

Perceived Use of Online Reading Strategies Online Reading Problems: A Study of Relationships between Reading Strategies

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Abstract

Reading comprehension is a critical component of literacy because it ensures that knowledge is easily obtained. However, the online reading comprehension approach necessitates practise, skills, and additional strategies to ensure that the reading is effective. Learners are said to use reading strategies to help them understand the contents. The aim of this research is to identify the relationship in between the online reading problems and the reading strategies. This quantitative research is done using a purposive sampling with 335 participants had involved in the survey. The instrument used is a 5 Likert-scale survey on reading comprehension problems and on perceived use of online reading strategies to reveal the variables. 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. This research found that there is a strong positive relationship between global strategies, problem-solving reading strategies and also support strategies in overcoming the reading problems among the learners. It is learned that from the findings the three strategies global, support and problems-solving strategies are essential to employ in order to minimize the difficulty in comprehend the online reading among the learners.

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

Introduction

Background of Study

Reading in general is the process of extracting meaning from a text. Thus, online reading basically is the process of extracting meaning in a digital format. Since the internet as the main source of digital texts provides abundant of sources of digital texts, readers might be facing difficulties to organize and comprehend the text. According to Coiro (2014), one of the biggest challenges for today's online learners is the process of understanding and becoming proficient with the new literacy skills and practices needed for online research. There is a need to employ reading strategies to overcome online reading problems or difficulties. Learning strategies includes action that should be taken to master the art of online reading. Most often than not, the main problem would be the understanding of English language, lack of basic knowledge of the topic and lack of focus due to a lot of external distraction. Sardor et. al. (2020) stated that a reading difficulty is a deficit in processes relating to decoding phonetic knowledge, word recognition and comprehension. This problem is not only among young children but also among young adults in university.

The adoption of online learning in all sections of education when the pandemic Covid-19 struck has changed the landscape of education in Malaysia. Evidently, this trend of online learning continues post-pandemic which shows that there will be a lot more online avenues for education. New Straits Times (2021) highlighted, the mindset of students has changed drastically over the last one-year post-pandemic. A recent global student survey indicated that 78 percent of tertiary students in Malaysia prefer online learning if it means cheaper fees rather than conventional face-to-face sessions. But of course, online learning did not come without its own set of difficulties. Such difficulties and strategies to overcome it is imperative to ensure efficiency of life-long education through online platform in Malaysia. Since Malaysia is rapidly developing, change in traditional learning to online learning should be taken seriously. Learners who do not comprehend the online material will not be able to appreciate it thus defeats the purpose of education.

Statement of Problem

Humans require the ability to read, especially in contemporary society. It is a crucial method for people to obtain information for their studies and career. People typically begin learning to read at a very young age for a variety of reasons, such as reading for enjoyment, reading to expand their knowledge and experience, or reading to stay up to date on news (Pangsapa, 2012)

According to Edward et. al (2021) people won't be capable of appreciating the information if they do not even understand it. Lack of language skill can also cause understanding to be lost. Reading materials written in a second language can be problematic for people who have grown disenchanted with it.

Davoudi and Yousefi (2015) claims that social, educational, and physiological variables all play a part in many people's reading problems. As stated by the researcher, reading problems can arise for a variety of reasons among learners who have difficulty, and some of these problems may be related to faulty or insufficient word identification and decoding abilities. According to Nezami (2012), the paucity of reading comprehension among students is one of the most glaring problems academics confront nowadays. This disability may have an adverse effect on their academic achievement.

In light of the previous issue, this study seeks to evaluate reading difficulties among ESL learners Malaysian students. The investigation is anticipated to yield dependable findings that will aid in the comprehension of the issue and the creation of workable solutions.

Objective of the Study and Research Questions

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

- How do learners perceive reading problems in online reading?
- How do learners perceive the use of global strategies in online reading?
- How do learners perceive the use of problem-solving strategies in online reading?
- How do learners perceive the use of support strategies in online reading?
- Is there a relationship for the use of global, problem-solving and support strategies in online reading?

Literature Review

Reading Problems

Current research suggests that reading online results in lower understanding and less critical reflection (Allcott, 2021). The digital media and the sheer volume of online information and communication invite the fast and shallow read. The result is young people not reading other than what is required (Blundell and Wolf, 2018). Screen-based reading behaviour is characterized by more time spent on browsing and scanning, keyword spotting, one-time reading, non-linear reading, and reading more selectively, while less time is spent on in-depth reading, concentrated reading and decreasing sustained attention (Ziming, 2012). The issues are more compelling for younger students as their adaptation to a fast-paced digital world may be changing their brains and influencing their ability to develop these skills (Susan, 2014).

Online reading strategies

Reading strategies may help students or society as a whole improve their reading comprehension. These reading strategies have been extensively discussed in previous research (Dian et. al., 2023; Sun et. al., 2021; Hsin-chou et. al., 2009). Global reading strategies, problem solving strategies, and support strategies are a few of the many types of strategies. Global reading strategies, such as previewing the text for organisation, are deliberate techniques used by learners to monitor their reading. While problem solving strategies are specific techniques used by readers when they are having difficulty understanding textual information, such as guessing the meaning of unknown words. Furthermore, it appears that some support strategies use some supportive mechanisms, such as consulting an online dictionary (Lisa, 2015).

Past Studies on Reading Problems

Many studies have been done to investigate the reading problems among students especially in terms of issues like fluent reading and vocabulary knowledge. research done by Gedik and Akhyol (2022) mentioned that Language learning and vocabulary knowledge are the two most important abilities that influence fluent reading. When compared to their peers, the learners' reading abilities are badly impacted by the lack of these skills. Those who have trouble with their reading abilities perform less well in both reading and other subjects.

There have been many past studies on reading problems. The study done by Nation (2019) is done to investigate vocabulary knowledge. A popular strategy has been to assess language learning using an effective reading test that has been modified to require learners to pay attention to the content instead of reading it. Several studies contend that another

component, such as vocabulary, drawing inferences, or working memory, directly influences reading comprehension. The 34 students have five different spoken language skills. The Wechsler Abbreviated Intelligence Scales' (WASI) vocabulary subtest was used to evaluate expressive vocabulary (Wechsler, 2011). The result of this study stated a mean standard score of 88 was obtained by averaging the results of the tests performed, which is exactly at the end of the normal range. This average, however, reveals a sizable amount of variability. Results ranged from very low to good for every test. It may be necessary for our graphical image to be more sophisticated in order to accommodate evolution, with some underlying language factor flowing into both components as well as possible bi-directional links between vocabulary acquisition and interpretation.

Next the study by Ergul (2012) looks at language learning. The author stated the reading abilities of pupils who had never previously mastered early grades reading ability were checked, and they were rated according to their probability of developing learning difficulties. 112 learners took part in the research across 38 groups. Instructors were requested to make a list of any struggling readers in their classes. A grade level text was assigned to participants selected. The reliability and efficiency of the students' reading were examined. Based on the percentage of the text's sentences that were appropriately pronounced, students in the study were divided into three reading levels: frustration, instruction, and independence. The findings showed that 13% of pupils in the participating schools reported having reading difficulties. All three reading levels had reading fluency rates that were much lower than the reading fluency standards established for third graders. As a result, it is assumed that the participants in this study, particularly those in the frustration category, who had trouble reading, most likely had underlying academic difficulties. Because of this, it is reasonable to suggest that these pupils be evaluated right away and receive special education assistance.

Past Studies on Online Reading Strategies

Many studies have been done to investigate the reading strategies. Studies by Hsieh and Dwyer (2009), on 169 undergraduate students indicated that not all types of reading strategies are equally effective in facilitating different types of learning objectives. The results indicated that even though different reading strategies may be structurally different, they are functionally identical for raising questions relative to the cost and amount of time required for student interaction.

On the other hand, Merliyani et. al (2022) conducted research to discover the most frequently used reading strategies of English Proficiency Language (EFL) university students across their reading proficiency and personality types and examine the interaction between the predictive factors in using the strategies when reading English online texts. Data were collected using a questionnaire on reading strategies distributed to 141 students majoring in English Language Education at one of the universities in Indonesia to achieve the aims. The students' responses to the questionnaire were analysed using descriptive and inferential statistics to evaluate the relationship among those variables. Then, the participants were classified into four groups based on their reading proficiency and personality types. The results indicated that each group of students used various reading strategies. It was found that an interaction between reading proficiency and personality types on reading strategy were used in global and socio-affective strategies. The results of the research indicated that students with different reading proficiency and personality types use different strategies for comprehending English online texts.

Conceptual Framework

Figure 1 shows the conceptual framework of the study. This study explores reading problems and reading strategies used by readers when they read online. This study is rooted from reading comprehension problems by Abeeleh, and Al-Sobh (2021) and also online reading strategies by (Amer., et.al., 2010). Readers face reading problems due to many factors. Some of the factors are the content of the text that is not familiar to the reader. Some may be familiar with the content but may have difficulties understanding the language or vocabulary used. According to Rahmat et. al (2020), reading difficulties and reading anxiety are related. When readers face difficulties in reading, the problems may escalate and caused them to face reading anxiety. As such, readers are reported to use reading strategies to facilitate understanding. Amer, et. al (2010) found that academic readers use online reading strategies such as global strategies, problem-solving strategies and also support strategies. Global strategies help readers develop a purpose for reading, think about what they are reading so they can make meaning from what they are reading. Next, problem-solving strategies help academic readers read accurately to gain a better understanding. Finally, support strategies are strategies that readers used resort to when they needed more help to make sense of what they are reading. It can be using prior knowledge, or making predictions, visualising, and many more.

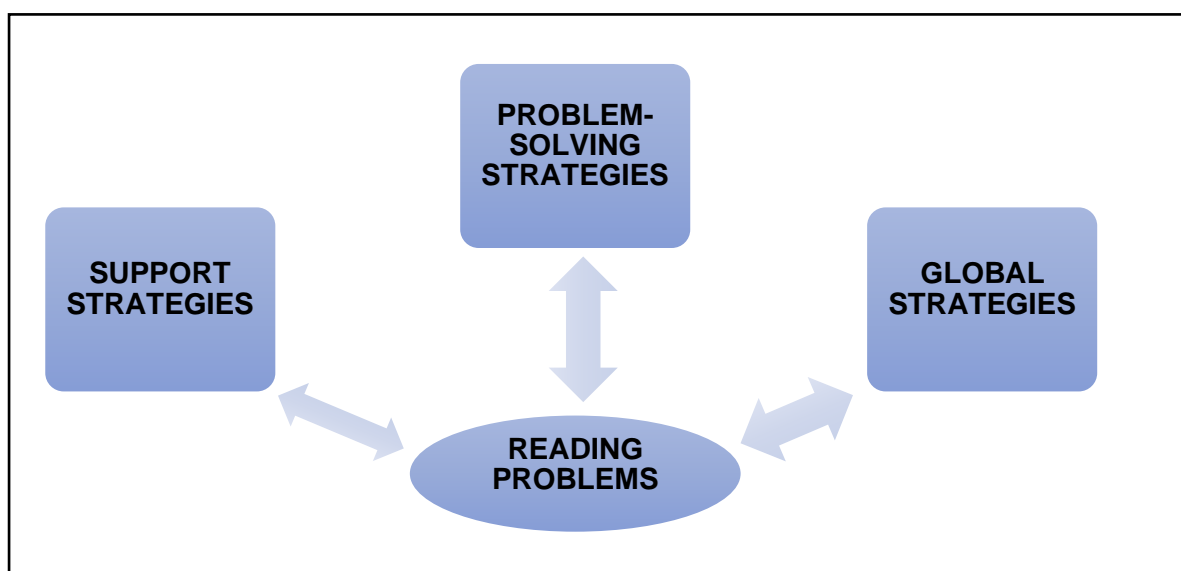


Figure 1- Conceptual Framework of the Study-
online reading problem and Its relationships between reading strategies

Methodology

This quantitative study is done to explore motivation factors for learning among undergraduates. A purposive sample of 335 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 comprehension problems and also Amer et al (2010) on readers on 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	Strategy	No of Items
A	Reading Problems	14
B	Global	17
C	Problem-Solving	8
D	Support	9
		48

Table 2

*Reliability of Survey***Reliability Statistics**

Cronbach's Alpha	N of Items
.922	48

Table 2 shows the reliability of the survey. The analysis shows a Cronbach alpha of 0.922, 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 355 respondents are examined in this section's analysis of their various demographic traits. There are supporting tables and graphics available. Thus, the data obtained are summarised in the Table. 4.1

Q1 Gender

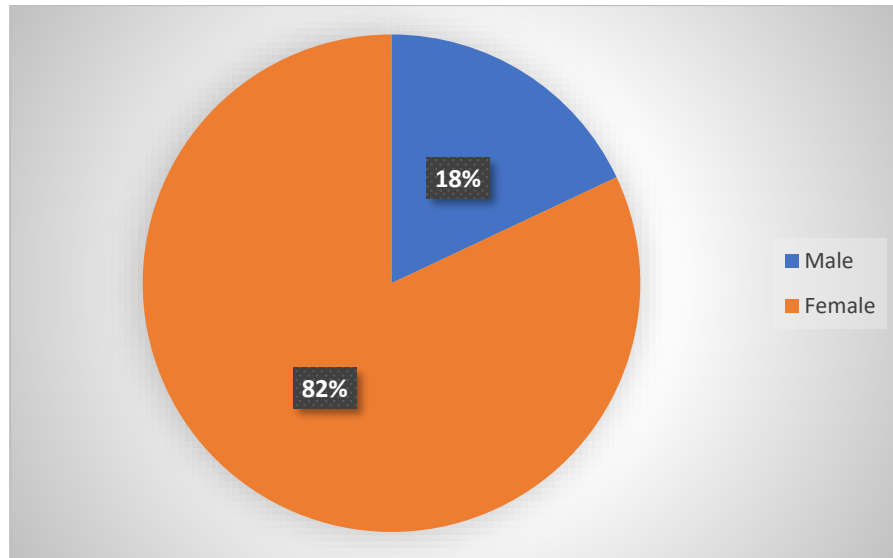


Figure 2- Percentage for Gender

The gender of the respondents who participated in this study can be seen in figure 2. The percentage distribution of gender is consisting of 18% of males and 82% of females.

Q2 Age

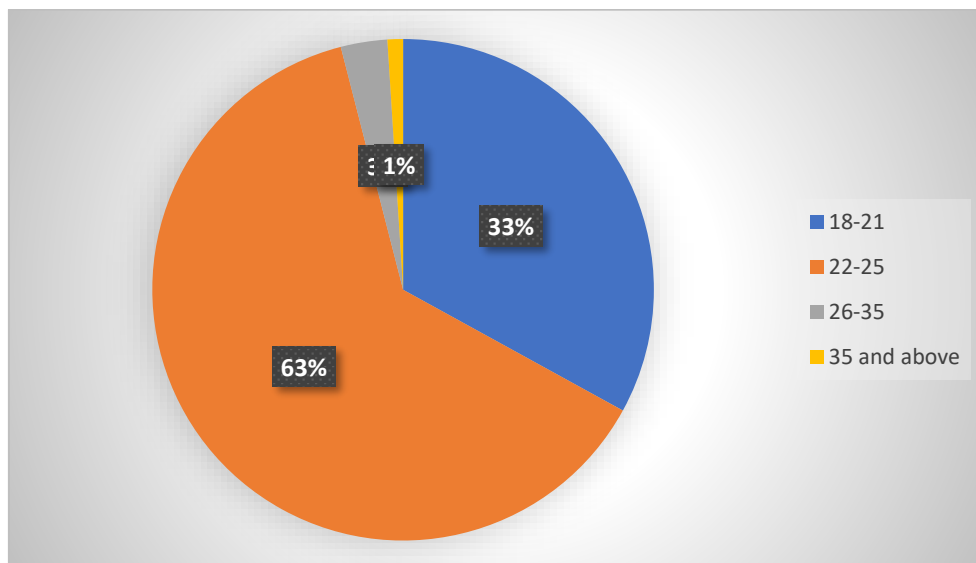


Figure 3- Percentage for Age

Based on figure 3, the biggest age group of respondents is 63% that is the age of 22 years old to 25 years old, followed by 33% of the age of 18 years old to 21 years old, then continued with 3% of the age of 26 years old to 35 years old, and lastly 1% of the age of 35 years old and above.

Q3 Level of Study

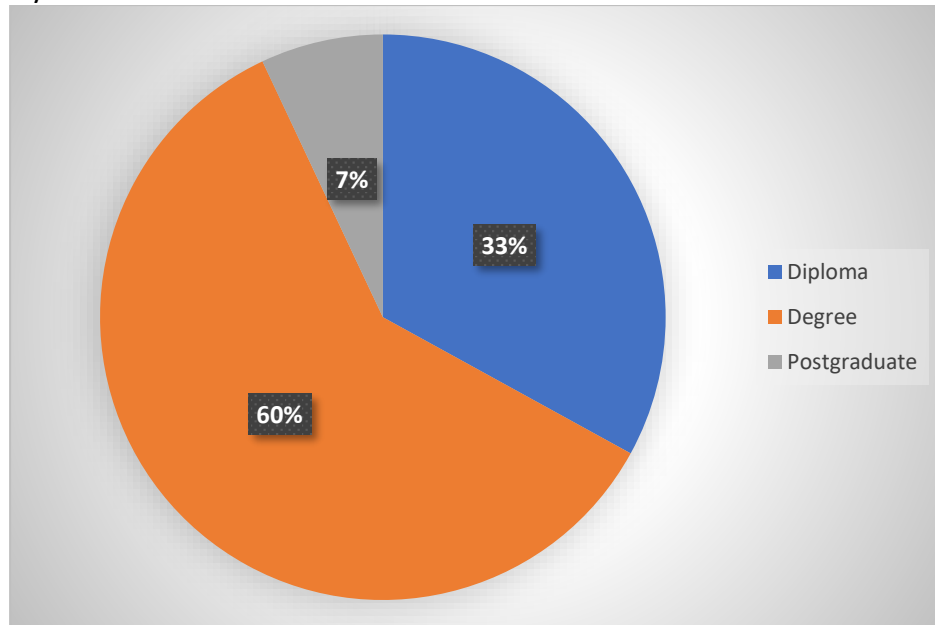


Figure 4- Percentage for Level of Study

In figure 4, most of the respondents are from the Degree level of study which is about 60% of the total. This is followed by the Diploma level of study which is 33% and the least is 7% that is from the postgraduate.

Q4 Mode of Study

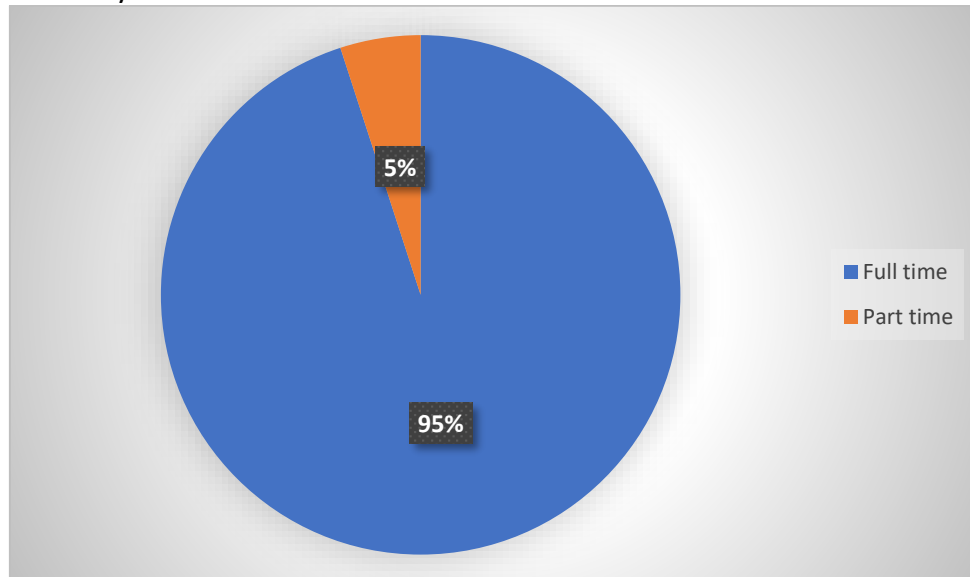


Figure 5- Percentage for Mode of Study

There are 95% of respondents who are having full-time mode of study while another 5% are having part-time mode of study. This can clearly be seen in figure 5 above.

Q5 Cluster

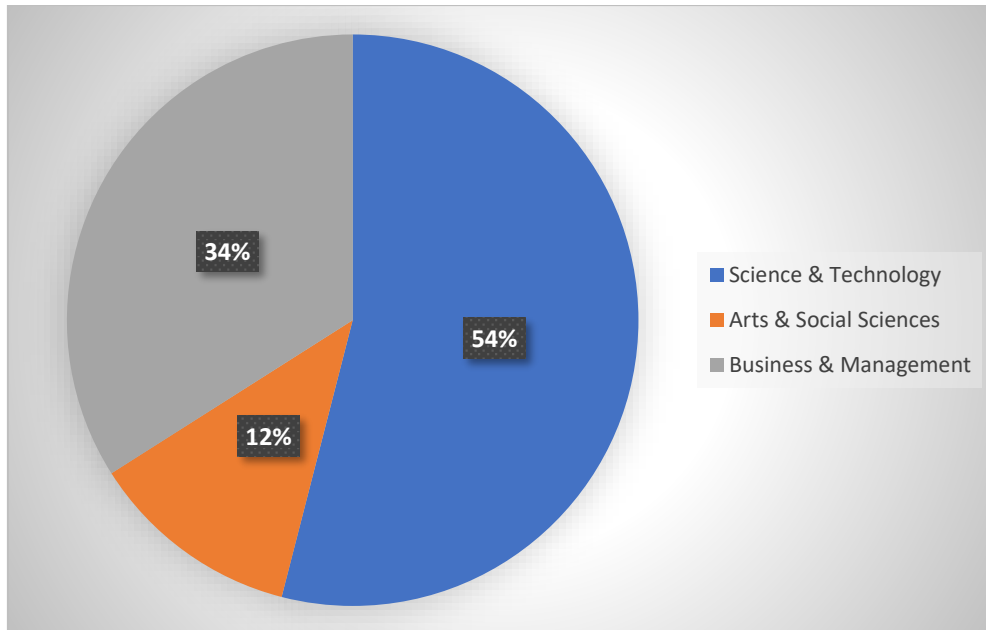


Figure 6- Percentage for Cluster

Figure 6 shows that the overall cluster is from Science and Technology that is 54% of the respondents belong from that, then followed by 34% of the respondents from Business and Management and lastly is 12% of the respondents that is from Arts and Social Sciences.

Q6 Self-Rating of Reading

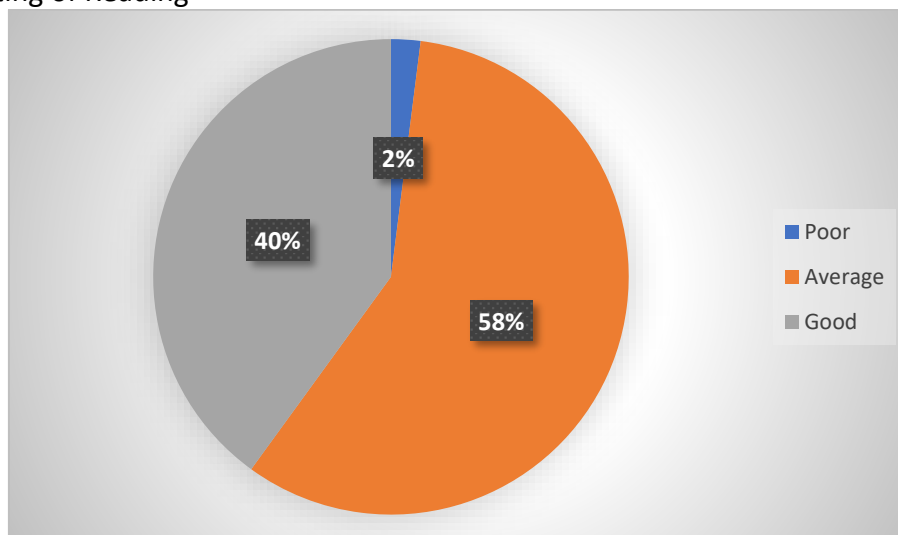


Figure 7- Percentage for Self-Rating Reading

In figure 7, the highest percentage shows an average level of self-rating reading among respondents which is about 58% of them. While another 40% is rating it at a good level and leave another 2% rated it at a poor level. This shows that most of them feel like they only read at an average level which is not too poor nor too good.

Q7 Free Time/ Reading Frequency

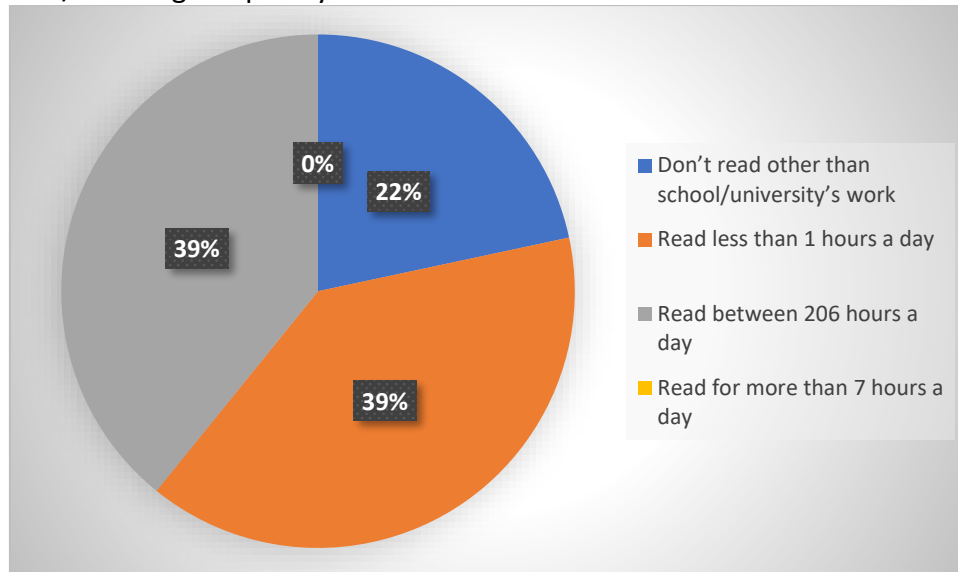


Figure 8- Percentage for Free Time/Reading Frequency

As for reading frequency, in figure 8, there is only 3% of the respondents that read for more than 7 hours a day while the respondents that read less than 1 hour a day and respondents that read between 2 to 6 hours a day have shared an equal percentage of the respondents that is 38%. Only 21% of the respondents do not read other than school or university's work. This shows that only a little number of the respondents love to read more in their day.

Q8 Reading Preference

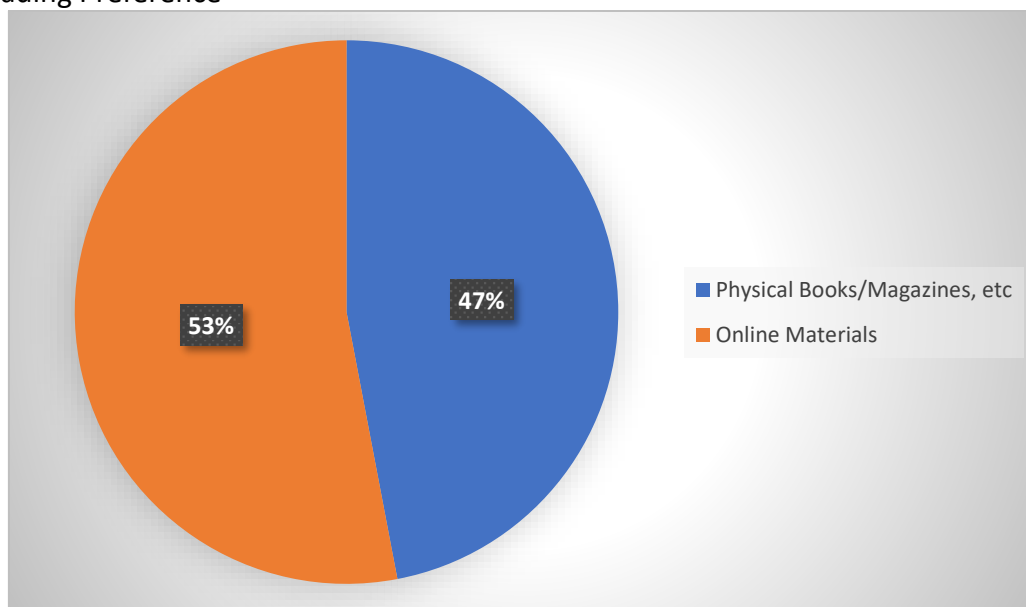


Figure 9- Percentage for Reading Preference

Figure 9 is about reading preference in which between physical materials or online materials. About 53% of the respondents prefer online materials and the remaining 47% of the respondents prefer physical books or magazines and so on.

Q9 When I read

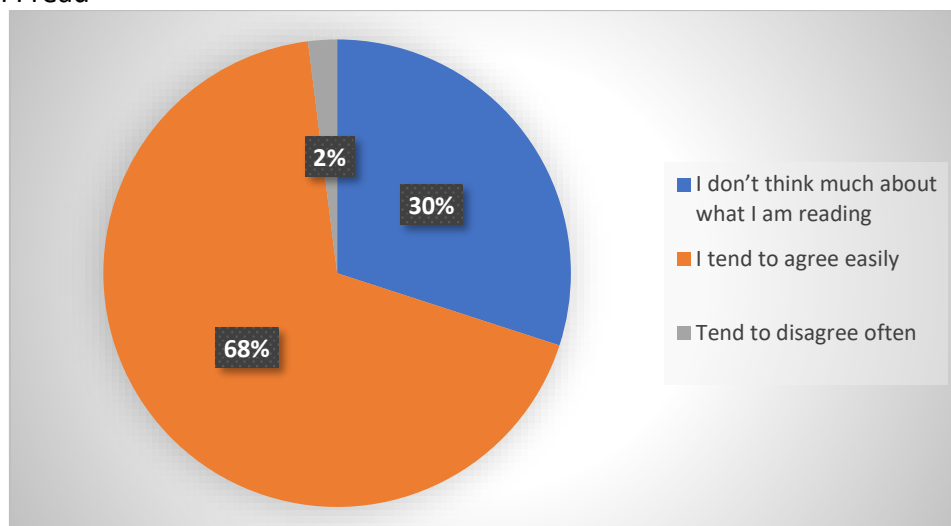


Figure 10- Percentage for Reading Habit

Figure 10 shows that the reading habit of the respondents can be seen by looking into what they think when they are reading. There is 68% of the respondents tend to agree easily with what they read, while only 2% of them would often disagree. Meanwhile, there is about 30% of the respondents do not think much about what they are reading.

Findings for Reading Problems

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

Reading Problems

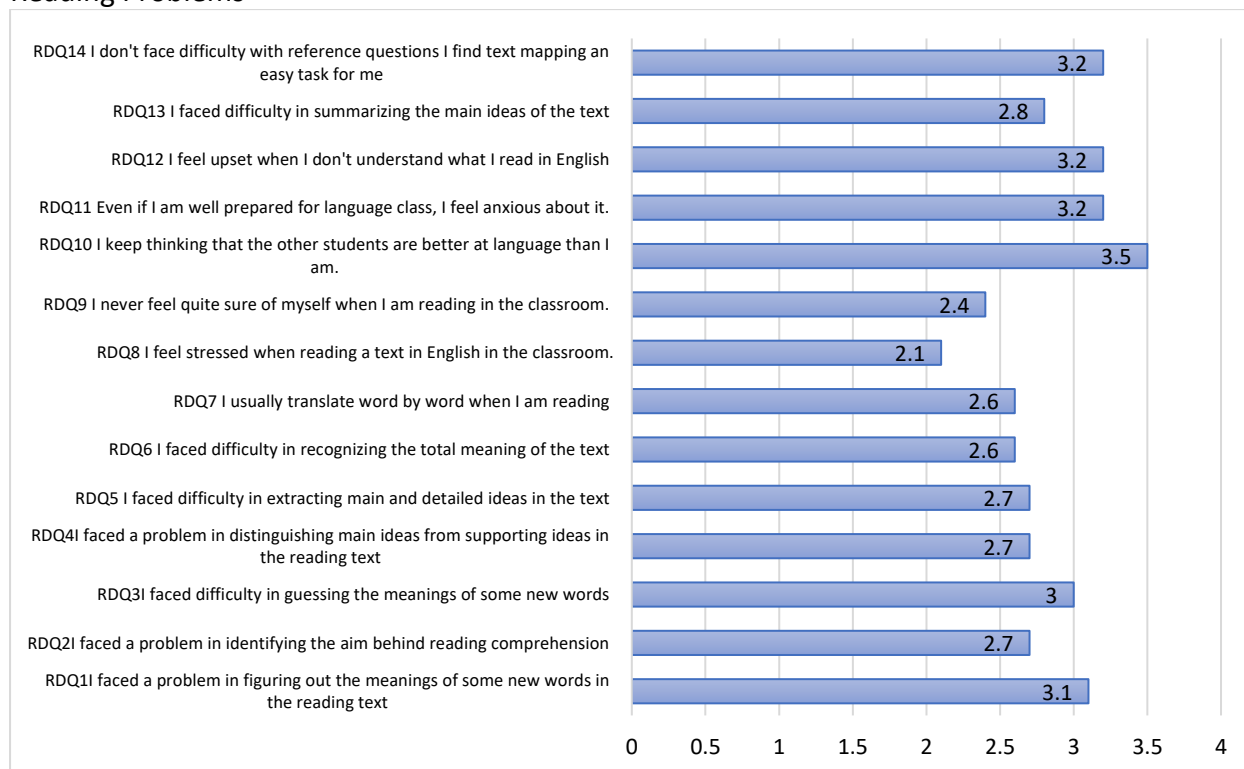


Figure 11- Mean for Reading Problems

The statistics for the mean values of the variables in the reading issue are displayed in Figure 11. According to the data, RDQ8 had the lowest mean values recorded, while the mean values for the other variables showed an average of 3 or above. From this, it may be inferred that there are a lot of reading problems.

Findings for Global Strategies

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

Global Strategies

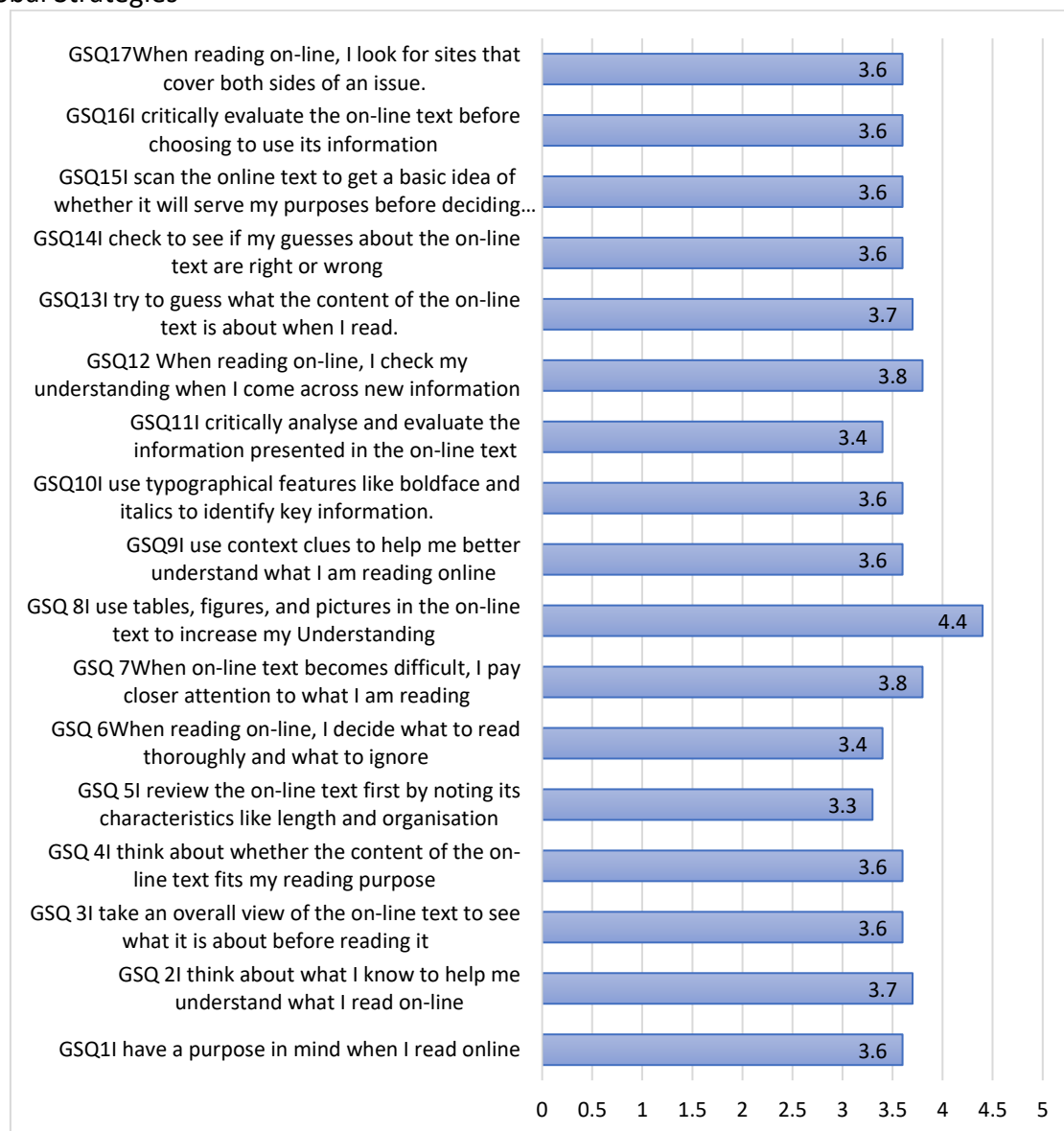


Figure 12- Mean for Global Strategies

Based on the figure 12, shows the statistics for the mean value for the global strategies. Based on the results of mean values stated, the lowest mean value reported was for GSQ5 while the highest mean values revealed was 4.4 for GSQ8. Based on the findings, this means that the level of global strategies is between high and medium.

Findings for Problem-Solving Strategies

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

Problem--Solving Strategies

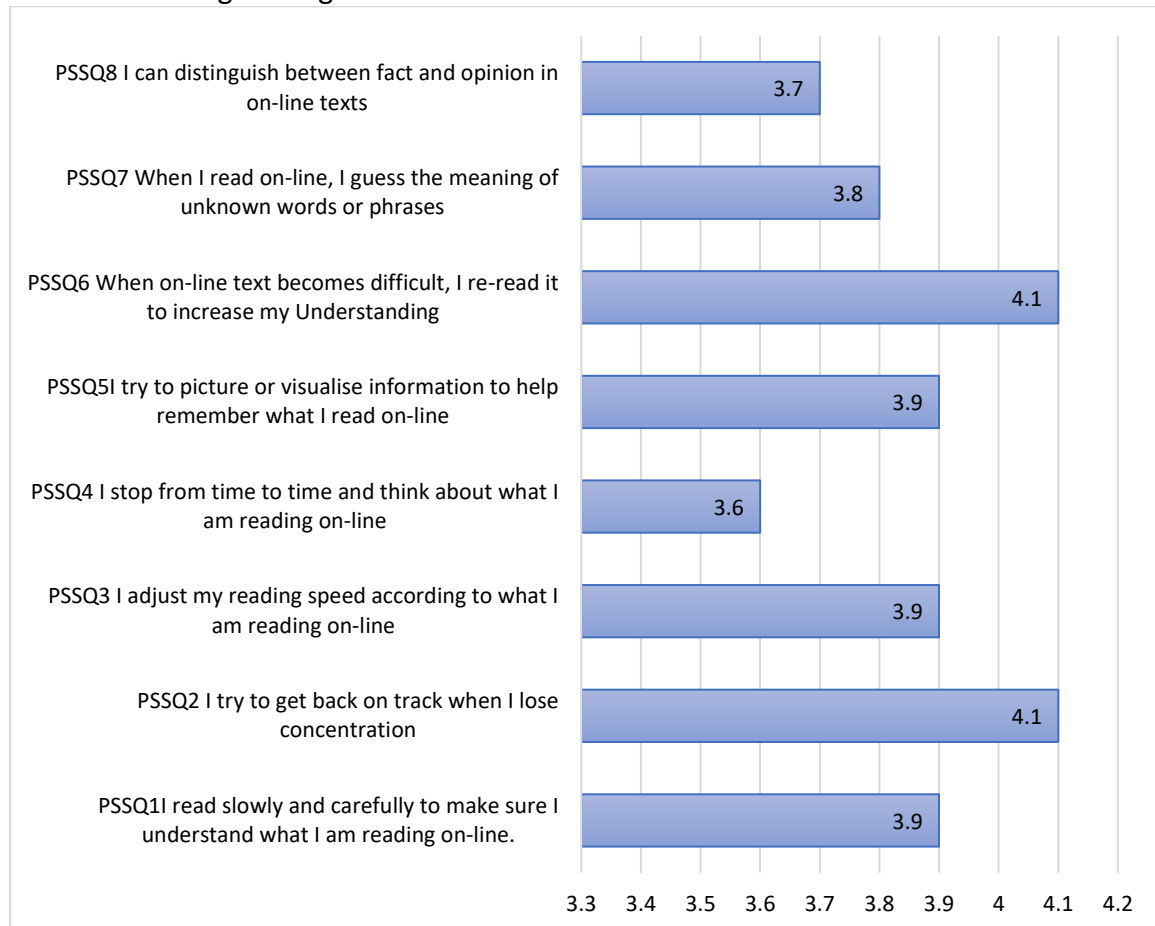


Figure 13- Mean for Problem-Solving Strategies

The mean for problem-solving strategies is shown in figure 13. In the data shown, PSSQ2 and PSSQ6 are the highest mean value which is 4.1 while the mean value for other variables is not too different with the highest mean value as the lowest mean value is 3.6 which is PSSQ4. This may indicate that the strategies used are helpful.

Findings for Support Strategies

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

Support Strategies

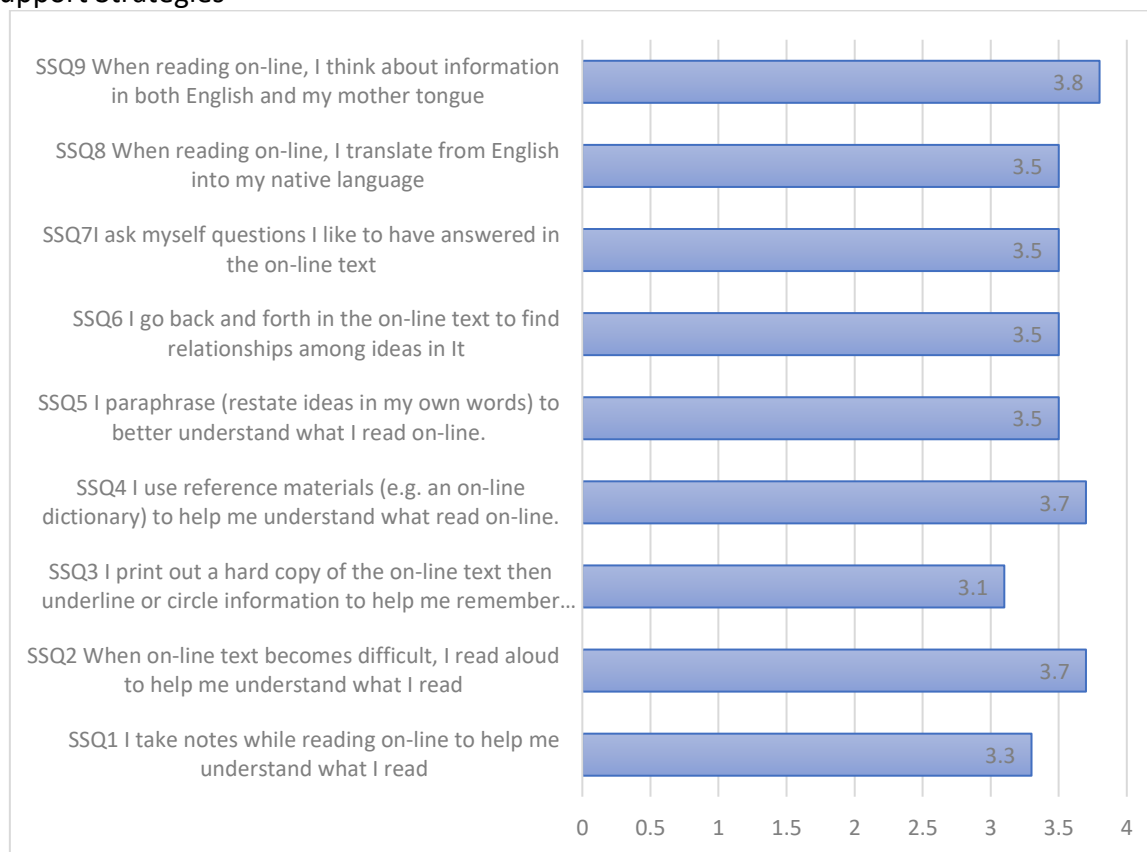


Figure 14- Mean for Support Strategies

The mean for support strategies is displayed in figure 14. Based on the stated mean values, the highest mean value is 3.8 which comes from SSQ9 while the average mean value in this is 3.5. This show that most of the learners very much needed support strategies to have a better understanding of what they are reading.

Findings for Relationship for global, problem-solving and support reading strategies

This section presents data to answer research question 5- Is there a relationship for the use of global, problem-solving and support strategies in online reading? Global reading strategies is the most basic reading strategies that all readers depend on, no matter how difficult the reading task is. To determine if there is a significant association in the mean scores for the use of global, problem-solving and support strategies in online reading data is analysed using SPSS for correlations. Results are presented separately in table 3, 4, and 5 below.

Table 3

*Correlation Between Global and Problem-Solving Reading Strategies***Correlations**

		TOTALGLOB AL	TOTALPROBL EMSOLVNG
TOTALGLOBAL	Pearson Correlation	1	.622**
	Sig. (2-tailed)		.000
	N	335	335
TOTALPROBLEMSOLVNG	Pearson Correlation	.622**	1
	Sig. (2-tailed)	.000	
	N	335	335

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows there is an association between global and problem-solving reading strategies. Correlation analysis shows that there is a high significant association between global and problem-solving reading strategies ($r=.622^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between global and problem-solving reading strategies.

Table 4

*Correlation Between Global and Support Reading Strategies***Correlations**

		TOTALGLOB AL	TOTALSUPPO RT
TOTALGLOBAL	Pearson Correlation	1	.580**
	Sig. (2-tailed)		.000
	N	335	335
TOTALSUPPORT	Pearson Correlation	.580**	1
	Sig. (2-tailed)	.000	
	N	335	335

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows there is an association between global and support reading strategies. Correlation analysis shows that there is a high significant association between global and support reading strategies ($r=.580^{**}$) and ($p=.000$). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between global and support reading strategies.

Conclusion

Summary of Findings and Discussions

As global reading strategies are the most fundamental reading strategies on which all learners rely, regardless of how difficult the reading task is, therefore, this paper found that there is a strong positive relationship between global and problem-solving reading strategies and also had a strong positive relationship between global and support reading strategies. Previous research has found that these three reading strategies have met the criteria for reducing the reading difficulties among learners. Global reading strategies are intentional techniques that learners use to monitor their reading. While problem solving strategies are specific techniques that readers use when they are having difficulty understanding textual information. Furthermore, it appears that some support strategies employ some supportive mechanisms. This finding is similar to John and Devi (2022) that reading strategies fostered a positive change in advancing their reading skills to overcome the difficulties in reading. As for the reading difficulties aspect, most learners have reading problems because they lack the specific strategies necessary for efficient reading. Similar finding had been presented by Arnold (2009) that the learners simply do not understand what they are reading and most of the learners encounter difficulties in reading text. Furthermore, Schiff and Calif (2004) also had similar finding that students had reading difficulties due to a lack of knowledge and awareness of how to apply reading strategies.

Implications and Suggestions for Future Research

This study has shown some implications between reading problems and reading strategies. The results of this study found that the three reading strategies, which are global strategies, problem solving strategies and support strategies have a positive relationship in minimizing online reading difficulties. The results of the study show that global strategies and problem-solving strategies are the highest contributors to improving reading difficulties among learners. The global strategy is paying attention to the features of the text, guessing about the content of the text, and so on. The use of this strategy helps the reader in preparing themselves to understand the main text. While problem solving strategies, help readers to read accurately, fluently, and understand. Learners understand by using information inside and outside the text according to world experience. In addition, instructors can also help learners to use those reading strategies spontaneously when they read online materials by increasing their awareness of using reading strategies through practice before they immerse themselves in online reading materials. Hence, this paper recommends that through explicit instruction in the use of reading strategies, teachers should raise students' awareness of the use of reading strategies in reading activities. Furthermore, teachers must educate and train students to use problem-solving strategies when constructing meaning from the reading materials. As for the limitation of this paper, the number of high-skilled learners and low-skilled learners is not the same, therefore future studies should include the same participants at different levels to ensure the validity of the results.

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