Exploring reading difficulties and reading strategies among undergraduates

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Abstract: This study investigates reading difficulties and strategies among undergraduates, crucial for understanding academic challenges and devising effective interventions. The instrument used to analyse the data from survey is a 5 Likert-scale survey. There were four sections, each with a sample of 40 participants who responded to the survey. Insights from other previous studies emphasize the significance of such research, particularly in contexts like Malaysia, where English proficiency is essential. Findings highlight factors contributing to reading difficulties and varying levels of strategy utilization among students. These insights inform tailored interventions to enhance reading comprehension and academic success. Pedagogical implications include customizing instructional strategies, promoting metacognitive reading approaches, and embracing digital tools. Future research should focus on interdisciplinary efforts and cultural factors impacting reading comprehension, essential for evidence-based practices supporting undergraduates' academic achievement.

Keywords: academic texts, reading difficulties, strategies, undergraduates

INTRODUCTION

Background of Study

Exploring reading difficulties and reading strategies among undergraduates is vital for educational researchers and practitioners to comprehend the challenges students face while reading academic texts and to devise effective strategies to overcome these challenges. According to Meiyan Li & Lihua Pei (2024), understanding reading difficulties among undergraduates is essential for educators to develop targeted interventions that can enhance students' reading skills and overall academic achievement. Furthermore, research by Shifa et al (2022) underscores the significance of investigating reading strategies among undergraduates, as it contributes to the advancement of literacy instruction and the cultivation of critical thinking skills necessary for success in higher education. In the Malaysian context, where English proficiency is crucial for academic success, exploring reading difficulties and strategies among undergraduates is particularly relevant. Given Malaysia's diverse linguistic landscape and the increasing emphasis on research-based learning, insights from studies such as those by Meiyan Li & Lihua Pei (2024) and Shifa et al (2022) can inform educational policies and practices tailored to address the specific needs of undergraduates in Malaysia, thereby promoting academic excellence and fostering a culture of lifelong learning.

Statement of Problem

The exploration of reading difficulties and strategies among undergraduates has been a growing area of academic inquiry. While much progress has been made in understanding general reading comprehension challenges, significant gaps remain in the field, particularly concerning the specific challenges faced by students in different academic disciplines. Recent research has examined various aspects, such as the role of digital technologies in reading comprehension (Shifa et al., 2022; Elif Burhan-Horasanlı, 2019), as well as the efficacy of metacognitive strategies like self-regulated learning and cognitive monitoring (Serhat et al., 2019). These studies have underscored the importance of instructional tools and cognitive strategies in supporting reading comprehension. However, despite these advancements, there is a critical need for more nuanced research that addresses the distinct reading difficulties students face within specific disciplinary contexts.

One key gap in the existing literature is the lack of exploration into the challenges undergraduates encounter when engaging with discipline-specific texts, particularly in fields such as science, technology, engineering, and mathematics (STEM), as well as the humanities. While general academic reading difficulties have been widely studied, the unique cognitive demands and reading strategies required for specialized academic texts remain underexplored. For example, the technical language and conceptual complexity found in STEM texts may pose different challenges than those encountered in the humanities, yet few studies have investigated these field-specific reading barriers. A deeper understanding of these discipline-specific challenges is essential for developing targeted instructional approaches that can cater to the diverse needs of students across various academic domains.

Furthermore, existing studies have not sufficiently addressed the influence of cultural and linguistic factors on reading comprehension, particularly in multicultural educational settings like Malaysia. Given the diverse linguistic backgrounds of Malaysian undergraduates, exploring how cultural context and language proficiency intersect with reading difficulties could offer crucial insights into how reading strategies can be tailored to improve comprehension and academic achievement in such settings.

This research gap highlights the pressing need for studies that delve into the unique reading demands posed by discipline-specific texts and the impact of cultural and linguistic diversity on reading strategies. Addressing this gap will contribute valuable knowledge to the field, enabling educators to develop more effective and context-sensitive interventions that support undergraduate students' reading comprehension and academic success across different disciplines.

Objective of the Study and Research Questions

This study is done to explore perception of learners on their use of learning strategies. Specifically, this study is done to answer the following questions.

1) How do learners perceive their reading difficulties?
2) How do learners perceive their use of reading strategies?
3) Is there a relationship between reading difficulties and reading strategies?

LITERATURE REVIEW

Reading Difficulties

Reading difficulties in the context of online reading refer to challenges that individuals or students may encounter when reading digital text or content on electronic devices via the internet. These difficulties arise due to various reasons including cognitive, environmental and technical factors. Refer to Symptom-Based Handbook, people may experience convergence fatigue and comprehensive difficulties through online reading resulting from tiredness, double or blurry vision, dizziness and headache. Reading difficulties on English comprehension passage among undergraduate students refers to the challenges individuals face when comprehending or interpreting written English texts for academic or non-academic purposes. Aynur et al. had emphasised that higher-level reading skills are important for success at undergraduate levels. It indicated that additional important abilities in reading comprehension among undergraduates include applying critical reading, integrating information from text, synthesising and comparing the idea across the passage. Those extra capabilities caused students to encounter difficulties while reading such as identifying arguments and reading journal articles (Aynur et al., 2022).

Reading Strategies

Reading is a process that involves higher-order thinking called the metacognition which is often used in academic reading strategies. Metacognitive awareness refers to the reader's conscious recognition, observation, and control of these methods throughout the act of reading. Reading strategies frameworks are structured methods that aid readers in comprehending and retaining information from texts. They include strategies for before, during, and after reading to enhance understanding and recall. There are three (3) categories of reading strategies during-reading phase: problem-solving strategies, support strategies, and global reading strategies (Mokhtari and Reichard, 2002). Problem-solving strategies involve employing techniques like reading style e.g. reading aloud, slowly, re-reading, breakdown the text into sections which help to focus closely on the text and making educated guesses about the meaning of unfamiliar terms. Meanwhile, engaging in discussion with peers or seeking teacher assistance on confusing parts is one of the examples that imply supporting reading strategies. Apart from that, this approach

needs a person to take note-taking, paraphrasing, reviewing, self-questioning, using reference resources, and highlighting important information. To effectively engage in global reading strategies, one should skim and scan for main ideas and details, contextualise the text within broader themes, and synthesise information from various parts of the text.

Past Studies on Reading Difficulties

There have been many past studies on online reading difficulties that are faced by the students. The study by Laura (2021) is done to investigate issues of attention and executive function (EF) towards students' online research comprehension performance. Definition of attention refers to the abilities to focus and maintain during reading while EF is a coordination of cognitive processes such as updating of working memory contents. Recently, technology has played an increasingly significant role in reading and learning. Researchers had found that students encounter poor attention and EF that could interfere with reading comprehension difficulties. For this study, approximately 426 sixth-grade students participated as respondents, recruited from eight elementary schools in Central Finland during the years 2014–2015 (Laura et al., 2021). The students' attention and EF difficulties were measured with informant-based teacher ratings in everyday, regular classroom context performance. The reading comprehension assessment is based on the multiple choice, online research comprehension (ORC) with problem solving. The tool which is The Attention and Executive Function Rating Inventory (ATTEX) has been used by the teachers to evaluate student's difficulties. The result findings from this study indicate that the ORC task was more challenging than the reading comprehension task for students with attention and EF difficulties. In conclusion, there is another aspect of using an ORC environment to take into consideration. More emphasis should be placed on creating interventions that assist students with attention and EF difficulties in learning from online information.

The study conducted by Johannes (2024) also explored the EF development of reading comprehension skills. Johannes has described the EF as a set of fundamental, domain cognitive skills connected to working memory management that facilitate behaviour, such as reading. The main aspect is the ability to control attention because it allows students to avoid distractions and concentrate on tasks (Johannes and Jochen, 2024). The primary objective of this study is to investigate the reading development achievement that was predicted by the early stage of reading. The respondents for this study were students recruited at school years of 2012, 2013 and 2015 with grade level from 1 to 6 that were located around Potsdam, Brandenburg and Germany. All the factors and assessments were statically analysed by using confirmatory factor analysis (CFA) and nonlinear mixed effects growth-curve modelling. The assessments included eye-movement measure, reading rate and perceptual span, low level eye-movement measures, executive function, response inhibition, memory updating and attention shifting. From the research, it had shown that the perceptual-span mostly affected the initial reading rate and development (Johannes and Jochen, 2024).

Past Studies on Reading Strategies

Reading methods involve the deliberate attempt to understand the meaning of written materials. Various reading techniques promote different methods by which learners acquire knowledge. A metacognitive awareness and usage of different academic reading strategies—specifically global, problem-solving, and support strategies have been focused by recent studies. Based on these three reading strategies, the study examines their frequency of use and finds that problem-solving strategies are most employed, while support strategies are the least utilized (Yuksel, I. & Yuksel, I., 2012).

In a study conducted by Lee, Y. J. et., al. (2013), the research investigated the metacognitive online reading methods of 132 college students, ranging in age from 19 to 40, representing Thailand, South Korea, Cambodia and Kenya. The research utilized an online self-report survey (OSORS) and a think-aloud technique with a subset of students. It discovered that students commonly rely on prior knowledge and adapt their methods according to the kind of text and their reading objective. They make use of contextual hints and important information. The results indicate that educators should promote the utilization of metacognitive techniques like skimming, scanning, summarizing, and self-questioning. In addition, it is important to choose books that align with students' interests and skill levels, while also including student-centred and collaborative learning methods. Additional investigation is advised to examine the disparities between digital and physical reading settings.

Meanwhile, in another study (Aziz, A. et. al. 2023), a total of 109 undergraduates from a Malaysian university responded to the survey which investigated undergraduate learners' perceptions of their use of metacognitive strategies in reading comprehension and examined the relationship between different reading strategies and their effectiveness in aiding comprehension. The findings suggest that background knowledge, pre-reading activities, and guidance are critical for successful reading comprehension. Additionally, the study emphasizes the significance of problem-solving strategies like re-reading, attentiveness, and visualizing information for improving comprehension. While supporting reading strategies like reading aloud, underlining, and using reference materials for overcoming reading challenges and fostering language acquisition.

According to A. Hab´ok et al. (2024), findings showed that problem-solving strategies significantly improved reading comprehension, and positive attitudes toward students' native language (L1) enhanced online reading strategies and language arts achievement. Research conducted an online survey of reading strategies, focusing on global, problem-solving, and support strategies, with 4,527 lower secondary students participating. Using instruments such as school marks, attitude questionnaires, reading comprehension tests, and online surveys, data were analysed with SPSS, Rasch, and CFA. The study also suggests incorporating problem-solving strategies and positive language attitudes into curricula, emphasizing the importance of digital tools for online reading strategies to enhance students' reading comprehension and overall academic success.

Across all studies, there is an emphasis on incorporating these strategies into curricula, utilizing digital tools, and fostering positive attitudes to enhance reading comprehension and overall academic success.

Conceptual Framework

Figure 1 illustrates the conceptual framework of this study, highlighting the relationship between academic reading, reading difficulties, and reading strategies. Prior research by Rahmat et al. (2020) suggests that readers' perceptions of reading influence how challenging they find the task, which in turn affects their choice of reading strategies. This study builds on the work of Abeeleh & Al-Sobh (2021), who explored reading difficulties, and Amer et al. (2010), who categorized reading strategies into three key types: global strategies, problem-solving strategies, and support strategies. Academic reading can present challenges due to factors such as text complexity, vocabulary load, and comprehension barriers. These difficulties influence the strategies that readers adopt to enhance understanding and retention.

The framework classifies reading strategies into global, problem-solving and support strategies. Examples of global strategies are broad approaches to reading, such as setting goals, previewing text, and using contextual clues. Whereas examples of problem-solving strategies are active engagement techniques like re-reading, adjusting reading speed, and breaking down

complex information. Support strategies examples are external aids such as note-taking, summarization, and seeking clarification from external sources.

Figure 1: Conceptual Framework of the Study-Reading Difficulties and Reading Strategies
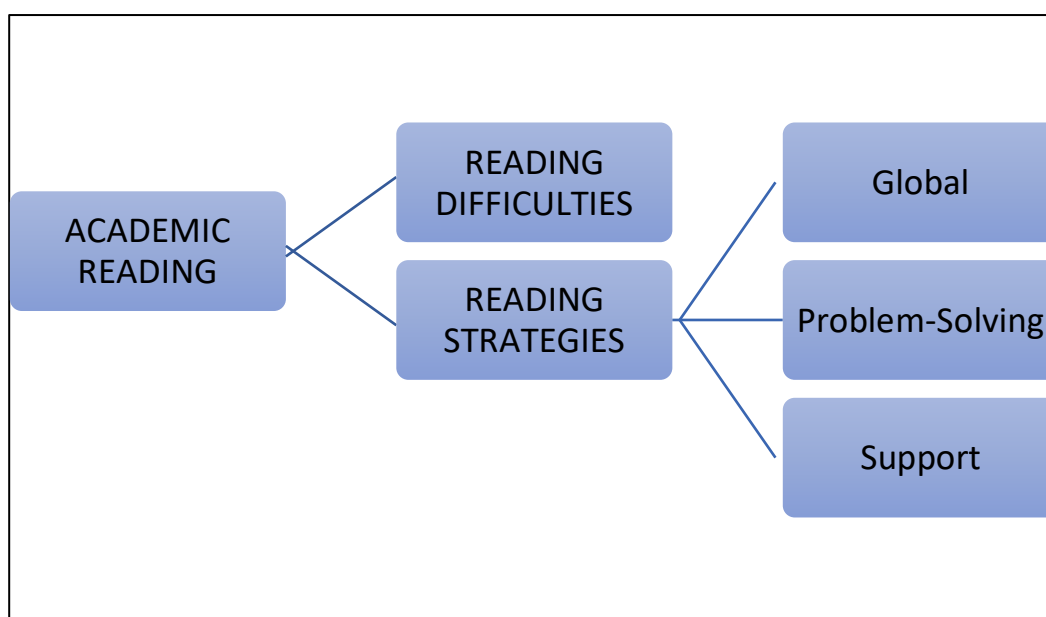
METHODOLOGY

This quantitative study is done to explore reading difficulties and reading strategies among undergraduates. A purposive sample of 40 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted from Abeeleh and Al-Sobh (2021) on reading difficulties and Amer, et.al. (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 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	
B	Reading Difficulties (Abeeleh & Al-Sobh, 2021)		8
C	Reading strategies (Amer et. al. 2010)	Global	9
		Problem-Solving	7
		Support	4
			28

Table 2: Reliability Statistics of Survey

| Cronbach's Alpha	N of items
0.841	28

Table 2 shows the reliability of the survey. The analysis shows a Cronbach alpha of .841, thus, revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

FINDINGS

Findings for Demographic Profile

The percentage for female respondents (72%) was higher than male respondents (28%) as shown in Figure 2.

Figure 2: Percentage of respondents based on gender.
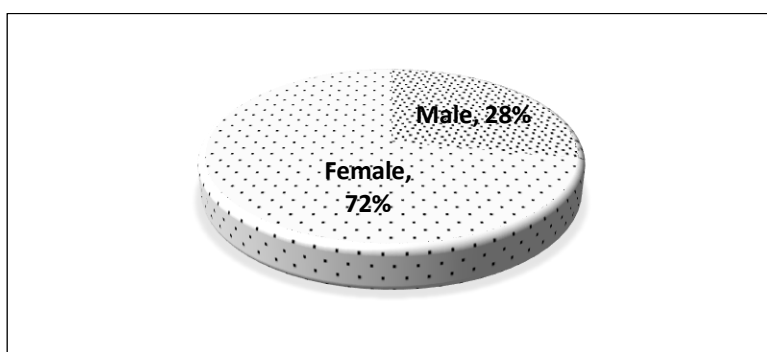

Based on the Figure 3, the highest level of study from the respondents are diploma holders (60%), followed by degree (25%) and postgraduates (15%).

Figure 3 – Percentage for Level of Study among respondents
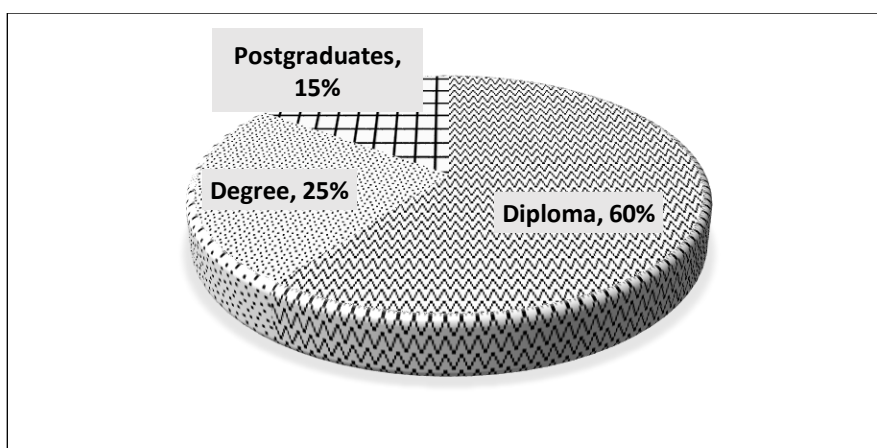
Based on the above, the highest participants that participate in this study comes from semester 5 and above (60%), followed by semester 3-4 (22%) and lastly semester 1-2 (18%).

Figure 4 – Percentage of respondents by Semester
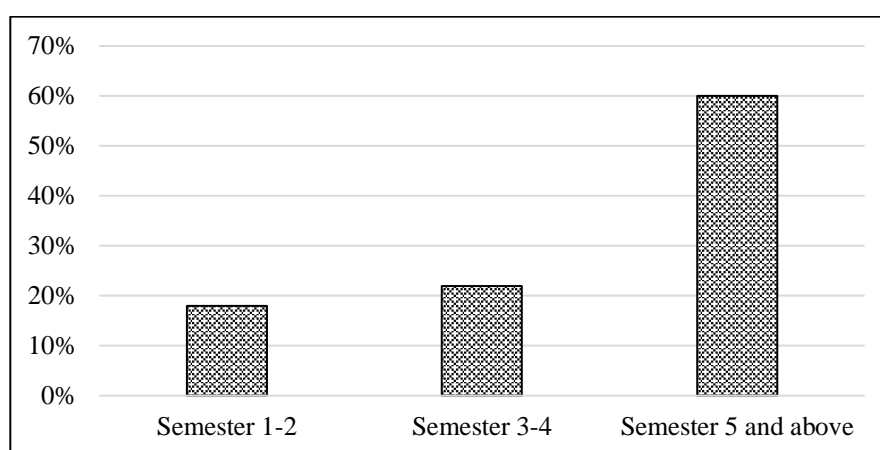
Data shown in Figure 5 indicates that most of the respondents rated themselves as being average (70%) of their reading in English Proficiency. Only 30% rated themselves as being good and none as poor when it comes to reading in English.

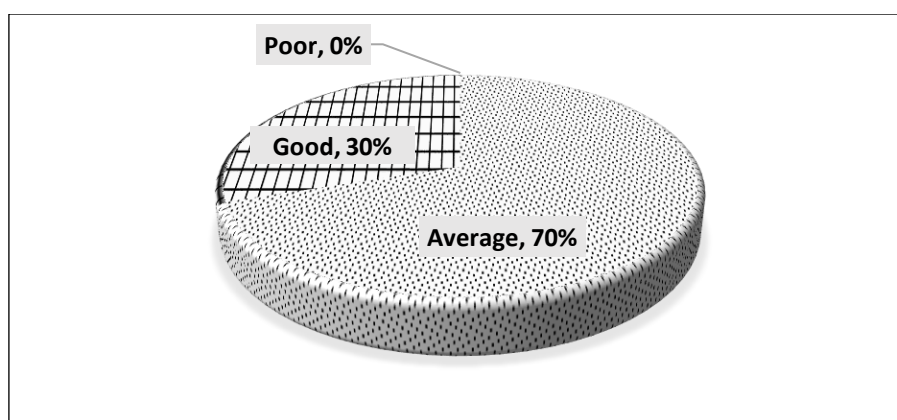*Figure 5 - Percentage for Self-rating of reading in English Proficiency*

Table 3 depicts the distribution of respondents' reading habits concerning the time allocated to leisure reading.

Table 3: Percentage for Free Time-How often do your read books

Q1	I don't read other than school/university's work	38%
Q2	I read less than 1 hour a day	32%
Q3	I read between 2-6 hours a day	25%
Q4	I read for more than 7 hours a day	5%

Notably, the largest segment, constituting 38%, exclusively engages in reading within the confines of academic obligations such as school or university tasks. Furthermore, 32% of participants reported dedicating less than an hour per day to recreational reading, indicating a moderate level of interest in non-academic materials. In contrast, a substantial 25% of the surveyed population spends between 2 to 6 hours daily engrossed in reading, highlighting a

significant commitment to literary pursuits during leisure time. A smaller but noteworthy group, comprising 5% of respondents, demonstrates an avid passion for reading by devoting more than 7 hours daily to this activity. This distribution underscores the diverse spectrum of reading behaviors exhibited by the surveyed individuals, reflecting varying degrees of enthusiasm and engagement with social science literature.

Table 4: Percentage for Reading Preference

1	Physical books/magazines	63%
2	Online materials	27%

Table 4 provides insight into the reading preferences of respondents, particularly regarding their favored mediums for accessing journal paper publications. Remarkably, a significant majority, encompassing 63% of participants, indicate a preference for conventional mediums like physical books and magazines. This inclination towards tangible reading materials suggests a continued affinity for the tactile experience and physical presence offered by printed media. In contrast, 27% of respondents indicated a preference for online materials, indicating a growing trend towards digitalization and the convenience afforded by digital platforms for accessing scholarly content. This distribution emphasizes the varied range of reading preferences among the surveyed individuals, illustrating the simultaneous presence of both traditional and digital mediums in accessing journal paper publications.

Table 5: Percentage for 'When I read...'

1	I don't think much about what I am reading	33%
2	I tend to agree easily with the writer	60%
3	I tend to disagree often with the writer	7%

Table 5 delineates the distribution of respondents' attitudes and engagement levels towards their reading experiences. Notably, a significant portion, comprising 33% of participants, indicated a tendency not to deeply contemplate the content they are reading, suggesting a more passive approach to consuming scholarly materials. Moreover, a substantial majority, constituting 60% of respondents, expressed a propensity to readily agree with the perspectives presented by the writer, indicating a higher level of receptiveness to the ideas and arguments put forth in journal papers. Conversely, a smaller segment, representing 7% of the surveyed population, reported a tendency to frequently disagree with the writer, suggesting a more critical and discerning approach to evaluating scholarly content. This distribution highlights the diverse range of attitudes and engagement levels prevalent among the surveyed individuals, shedding light on varying degrees of critical thinking and receptiveness to the content presented.

Findings for Reading Difficulties

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

Table 6: Mean for Reading difficulties

ITEM	Mean
RDQ1 – I faced a problem in figuring out the meanings of some new words in the reading text	3.1
RDQ2 – I faced a problem in identifying the aim behind reading comprehension	2.7
RDQ3 – I faced difficulty in guessing the meanings of some new words	3
RDQ4 – I faced difficulty in recognizing the total meaning of the text	2.7
RDQ5 – I usually translate word by word when I am reading	2.7
RDQ6 – I feel stressed when reading a text in English in the classroom.	2.2
RDQ7 – I keep thinking that the other students are better at language than I am.	3.8
RDQ8 – I feel upset when I don't understand what I read in English	3.3

Table 6 comprises several data on the factors that contribute to the reading difficulties. Based on data, the highest factor that contributes to reading difficulties is student's perception as they lose their confidence and keep thinking that the other students had a better language than himself. This result was reflected in the mean score of 3.8 for RDQ7. In addition, during comprehensive reading, students feel upset as they do not understand as indicated in the mean score of 3.3. for RDQ8. Other than that, students also encounter difficulty in figuring out and guessing the meanings of some new words during passage reading as reflected in mean scores of 3.1 and 3 for RDQ1 and RDQ3 respectively. There are some factors that have low means scores, which means the students could cooperate with those factors in understanding the text. Students had less experience problems in identifying the main content and translating each word of text to understand the information across the whole passage. Those factors were indicated in RDQ2, RDQ4 and RDQ5 with a mean score of 2.7. The lowest mean score was the experience during reading. Most of the students feel less stress while reading English passages in the classroom. In short, there are some major areas that students could improve to enhance their difficulties in English reading comprehension which are their level of confidence and improved vocabulary. In short, the primary factor contributing to students' reading difficulties is their perception, particularly their lack of confidence and comparison with peers who they believe have better language skills. Additionally, difficulties in understanding comprehensive reading and guessing the meanings of new words further hinder their reading ability. However, students experience fewer challenges in identifying main ideas and translating words to grasp overall meaning. Particularly, stress during reading is minimal. From this finding, to enhance their reading comprehension, students should focus on boosting their confidence and expanding vocabulary.

Findings for Reading Strategies

This section presents data to answer research question 2- How do learners perceive their use of reading strategies?

Table 7: Mean for Global strategies

ITEM	Mean
GSQ 1 – I take an overall view of the on-line text to see what it is about before reading it	3.6
GSQ 2 – I think about whether the content of the on-line text fits my reading purpose	3.5
GSQ 3 – I review the on-line text first by noting its characteristics like length and organisation	3.2
GSQ 4 – I When reading on-line, I decide what to read thoroughly and what to Ignore	3.3
GSQ 5 – I use tables, figures, and pictures in the on-line text to increase my understanding	3.7
GSQ6 – I use context clues to help me better understand what I am reading online	3.7
GSQ7 – I use typographical features like boldface and italics to identify key information.	3.5
GSQ8 – I try to guess what the content of the on-line text is about when I read.	3.7
GSQ9 – I scan the on-line text to get a basic idea of whether it will serve me purposes before deciding to read it.	3.4

The data presented in Table 7 offers insights into learners' utilisation of global reading strategies when engaging with online texts. Overall, participants demonstrate a moderate level of engagement with these strategies. They tend to adopt a proactive approach by considering the overall content and relevance of the text to their reading purposes, as indicated by the mean scores of 3.6 and 3.5 for GSQ 1 and GSQ 2, respectively. These scores indicate that learners often prepare themselves for reading by setting a purpose and gaining an initial understanding of the text, which are essential steps in effective reading comprehension. Additionally, learners show a tendency to employ various techniques to enhance comprehension, such as using tables, figures, and context clues, as reflected in the mean scores of 3.7 for both GSQ 5 and GSQ 6, indicating that these strategies are among the most commonly employed. Similarly, GSQ 8 (trying to guess the content of the text) also received a high mean score of 3.7. These findings suggest that learners recognise the value of visual and contextual cues in supporting their comprehension of online texts.

However, there are areas where learners could potentially improve their strategy implementation, as seen in the relatively lower mean scores for GSQ 3 and GSQ 4, suggesting that they may not consistently review the text's characteristics or scan efficiently before reading. Likewise, GSQ 4 (deciding what to read thoroughly and what to ignore) scored 3.3, indicating room for improvement in the ability to prioritise information. The mean score of 3.4 for GSQ 9 (scanning the text to determine its relevance) further reflects this trend. The moderate scores for GSQ 7 (using typographical features to identify key information) and GSQ 2 (thinking about content relevance) at 3.5 also suggest that while learners use these strategies, there is potential for more consistent application. These findings point to the need for enhanced training in the efficient use of global reading strategies, particularly in text organisation analysis and selective reading.

Overall, the findings highlight a moderate level of engagement with global reading strategies are not always consistent. Strengths lie in their use of visual aids and contextual clues, but there is room for improvement in reviewing text structure and prioritising information. These insights highlight the importance of fostering more systematic and purposeful reading habits to optimise online reading comprehension.

Table 8; Mean for Problem solving strategies

ITEM	Mean
PSSQ1 – I read slowly and carefully to make sure I understand what I am reading on-line.	3.8
PSSQ2 – I try to get back on track when I lose concentration	4
PSSQ3 – I adjust my reading speed according to what I am reading on-line	3.8
PSSQ4 – I stop from time to time and think about what I am reading on-line	3.5
PSSQ5 – I try to picture or visualise information to help remember what I read on-line	3.9
PSSQ6 – When on-line text becomes difficult, I re-read it to increase my understanding	4.3
PSSQ7 – When I read on-line, I guess the meaning of unknown words or phrases	3.8

The problem-solving strategies to minimise the on-line reading difficulties were tabulated in Table 8. The most effective strategies among undergraduates in handling reading difficulties was re-read the sentences or text and regaining focus while losing track to increase level of understanding, as reflected in the mean score of 4.3 and 4 for PSSQ6 and PSSQ2 respectively. Other than that, they also make an effort to visualise information to enhance their understanding while reading as shown in PSSQ5 with a mean score of 3.9. The strategies that had moderate mean score were students would adjust their reading speed, carefully reading and guessing the unknown words in order to enhance understanding of the passage. Those strategies were reflected in mean score of 3.8 for PSSQ1, PSSQ 3 and PSSQ7. The lowest problem-solving strategy was represented in PSSQ4 with a mean score of 3.5. The strategy of taking a pause during reading and digesting the text did not give an impactful outcome to improve on-line reading and reduce difficulties of graduates. In summary, the most effective problem-solving strategies for minimizing online reading difficulties among undergraduates are re-reading the text and regaining focus when losing track, as these significantly enhance understanding. Additionally, visualizing information is another helpful approach. However, taking pauses to digest the text was the least effective strategy. Overall, students can improve their online reading comprehension by employing strategies that reinforce focus and comprehension.

Table 9: Mean for Support strategies

Questions	Mean
SSQ1 – I take notes while reading on-line to help me understand what I read	3.2
SSQ2 – When on-line text becomes difficult, I read aloud to help me understand what I read	3.7
SSQ3 – I print out a hard copy of the on-line text then underline or circle information to help me remember it.	2.9
SSQ4 – I use reference materials (e.g. an on-line dictionary) to help me understand what read on-line.	3.5

The results presented in the image reflect the mean responses of students regarding their use of various support strategies to comprehend difficult online texts. These strategies include taking notes, reading aloud, printing and annotating texts, and using reference materials. The data highlights varying levels of reliance on different strategies to support reading comprehension among students. The most prominent strategy, with the highest mean score, is reading aloud (3.7). This suggests that many students find auditory processing helpful, particularly when they encounter difficult sections in their reading. It underscores the

importance of multisensory approaches in educational strategies. Using reference materials also scores relatively high (3.5), indicating that students frequently seek external aids to enhance their understanding. This could imply a growing comfort and familiarity with digital tools and resources. Utilizing reference materials like online dictionaries is a strategy that helps students understand difficult words or concepts. In contrast, the lower mean score for printing and annotating texts (2.9) suggests that physical methods of engagement with the text are less favoured among students. This could be due to the extra steps required especially to print materials or a preference for more immediate and accessible digital solutions. Whereas for the taking notes strategy, a mean score of 3.2 suggests a moderate use of this strategy among students. This strategy involves students taking notes as they read online content to enhance understanding and retention. It indicates that while some students find note-taking helpful, it is not universally adopted or perceived as the most effective method for all. Overall, these results provide valuable insights into the strategies students employ to tackle reading difficulties. They suggest a preference for auditory and digital aids over traditional note-taking and physical annotation methods. Educators can use this information to tailor their support techniques, perhaps by incorporating more auditory elements and ensuring easy access to reference materials to improve reading comprehension among students.

CONCLUSION

Summary of Findings and Discussions

This study explores critical aspects of students' perceptions regarding their reading difficulties and the strategies they employ to overcome these challenges. It reaffirms the significance of understanding reading difficulties, aligning with Meiyan Li & Lihua Pei (2024), who emphasize the importance of identifying challenges faced by undergraduates to improve their academic performance. Similarly, Shifa et al. (2022) stress the need for investigating reading strategies to foster the critical thinking skills essential for success in higher education. The Malaysian context, with its focus on English proficiency, underscores the relevance of this research, given the country's diverse linguistic landscape and the centrality of research-based learning in higher education. Findings from this study can serve as a foundation for crafting tailored educational policies and practices aimed at addressing the unique needs of Malaysian undergraduates, ultimately enhancing academic excellence and lifelong learning.

This study investigates three pivotal questions: (1) How do learners perceive their reading difficulties? (2) How do learners perceive their use of reading strategies? (3) Is there a relationship between reading difficulties and reading strategies? Previous studies, such as those by Laura (2021) and Johannes (2024), have explored related aspects of reading comprehension, including attention, executive function, and perceptual span. Aziz et al. (2023) and A. Habók et al. (2024) have examined the effectiveness of various reading strategies in improving comprehension. The findings of this study provide deeper insights into students' perceptions. Table 10 identifies key factors contributing to reading difficulties, particularly the need to enhance students' confidence and vocabulary to improve English reading comprehension. Further, data in Tables 11 and 12, along with visual representations, reveal the extent of engagement with global, problem-solving, and support reading strategies among students. These findings highlight the varying levels of strategy use and suggest areas for improvement and intervention.

The study's results underscore the complex relationship between reading difficulties and strategy use. Students who reported lower confidence and vocabulary also tended to utilize

fewer effective strategies, suggesting that targeted interventions to boost confidence and vocabulary could significantly improve comprehension. Furthermore, the varying levels of strategy usage, particularly with problem-solving and support strategies, signal that certain student groups may require additional guidance or training in metacognitive strategy use. These insights align with existing literature on the importance of strategy-based interventions (e.g., Shifa et al., 2022; Aziz et al., 2023), yet they also raise new questions about how these strategies can be better incorporated into university curricula to maximize academic success.

Pedagogical Implications and Suggestions for Future Research

The findings provide several key implications for pedagogy. Educators can tailor their instructional strategies to address specific reading difficulties, particularly in enhancing student confidence and vocabulary. This can be done through targeted interventions integrated into English language courses. Furthermore, promoting metacognitive reading strategies—explicitly and systematically—can help students engage more effectively with academic texts. Integrating these strategies into the curriculum would empower students to become more self-regulated learners, improving their academic performance. The use of digital tools and resources can further enhance engagement, catering to diverse learning preferences. Educators' professional development should include training on how to incorporate these tools effectively to support students' reading development. For future research, interdisciplinary and longitudinal studies are crucial in investigating the long-term effects of different reading strategies. Additionally, examining the influence of cultural and linguistic factors on reading comprehension could provide a more nuanced understanding of the challenges faced by diverse student populations.

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