problems and also Amer, AL Barwani, & Ibrahim (2010) on readers' perceived use of online reading strategies. This study employs a quantitative method involving a purposive sample of 160 Diploma and First Degree students majoring in English Language Studies. The findings suggested that concerning difficulties of reading online materials, their mean in emotional responses and self-perception was higher than specific comprehension tasks, indicating feelings of anxiety and lack of self-confidence when comparing themselves to their

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peers. Most respondents employed global strategies quite effectively but did not often apply critical reading skills. Learners also applied problem-solving strategies by adjusting their reading pace based on text difficulty, relying on contextual clues to understand difficult words, and re-reading when texts became challenging. Most ESL learners tended to use support strategies over other reading strategies but did not apply note-taking skills. Finally, there was no relationship between reading difficulties and global strategies, as well as problem-solving strategies. However, there was a weak significant relationship between reading difficulties and support strategies. Several implications are also addressed in this study.

Keywords:

Reading Difficulties, Online Reading, ESL Learners, Reading Strategies

Introduction

Reading is a fundamental aspect of the learning process of university students. It serves as an information gateway in acquiring new knowledge, is an important tool for communication, and is a source of all learning aspects as well as entertainment. In the context of language learning among English as a second language (ESL) learners, reading helps learners develop other related skills such as fluency, grammar, vocabulary and writing.

In today's digital age, the nature of reading printed paper is shifting due to the escalating presence of digital reading materials. More often than not, university students today read from the screens of their smartphones, laptops, or tablets at their convenience. Dahlstrom et al. (2013) state that globally, 70 percent of undergraduate students used laptops, 59 percent smartphones, and 35 percent tablets for academic purposes. This trend of digital reading became increasingly popular during the Movement Control Order (MCO) due to COVID-19 because all classes were conducted online along with the sharing of learning materials. In a study involving ESL learners majoring in English language studies, Virgayanti et al. (2024) found that the majority of undergraduates preferred e-books, online media and articles because they are more interesting, updated and practical. As educational institutions increasingly rely on digital resources, understanding how students perceive their reading difficulties and the strategies they employ to navigate these challenges is crucial for enhancing academic success.

Reading difficulties encompass various challenges that learners face when attempting to understand written texts, including issues with vocabulary, main idea identification, and overall text coherence (Abeeleh & Al-Sobh, 2021). Concerning online learning, Fauziyyah, Lemieshevskaya, Nurjaini and Suparman (2023) discovered that among the five identified barriers, the epistemological barrier was the most prominent in online learning. When reading online materials, students faced difficulties in identifying main ideas and supporting details, determining similarities and differences and understanding the meaning of words and texts, as well as making inferences. In relation to reading attitude, Alsaeedi et al. (2021) concluded that the majority of students globally did not enjoy reading and mainly read to pass the examination. When given choices, most of them preferred leisure reading from online sources. These challenges are particularly pronounced in online environments, and this can complicate the reading process.

Reading abilities can be improved with appropriate use of reading strategies. According to Dillah et al. (2023), to improve comprehension of online materials, readers' strategic knowledge and the use of effective reading strategies are important. There are three reading strategies commonly used to address reading difficulties namely, global strategies, problem-solving strategies and support strategies. Global strategies refer to reading methods used intentionally and unintentionally by readers to monitor reading for example previewing, predicting, skimming, and scanning the text. Problem-solving strategies encompass methods and actions used by readers to facilitate and better process reading difficult texts. This includes adjusting the reading pace, reading slowly, guessing the meaning of words, and visualising the reading materials. Support strategies aid readers in enhancing their comprehension of the text for example using related materials, asking questions, taking notes while reading, as well as summarising and paraphrasing the text (Mokhtari & Reichard, 2002). In a study among ESL learners, Banditvilai (2020) concluded that reading strategies had a positive effect on the students' reading comprehension. The students in his study had favourable attitudes towards skimming, scanning, making predictions and questioning when asked to apply the global strategy to their reading processes, resulting in a better comprehension of the text.

This study aims to investigate the perceptions of higher education students regarding online reading difficulties and how they perceive global strategies, problem-solving strategies and support strategies. It will analyse if there is a relationship between reading difficulties and these reading strategies among English as a second language (ESL) learners majoring in English Language Studies.

The findings are expected to reveal insights into the reading difficulties faced by ESL learners, as well as the effectiveness of different strategies in overcoming online reading challenges among university students majoring in English language programme. By examining these dynamics, this research seeks to contribute valuable knowledge for educators aiming to enhance student engagement and comprehension in digital learning environments. Understanding how students perceive their reading difficulties and apply various strategies is essential for developing suitable interventions that could support academic success in an increasingly digital landscape.

Problem Statement

In an ideal learning environment, students effectively use online reading strategies to navigate, comprehend, and retain information from digital texts. Strategies such as previewing, predicting, summarising, and monitoring comprehension are designed to help readers overcome challenges in processing complex content (Li, Wang, Gan & Hoi, 2024; Li & Wang, 2022). If applied properly, these strategies would lead to better academic outcomes, improved digital literacy, and enhanced reading efficiency, with minimal reading difficulties in online contexts (Sun, et al., 2021).

Despite the availability of numerous online reading strategies, many students and readers continue to experience reading difficulties when engaging with digital content. These difficulties include challenges in understanding, remembering, and critically evaluating online materials (Zhang & Wang, 2020). Factors such as information overload, nonlinear text structures, and hyperlinks contribute to cognitive strain, making it harder for readers to stay focused and comprehend effectively. Moreover, limited research exists on how individuals

perceive and apply these strategies and whether their use significantly mitigates reading difficulties.

Understanding the relationship between reading difficulties and reading strategies in online reading environments is crucial for developing effective educational interventions and tools. By identifying how specific strategies impact reading comprehension and ease of navigation, educators can design targeted teaching methods to enhance digital literacy (Li, Ahmad & Jamil, 2023). Furthermore, this research can provide valuable insights for curriculum developers, technology designers, and policymakers aiming to support students in an increasingly digital world. Addressing this knowledge gap will improve overall academic outcomes and foster lifelong learning skills. Hence, this study aims to investigate the difficulties that students face while reading online materials and to identify the strategies that they use to overcome the difficulties.

Literature Review

Reading Difficulties

In this era of digitalisation, reading has shifted from traditional books to online platforms, which introduce unique difficulties and require users to adopt specific strategies to improve understanding and retention. Traditional reading difficulties are usually associated with poor vocabulary, weak language skills and limited comprehension strategies. In the context of online reading, it poses different difficulties including the non-linear nature of digital text which is usually typified by hyperlinks as well as multimedia components that might interfere with readers' cognitive processes. This problem makes it more challenging for the readers to stay focused and cohere.

According to Sardor et al. (2020), students with reading difficulties usually struggle to recognise words, understand sentence structure and maintain focus while reading; and all of these elements are crucial for fluent reading and comprehension. This issue is more complicated in a digital environment due to distraction and the necessity for a higher level of self-discipline and digital literacy. Furthermore, Grabe and Stoller (2002) stated that several dilemmas faced by L2 readers included context for L2 reading instruction, social context, reading development vs rule learning, reading as a cultural socialisation practice and understanding context. In order to solve the above difficulties readers need to use some strategies to overcome them.

Reading Strategies

Effective and efficient reading strategies are crucial to overcoming difficulties particularly within an online context. A study by Brun-Mercer (2023) emphasises the importance of teaching and training students' specific strategies for online reading. This includes skimming for main ideas, scanning specific information as well as assessing the reliability and credibility of online sources. These techniques assist students in mitigating the specific difficulties presented by digital texts as discussed above.

Besides, according to Mesa (2025), skimming and scanning act as a significant role in common reading strategy especially in this digital age. The expert pointed out that skimming can be effective as long as it does not impede comprehension; therefore, learners should have good skills to apply skimming in understanding an online text.

Past Studies on Reading Difficulties

Reading is a process that requires learners to actively interact with the reading texts in order to construct meaning. As reading is an important skill for students and is closely related to their academic performance (Par, 2020), previous studies have focused on reading difficulties faced by learners particularly in comprehension, retention, and critical evaluation of texts. A study by Al-Jarrah and Ismail (2018) on 100 EFL learners' difficulty in understanding reading text showed that the main difficulty faced by the participants was the inability to identify the types of text. This quantitative survey aimed to analyse reading comprehension difficulty faced by EFL learners. The research showed that reading difficulty can have an effect on learners' academic performances. Similarly, a quantitative study by Qrgez, (2017) on 200 EFL students at Yarmouk University revealed that although the learners indicated a high motivation to learn, they faced several difficulties in reading. The difficulties indicated were specifically ambiguous words, unfamiliar vocabulary, and the limited time to cognitively process and comprehend the texts. This paper highlights the importance of acquiring effective reading strategies among EFL learners.

Past Studies on Reading Strategies

Semry Anak Semtin (2015) conducted a research on cognitive and metacognitive reading strategies employed by Malaysian Form 4 secondary school students. Cognitive reading strategies refer to strategies such as translation, repetition, inferring, guessing, note-taking, prediction, summarising, analysing, and skimming. While metacognitive reading strategies refers to directed attention, self-evaluation, and monitoring in supporting their reading skills. This mix-method research showed that although the students used a variety of cognitive strategies, translation is the most frequently used cognitive strategy. In terms of metacognitive strategies, the strategy of selective attention is used more compared to the strategy of an advanced organisation that involves planning in completing reading tasks. This study indicates the types of reading strategies used by students and the importance for learners to employ various strategies in reading comprehension.

Another study by Mohd Ramli et al. (2011) focused on metacognitive strategies used in online learning among adult ESL learners in a public university. This quantitative survey was adapted from an online survey of reading strategies or OSORS (Anderson, 2003) and was used to compare the reading strategies employed by semester 1 and semester 2 students in utilising Learning Management Systems (LMS) - an online learning platform. The findings revealed that there was no difference between the strategies employed by semester 1 and semester 2 students. Students from both semesters mainly preferred to use global learning strategies compared to problem-solving and support reading strategies. However, they did not fully utilise the learning tools and features of the LMS. This shows that learners are aware and employ various reading strategies in attempting to comprehend reading texts but are not fully utilising the tools and features of online learning platforms when reading texts online.

Pradita (2020) compared global learning strategies, problem-solving strategies, and support strategies used by 300 male and female university students in reading digital texts. Seven skills which are activating prior knowledge, monitoring comprehension, repairing comprehension, identifying important ideas, synthesising, drawing inferences, and asking questions were listed. The findings indicated that female students used support strategies more compared to male students. However, male students showed a high percentage of using global reading strategies. Both female and male students demonstrated a high use of problem-solving

strategies. The study showed that there appears to be a gender gap in the use of online reading strategies with female students being more skillful in using support strategies.

Conceptual Framework

The conceptual framework of this study is presented in figure 1 below. This study explores the relationship between reading difficulties and each online reading strategy (global, problem-solving and support strategies). When reading online, learners may prefer to use one strategy over the other (Rahmat, et.al, 2021) . The choice could be on the type of text they are reading at any point of time. According to Abeeleh and Al-Sobh (2021), some readers face reading difficulties because of the text, some because of the use of reading strategies chosen. Amer, AL Barwani, & Ibrahim (2010) presented some online strategies. The strategies are global strategies, problem-solving strategies and support strategies.



Figure 1: Proposed Conceptual Framework

Methodology

This quantitative study is conducted to explore motivation factors for learning among undergraduates. A purposive sample of 160 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted in Abeeleh and Al-Sobh (2021) on reading comprehension problems and also Amer, AL Barwani, & Ibrahim (2010) on readers' perceived use of online reading strategies to reveal the variables in Table 1 below. The survey has 4 sections. Section A has items on the demographic profile. Section B has 14 items on reading difficulties. Section C has 17 items on global strategies. Section D has 8 items on problem-solving strategies and section E has 9 items on support strategies.

Table 1: Distribution of Items in the Survey

Section	Category	Strategy	No. Items	
B	Reading Difficulties (Abeeleh & Al-Sobh, 2021)		10	.858
C	READING STRATEGIES (Amer,et.al.,2010)	Global	17	.911
		Problem-Solving	7	.804
		Support	8	.711
		Overall Items	42	.897

Table 1 shows the reliability of the survey. The analysis shows a Cronbach alpha of .858 for reading difficulties, .911 for global strategies, .804 for problem-solving strategies and .711 for support strategies. The overall external reliability for all 42 items is .897; thus, revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is conducted to present findings to answer the research questions for this study.

Findings

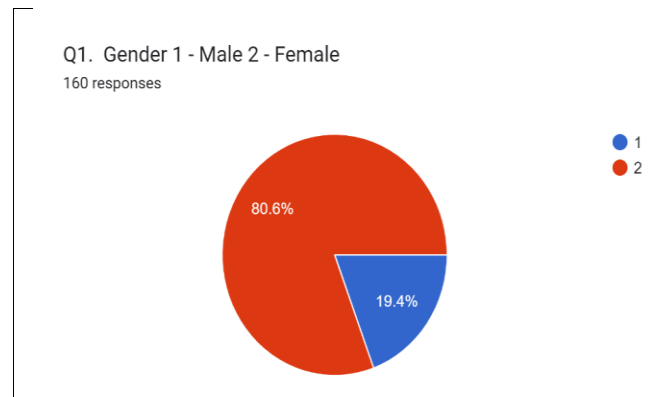


Figure 2: Percentage for Q1-Gender

Figure 2 shows the percentage for gender. The majority of the respondents were female (81%), while the remaining (19%) were male. The disparity in the number of male students to female students is common in most public universities in Malaysia, especially in language studies and other female-dominated fields of study.

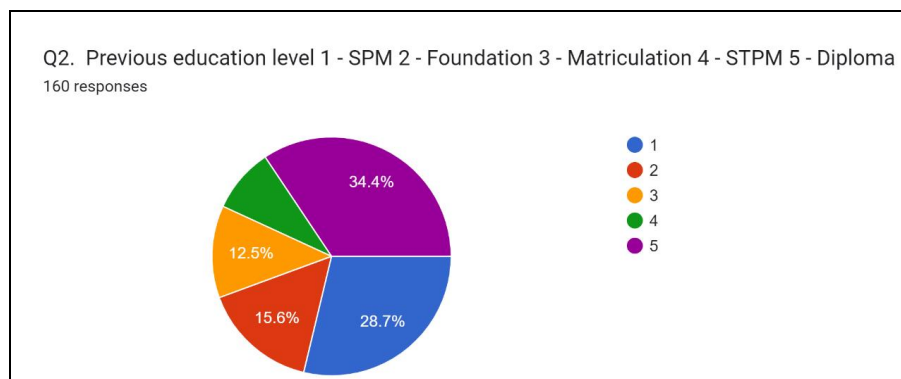


Figure 3: Percentage for Q2-Previous Education Level

Figure 3 presents the education levels of the respondents. It shows that the respondents had various educational backgrounds, ranging from SPM to Diploma levels. Most respondents came from Diploma (34%) and SPM (29%).

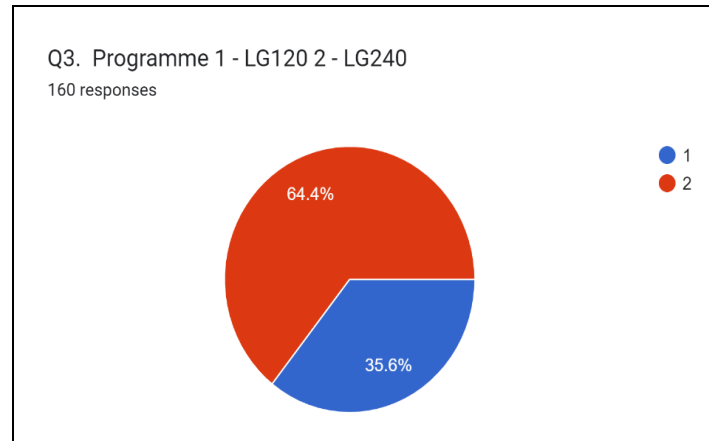


Figure 4: Percentage for Q3-Programme

Figure 4 shows the type of programmes taken by the respondents. Most of them (64 %) were ESL learners from the First Degree level and 36 percent from the Diploma level. All respondents were majoring in English for Professional Communication.

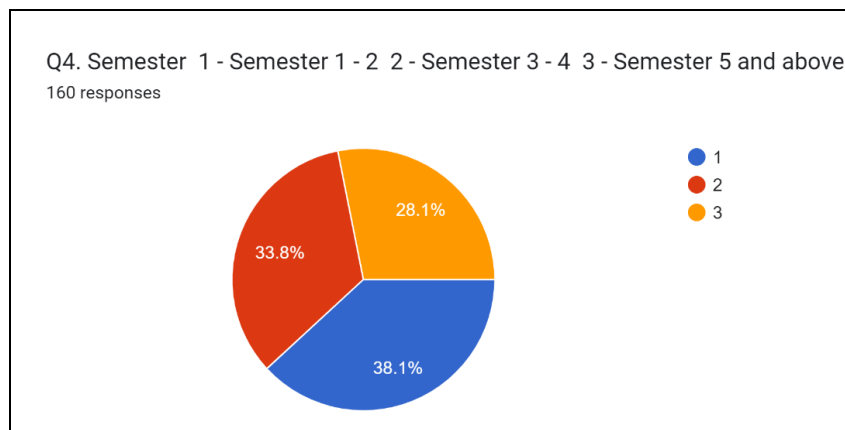


Figure 5: Percentage for Q4-Semester

Figure 5 shows the number of respondents by semester. The spread of respondents from semesters 1 to 6 was quite even with around 28 to 38 percent. The Diploma programme has 5 semesters while the First Degree has 6 semesters in total.

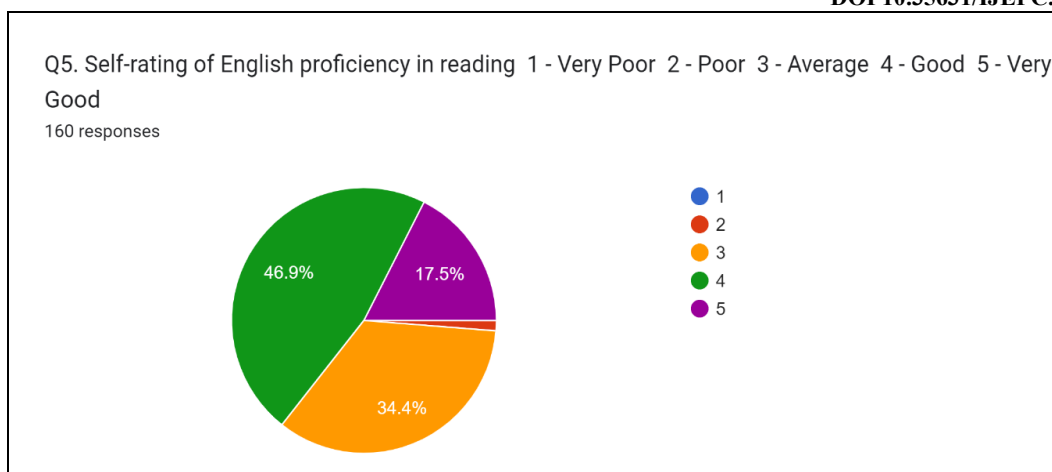


Figure 6: Percentage for Q5-Self-Rating English Proficiency in Reading

Figure 6 displays learners' self-rating of English proficiency in reading. When the respondents were asked to rate their reading proficiency, nearly half (47%) rated themselves as average and 34 percent as good readers. This indicates that they were quite confident with their reading in the English language. This may be because the respondents were majoring in an English language programme.

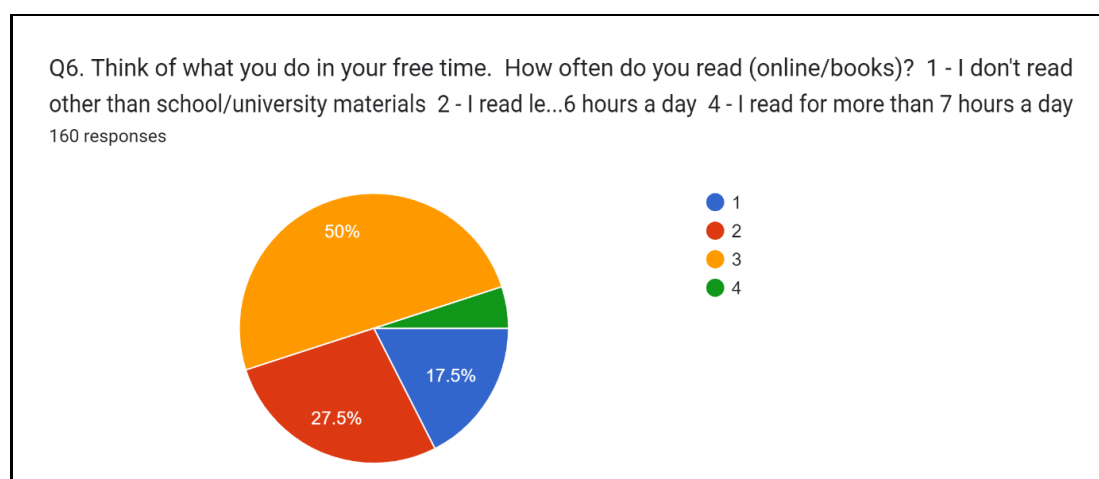


Figure 7: Percentage for Q6-Activity during Free Time

Figure 7 presents the percentage distribution of responses to Question 6 regarding reading activities during free time. The majority of respondents, 50 percent, reported reading between 2 to 6 hours per day, indicating a moderate level of engagement with reading outside of academic requirements. A smaller proportion, 27 percent, read for less than 1 hour daily, while 18 percent did not engage in any reading beyond school or university materials. Only a minimal 5 percent of respondents spent more than 7 hours per day on reading activities. This suggests that most respondents dedicate a significant but balanced amount of time to reading outside their academic commitments.

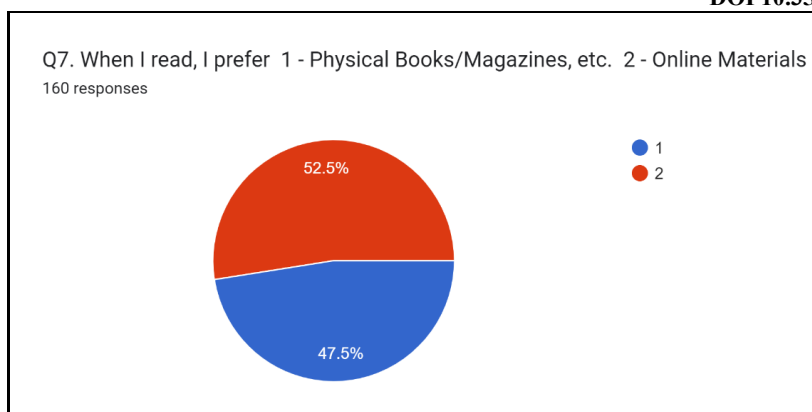


Figure 8: Percentage for Q7-When I read, I prefer

The data in Figure 8 highlights respondents' reading format preferences. A slight majority of 52 percent preferred reading online materials, reflecting a trend toward digital consumption of content. Meanwhile, 48 percent favoured physical books, magazines, and similar printed materials. This distribution indicates a nearly balanced preference, with a marginal inclination toward online reading, suggesting that both digital and traditional reading mediums remain significant among respondents.

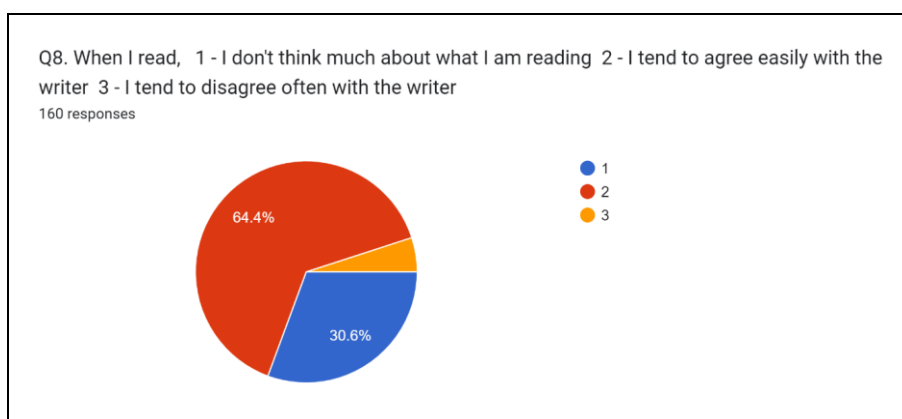


Figure 9: Percentage for Q8-When I Read

Figure 9 provides insights into respondents' reading attitudes. A majority of 64 percent indicated that they tend to agree easily with the writer when they read, suggesting a generally accepting or non-critical approach to content. Meanwhile, 31 percent reported that they do not think much about what they are reading, pointing to a passive reading style. Only a small minority, 5 percent, tend to disagree often with the writer, reflecting a limited engagement in critical analysis or questioning of the text. This distribution highlights a predominant tendency toward agreement and passive consumption of information among respondents.

Findings for Reading Difficulties

This section presents data to answer research question 1 - How do learners perceive reading difficulties in online reading?

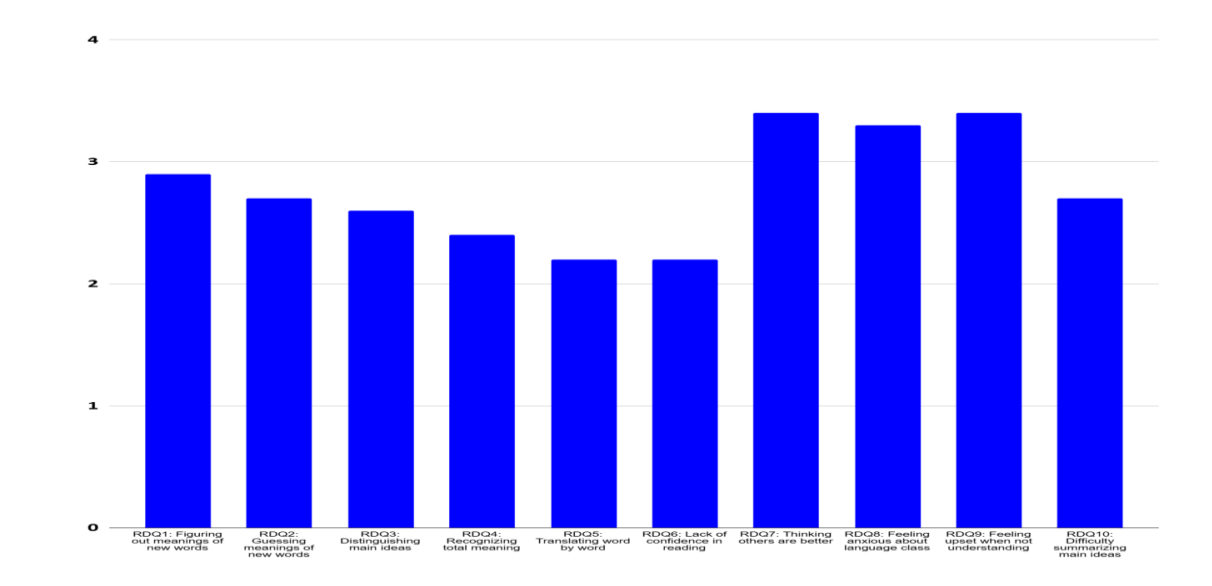


Figure 10: Mean for Reading Difficulties

Figure 10 shows the mean score for reading difficulties during online reading by respondents. RDQ7 “I keep thinking that the other students are better at language than I am” and RDQ9 “I feel upset when I don’t understand what I read in English”, both had the highest mean score of 3.4. They were followed closely by DQ8 “Even if I am well prepared for language class, I feel anxious about it” with a 3.3 mean score. This indicates that students were not confident in reading and understanding English text. The lowest mean scores for reading difficulties were item RDQ5 “I usually translate word by word when I am reading” and RDQ 6 “I never feel confident of myself when I am reading in the classroom” with score of 2.2.

Findings for Global Strategies

This section presents data to answer research question 2 - How do learners perceive global strategies in online reading?

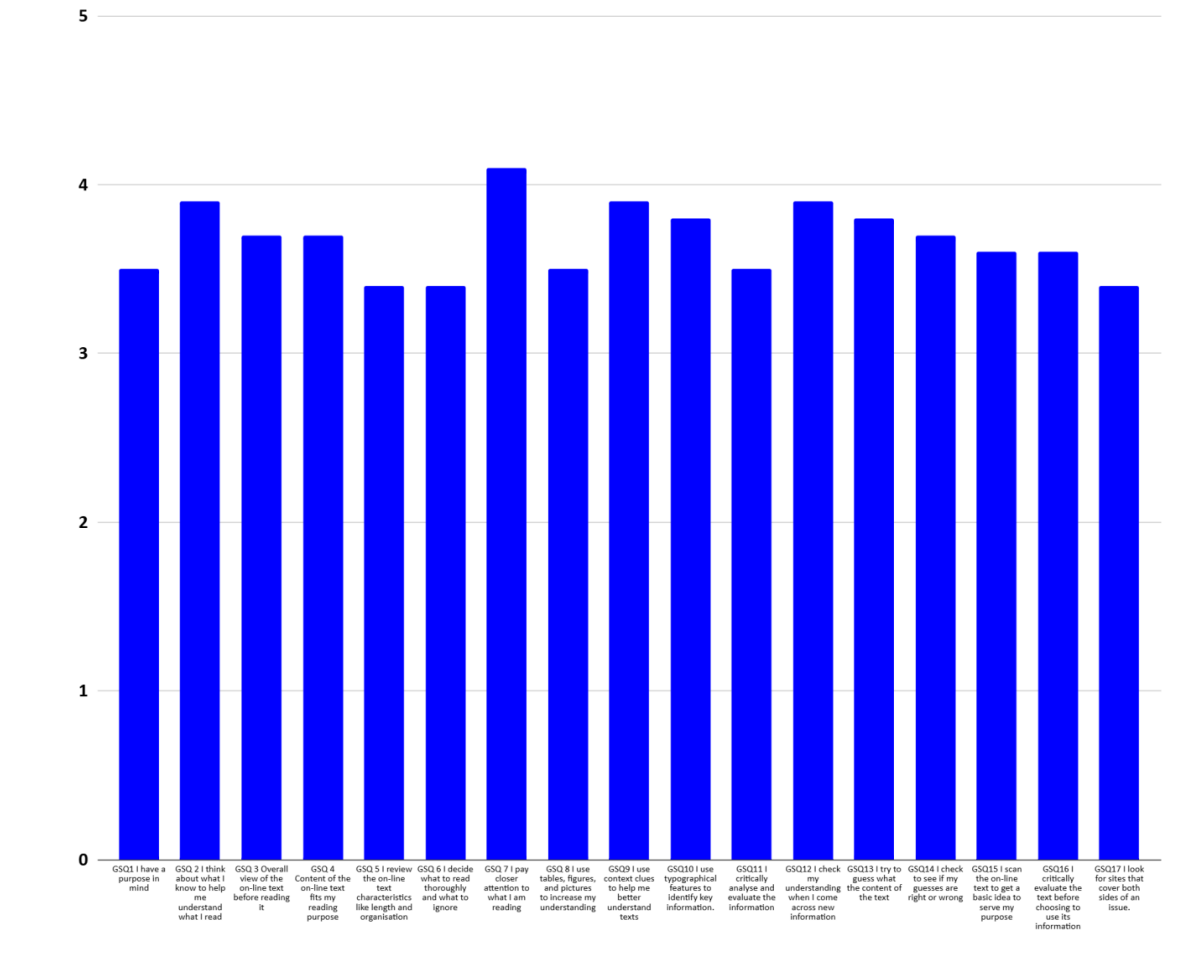


Figure 11: Mean for Global Strategies

Figure 11 shows the mean scores for Global strategies during online reading by respondents. GSQ7 has the highest mean score of 4.1 indicating that participants “paid close attention when faced with challenges or difficulties in reading”. This is followed by using contextual clues (GSQ9), “checking understanding when encountering new information” (GSQ12), and “referring to present knowledge when trying to understand online text” (GSQ2), with all these subcategories receiving a mean score of 3.9. The results suggest that participants used contextual and reflective strategies in attempting to understand reading texts and that they referred to prior knowledge in deciphering reading texts. Text characteristics such as the length of the text and its organisation (GSQ5), the decision to read thoroughly or to ignore (GSQ6), and searching for information for both sides of an issue (GSQ17) are the least likely strategies used by the participants with these three subcategories receiving a mean score of 3.4.

Findings for Problem-Solving Strategies

This section presents data to answer research question 3 - How learners perceive problem-solving strategies in online reading?

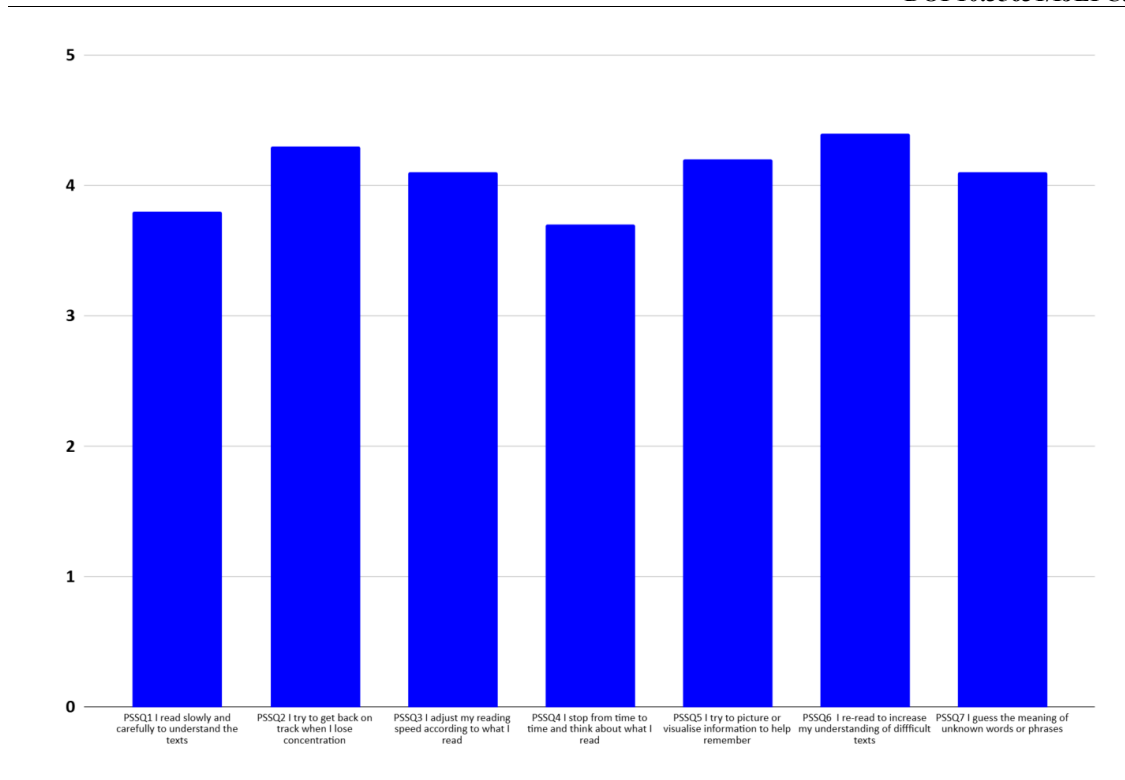


Figure 12: Mean for Problem-Solving Strategies

Figure 12 shows the mean score for learners' perception of problem-solving strategies. Generally, respondents had a tendency to employ problem-solving strategies with high means in PSSQ6, "Re-reading to increase understanding of difficult texts" (mean = 4.4), PSSQ2, "Trying to get back on track when losing concentration" (mean = 4.3), PSSQ5, "Visualising information to help remember" (mean = 4.2), PSSQ3, "Adjusting reading speed", and PSSQ7 "Guessing the meaning of unknown words or phrases" (mean = 4.1). This finding indicates that respondents generally preferred using problem-solving strategies in actively engaging with digital texts to overcome reading difficulties.

Findings for Support Strategies

This section presents data to answer research question 4 - How do learners perceive support strategies in online reading?

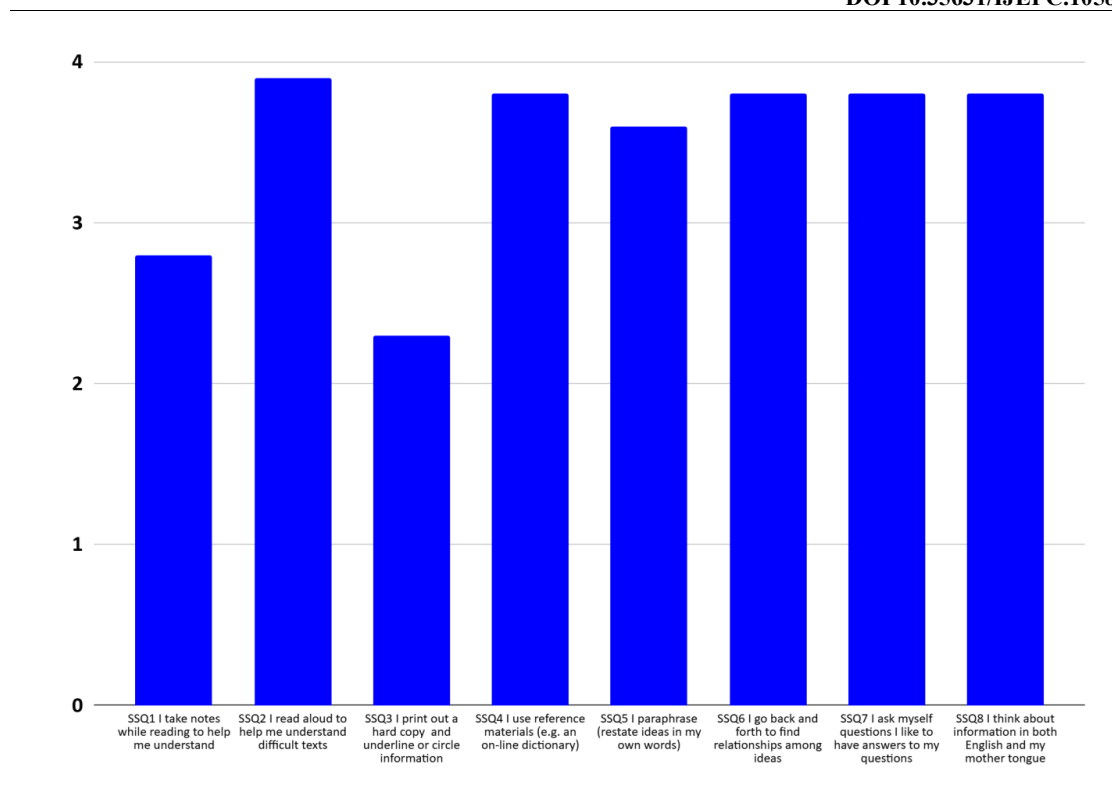


Figure 13: Mean for Support Strategies

Figure 13 presents the mean scores for learners' perceptions of support strategies in online reading. The findings reveal that strategies such as 'reading aloud when the text becomes difficult' (mean = 3.9) and "using reference materials like online dictionaries" (mean = 3.8) were among the most frequently utilised techniques. Other strategies with similar mean scores included "going back and forth in the text to find relationships", "thinking in both English and the mother tongue while reading", and "asking questions while reading". In contrast, note-taking (mean = 2.8) and "printing out hard copies for annotation" (mean = 2.3) were less commonly used. These results suggest that learners favoured immediate, interactive, and cognitive support strategies over traditional, manual approaches to enhance their online reading comprehension.

Findings for Relationship between Reading Difficulties and all Reading Strategies

This section presents data to answer research question 5 - Is there a relationship between reading difficulties and all reading strategies for online reading? To determine if there is a significant association in the mean scores between metacognitive, effort regulation, cognitive, social and affective strategies data is analysed using SPSS for correlations. Results are presented separately in Tables 2, 3 and 4 below.

Table 2: Correlation between Reading Difficulties and Problem-Solving Strategies

		Reading Difficulties	Problem Solving
Reading Difficulties	Pearson Correlation	1	-.103
	Sig. (2-tailed)		.194
	N	160	160
Problem Solving	Pearson Correlation	-.103	1
	Sig. (2-tailed)	.194	
	N	160	160

Table 2 shows there is a negative association between reading difficulties and global strategies. Correlation analysis shows that there is no significant association between reading difficulties and global strategies ($r = -.103$) and ($p = .000$). According to Jackson (2015), the coefficient is significant at the .05 level and a positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be in the range of 0.1 to 0.3, a moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. This means that there is no significant relationship between reading difficulties and global strategies.

Table 3: Correlation between Reading Difficulties and Global Strategies

		Reading Difficulties	Problem Solving
Reading Difficulties	Pearson Correlation	1	.031
	Sig. (2-tailed)		.693
	N	160	160
Problem Solving	Pearson Correlation	.031	1
	Sig. (2-tailed)	.693	
	N	160	160

Table 3 shows there is no association between reading difficulties and problem-solving strategies. Correlation analysis shows that there is no significant association between reading difficulties and problem-solving strategies ($r = .031$) and ($p = .000$). According to Jackson (2015), the coefficient is significant at the .05 level and a positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be in the range of 0.1 to 0.3, a moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. This means that there is no significant relationship between reading difficulties and problem-solving strategies.

Table 4: Correlation between Reading Difficulties and Support Strategies

		Reading Difficulties	Problem Solving
Reading Difficulties	Pearson Correlation	1	.168*
	Sig. (2-tailed)		.033
	N	160	160
Problem Solving	Pearson Correlation	.168*	1
	Sig. (2-tailed)	.033	
	N	160	160

Table 4 shows there is an association between reading difficulties and support strategies. Correlation analysis shows that there is no significant association between reading difficulties and support strategies ($r = .168^*$) and ($p = .000$). According to Jackson (2015), the coefficient is significant at the .05 level and a positive correlation is measured on a 0.1 to 1.0 scale. A weak positive correlation would be in the range of 0.1 to 0.3, a moderate positive correlation from 0.3 to 0.5, and a strong positive correlation from 0.5 to 1.0. This means that there is a weak significant relationship between reading difficulties and support strategies.

Conclusion

Summary of Findings and Discussions

This study aims to explore motivation factors for learning among undergraduates by exploring ESL learners' perceptions of difficulties in reading online materials. Learners' perceptions of reading strategies namely, the global strategies, problem-solving strategies, and support strategies in addressing online reading difficulties were also analysed. Finally, it determined if there is a relationship between reading difficulties and all reading strategies for online reading.

Concerning the respondents' perceptions of difficulties in reading online materials, it is interesting that their mean in emotional responses and self-perception was higher than specific comprehension tasks. When comparing themselves with other peers, their responses indicate anxiety, lack of self-confidence and inferiority. Comparatively, as students majoring in English language studies, they did not have much difficulty in fulfilling online reading tasks like understanding the meaning of words and distinguishing between main ideas and supporting details. This means that reading difficulties among these ESL learners are mainly influenced by emotional factors that call for support mechanisms in addressing the issue. Similarly, Dillah et al. (2023) explored the reading difficulties and strategies employed by ESL learners of pre-university English when engaging with online reading texts. Besides reading difficulties related to reading skills, they found that a sense of inferiority, low self-confidence, inadequate language proficiency, and feelings of worry and frustration regarding their inability to comprehend online materials in English have led to reading difficulties.

When faced with difficulties in reading online materials, it can be said that most respondents employed global strategies quite effectively. They used prior knowledge and paid more attention to difficult parts to enhance understanding. However, ESL learners in this study did not often use critical reading skills when attempting online materials as indicated by lower

mean scores. They did not frequently explore both sides of an issue or critically analyse and evaluate information. In a study that investigated critical thinking skills in reading comprehension of ESL students in an Australian context, Nguyen (2020) found that understanding authors' arguments, text main ideas and text structures were learners' main challenges in reading critically.

Another reading strategy used when respondents were facing online reading difficulties was problem-solving strategies. The findings suggest that most learners adjusted their reading pace based on text difficulty, relied on contextual clues to understand difficult words and re-read when texts became challenging. The findings indicate that the ESL learners were actively engaged with online reading materials and that using problem-solving strategies could significantly improve understanding by helping them navigate through difficult digital texts.

In addition, support strategies were employed when encountering difficult online texts. ESL learners tend to read aloud, use dictionaries, find relationships among ideas, ask questions, and think in English and their first language when facing reading difficulties. In contrast, they did not use note-taking skills although this reading technique ensures active engagement and is effective in helping learners understand difficult digital texts.

Finally, the finding of this study revealed that there was no relationship between reading difficulties and global strategies, as well as problem-solving strategies. However, there was a weak significant relationship between reading difficulties and support strategies. These findings indicate that although ESL learners may be familiar with global strategies and problem-solving strategies, they may not apply them consistently to overcome reading difficulties. Lack of practise and integration of these reading strategies into their regular reading habits could be the possible cause. On the other hand, ESL learners in this study showed reliance on external sources when facing online reading difficulties by using a dictionary and translation. Similarly, Supanan (2005, as cited in Banditvilai 2020) who explored the reading strategies of first-year Business English students at a university in Thailand found that the most frequent strategy used to address reading difficulty was looking up the meanings of unknown words or usage from an English-Thai dictionary.

Pedagogical Implications and Suggestions for Future Research

English as a second language (ESL) learners majoring in English language studies may face difficulties associated with psychological factors, rather than technical comprehension skills in reading online texts. This may be caused by their background and cultural differences. Therefore, classroom teaching and learning should emphasise building confidence and addressing emotional barriers as a strategy to motivate ESL learners to read English online texts. In addition, higher institutions could develop programmes and support mechanisms to deal with learners' psychological factors that hinder comprehension of online materials.

Analysing the online reading strategies namely global strategies, problem-solving strategies and support strategies results in a few implications. Firstly, as different individuals have different preferences on reading strategies, educators should reinforce the application of preferred strategies while encouraging learners to practise less-used reading strategies by integrating them into teaching and learning. The frequency and effectiveness of these strategies differ based on individuals' experiences and educational contexts. Next, as today's learners rely more on digital reading materials for references than print materials, they need to be able

to transfer the knowledge into a simplified linear or non-linear form to enhance understanding. In this study, ESL learners tended to employ support strategies but did not use note-taking and mind-mapping skills. Therefore, educators should encourage learners to incorporate these skills when engaging with digital materials in classroom activities.

For future research, it is interesting to see correlations between reading strategies used and ESL learners' overall reading achievement or satisfaction. This could help identify reading strategies preferred by and effective for university students so educational intervention could reinforce existing strengths while encouraging other less-used reading strategies when reading digital texts. Future research should be a larger scale study that includes a bigger number of respondents majoring in English language studies in public universities in Malaysia so that the findings can be more representative of this group of undergraduates.

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References

- Abeeleh, T.W.A. and Al-Sobh, M. (2021) Reading comprehension problems encountered by EFL students at Aljoun National University. *International Journal of Language and Linguistics*, 8(1), 6-15. https://ijllnet.com/journals/Vol_8_No_1_March_2021/2.pdf
- Al-Jarrah, H., & Ismail, N. S. B. (2018). Reading comprehension difficulties among EFL learners in higher learning institutions. *International Journal of English Linguistics*, 8(7), 32-41.
- Alsaeedi, Z. S., Ngadiran, N. B. M., Kadir, Z. A., & Ali, W. (2021). Reading habits and attitudes among university students: A review. *Journal of Techno Social*, 13(1), 44-53. <https://doi.org/10.30880/jts.2021.13.01.006>
- Amer, A., AL Barwani, T., Ibrahim, M. (2010) Student teachers' perceived use of online reading strategies. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 6(4), 102-113. <http://ijedict.dec.uwi.edu>
- Anderson, N. J. (2002, April). The role of metacognition in second language teaching and learning. *Eric Clearinghouse on Language and Linguistics*. ERIC Digest.
- Banditvilai, C. (2020). The effectiveness of reading strategies on reading comprehension. *International Journal of Social Science and Humanity*. 46-50. <https://doi.org/10.18178/ijssh.2020.V10.1012>.
- Dahlstrom, E., Walker, J. D. D., & Dziuban, C. (2013). ECAR study of undergraduate students and information technology. *Educause Centre for Applied Research*, 1-49. <https://doi.org/10.13140/RG.2.1.3030.7040>
- Dillah, D., Hamid, N. B. A., Afrin, J. F., Subramaniam, N., & Rahmat, N. H. (2023). exploring reading difficulties and online reading strategies employed by pre-university English as a Second Language (ESL) learners. *International Journal of Academic Research in Business and Social Sciences*, 13(10). <http://dx.doi.org/10.6007/IJARBS/v13-i10/18976>

- Fauziyyah, G. L., Lemieshevskaya, A., Nurjain, L. R., & Suparman, A. (2023). Barriers of online reading learning faced by college students. *English Education and Applied Linguistics Journal* (EEAL Journal), 6(1), 33–41. <https://doi.org/10.31980/eeal.v6i1.42>
- Grabe, W. & Stoller L. F. (2002) *Teaching and researching reading*. Longman Pearson. London, New York, Singapore.
- Jackson, S.L. (2015) *Research methods and statistics-A critical thinking approach* (5th ed.) Boston, USA: Cengage Learning.
- Jiang, X., & Grabe, W. (2007). Graphic organizers in reading instruction: Research findings and issues. *Reading in a Foreign Language*. 19 (1), 34-55.
- Li, H., Wang, C., Gan, Z., & Hoi, C. K. W. (2024). Reading motivation and learning strategies among Chinese EFL learners. *Psychology in the Schools*. DOI: 10.1002/pits.23135
- Li, X., Ahmad, N. K., & Jamil, H.B. (2023). Factors influencing EFL/ESL students' use of reading strategies: A systematic review. *International Journal of Language Teaching and Education*. <https://doi.org/10.26803/ijlter.23.11.5>
- Li, Y., & Gan, Z. (2022). Reading motivation, self-regulated reading strategies and English vocabulary knowledge: Which most predicted students' English reading comprehension? *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2022.1041870>
- Mesa, N. (2025, January 17). *Is there a "right" way to read?* Science. <https://www.nationalgeographic.com/science/article/reading-skimming-attention>
- Mokhtari, K., & Reichard, C. A. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of Educational Psychology*, 94(2), 249.
- Nguyen, N. (2020). Critical reading skills in ESL students: Challenges and pedagogical recommendations. *English Australia Journal*, 36(2), 33-51.
- Nor Fazlin Mohd Ramli, Saadiyah Darus, & Nadzrah Abu Bakar. (2011). Metacognitive online reading strategies of adult ESL learners using a learning management system. *Theory and Practice in Language Studies*, 1(3), 195-204. <https://www.academypublication.com/issues/past/tpls/vol01/03/01.pdf>
- Par, L. (2020). The relationship between reading strategies and reading achievement of the EFL students. *International Journal of Instruction*, 13(2), 223-238. <https://doi.org/10.29333/iji.2020.13216a>
- Pradita, I. (2020). Gender gap on the selection of metacognitive online reading strategies by EFL college students. *The Journal of Asia TEFL*, 17(4), 1507-1514 <http://dx.doi.org/10.18823/asiatefl.2020.17.4.27.1507>
- Qrquez, M., & Rashid, R.A. (2017). Reading comprehension difficulties among EFL learners: The case off first and second year students at Yarmouk University in Jordan. *Arab World English Journal*, 8, 421-431.
- Rahmat, N. H., Sukimin, I. S. ., Sim, M. S. ., Anuar, M. ., & Mohandas, E. S. (2021). Online learning motivation and satisfaction: A case study of undergraduates vs postgraduates. *International Journal of Asian Social Science*, 11(2), 88–97. <https://doi.org/10.18488/journal.1.2021.112.88.97>
- Sardor, S., Oyshajon, A., & Rushana, T. (2020). The difficulties of reading among young learners in online education. *European Journal of Research and Reflection in Educational Sciences*, 8(12), 76-79.
- Semry Anak Semtin & Mahendran Maniam (2015). Reading strategies among ESL Malaysian secondary school students. *International Journal of Evaluation and Research in Education (IJERE)*. 4(2), 54-61. <https://files.eric.ed.gov/fulltext/EJ1091709.pdf>

- Sun, P., Wang, Y., Dong, Y., Zheng, H., Yang, J., Zhao, Y., & Dong, W. (2021). The relationship between reading strategy and reading comprehension: A meta-analysis. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2021.635289>
- Virgiyanti, D. F., Dipta, D., Fachriza, A., Nuraini, E. I., & Hafiz, L. A. (2024). Online and offline reading materials from students' perspective. *Journal of English Language Teaching and Applied Linguistics*, 5(1), 29-34. <https://doi.org/10.21460/saga.2024.51.181>
- Zhang, Y., & Wang, C. (2020). Motivational strategies, language learning strategies, and literal and inferential comprehension in L2 Chinese reading. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2021.707538>