24. **Learners' Awareness and Perceived Use of Metacognitive Online Reading Strategies among Malaysian ESL University Students**

Ruhil Amal Azmuddin[1*] Nooradelena Mohd Ruslim[2]
[1]Modern Languages, Centre for Modern Languages and Human Sciences, Universiti Malaysia Pahang, Malaysia
[2]Faculty of General Studies, IKIP International College
*E-mail: ruhilamal@ump.edu.my

ABSTRACT

Some ESL learners are not aware of the importance of reading strategies to comprehend a text. Due to this, reading a text becomes challenging especially so, if it is an academic text. This study explores the level of awareness and perceived use of online reading strategies of university students when they read English academic texts online. A total of 109 respondents who took English for Technical Communication, a required English level 2 course in a higher institution in the East Coast of Malaysia were involved in the study. A 38-item, self-report inventory by Mokhtari and Sheorey (2002) called On-line Survey of Reading Strategies (OSOR) was used to gather data. Descriptive statistics were used to analyze the data. Some respondents were also interviewed to obtain information on the importance of reading strategies to ESL learners. Results indicated that these respondents believe that problem-solving reading strategies are more useful than global and support strategies especially in reading academic texts online.

Keywords: ESL, Online Reading Strategies, Metacognitive Online Reading Strategies, OSOR

Introduction

Reading is considered to be one of the most important skills needed in learning a language and because of that, reading instructions in English as a Second Language (ESL) has widely been studied and has been of interest over the past decade. Over the past thirty years, research on reading has looked into metacognitive reading strategies using printed texts but there is limited studies done on metacognitive reading strategies using online texts.

With the current advance use of technology in classrooms, teachers, educators and researcher are constantly struggling to teach students to locate information and critically evaluating and comprehending texts online. More common nowadays is the fact that reading texts online is becoming a much needed activity for students. However, Malaysian university students are often regarded as being unable to think and read critically (Zuhana, Wong & Shameem, 2014). According to Pandian, (2007) and Thang & Azarina, (2008), many Malaysian university students are not equipped to engage in demanding reading tasks required of them. With the growing use of technology in classrooms, students are required to comprehend online texts more meaningfully in order to succeed academically. Hence, this study aims to examine the awareness and use of metacognitive reading strategies in online reading among university students.

Research Questions

This study aimed at examining the level of awareness and perceived use of online reading strategies of university students when they read English academic texts online. In order to achieve this aim, the following research questions were addressed:

1. What type of metacognitive reading strategies do students use the most in reading English academic texts online?
2. What is the awareness of metacognitive reading strategies among students?

In order to answer these research questions, the concept of metacognitive reading strategies needs to be further explored.

Literature Review

According to Brown (1980), metacognition refers to an individual's ability to control their own cognitive actions. It is the ability to administer, control and "direct the language learning tasks and invoke thinking about the learning process" (Vandergrift, 2002, p.559). The use of metacognitive reading strategies will enable readers to overcome problems they face when reading and ultimately achieve reading comprehension. Research on metacognitive reading strategies has classified these strategies into three subcategories; global, problem-solving and support strategies. Global strategies is when readers plan their reading by previewing the text or having a purpose in mind whereas, problem-solving strategies refer to actions readers do when reading a text such as guessing meaning of words or rereading. Support reading strategies are those that readers use to assist in reading such as looking up dictionaries or highlighting. Based on these subcategories, Online Survey of Reading Strategies (OSOR) was developed by Mokhtari & Sheorey (2002) as cited in Anderson (2003). It was developed to measure students' use of metacognitive reading strategies when reading academic texts online and the items used in this questionnaire was divided into these three subcategories.

As known, proficient readers often use more metacognitive strategies compared to those who are less proficient (Anderson, 2003). This entails better understanding of texts read and allows learners to be more successful academically. In addition, the need to comprehend texts online has also become very significant among students. Moreover, online reading has also become an increasingly interesting topic among researchers. For instance in a study by Anderson (2003), who made comparison between EFL and ESL learner's use of metacognitive reading strategies with the use of OSOR. In his study, he found no difference between these two groups in using global and support reading strategies. However, he also found that EFL learners used more problem solving strategies compared to ESL learners. Similarly in another study, problem solving strategies were used more than support and global strategies among EFL Thai students (Jaengsaengthong, 2007). This study also used OSOR as the means of collecting data. Pookcharoen (2007), also found similar results, where problem solving strategies were more often used compared to support and global strategies.

Methodology

All of the participants were required to complete a 38-item survey known as Online Survey of Reading Strategies (OSOR) that consists of five-point Likert scale questions ranging from always or almost always (5) to never or almost never (1). This survey measures students' use of metacognitive strategies when they read online texts for academic purposes. This questionnaire was distributed among 109 respondents who took English for Technical Communication (ETC), a required English level 2 course in a higher institution in the East Coast of Malaysia. In order to further explore students awareness of online reading strategies, semi-structured interviews (Appendix1) were conducted. For this part, a total of 15 students who were enrolled in ETC were interviewed.

Results and Discussions

Descriptive statistics was used in this study to answer the first research question, which is to identify what metacognitive reading strategies do students use when reading English academic texts online. A 38-item self-report inventory by Mokhtari and Sheorey (2002) called On-line Survey of Reading Strategies (OSOR) was categorized into three parts called Problem Solving Strategies, Global Reading Strategies and Support Reading Strategies in.

Problem-solving strategies consist of actions used by readers when they are directly working with a text by guessing meaning of unfamiliar words, rereading the texts etc. Table 1 depicts the items used in the questionnaire to determine problem solving strategies used by students.

Table 1
Problem Solving Strategies

Item No.	Description of Items
9	I read slowly and carefully to make sure I understand what I am reading online.
11	I try to get back on track when I lose concentration.
13	I adjust my reading speed according to what I am reading online.
16	When an online text becomes difficult, I pay closer attention to what I am reading.
19	I stop from time to time and think about what I am reading online.
22	I try to picture or visualize information to help myself remember what I have read online.
28	When an online text becomes difficult, I re-read it to increase my understanding.
31	When I read online, I guess the meaning of unknown words or phrases.
34	I critically evaluate the online text before choosing to use information I read online.
35	I can distinguish between fact and opinion in online texts.
36	When reading online, I look for sites that cover both sides of an issue.

Global strategies refer to ability of learners to properly plan their reading by previewing the text, having a purpose in mind and predicting the text etc. Table 2 encompasses the items used in the questionnaire that determine students use of global reading strategies

Table 2
Global Reading Strategies

Item No.	Description of Items
1	I have a purpose in mind when I read online.
2	I participate in live chats with other learners of English.
3	I participate in live chats with native speakers of English.
5	I think about what I know to help me understand what I read online.
6	I take an overall view of the online text to see what it is about before reading it.
8	I think about whether the content of the online text fits my reading purposes before choosing to read it.
10	I review the online text by first noting its characteristics like length and organization.
14	When reading online, I decide what to read closely and what to ignore.
17	I read pages on the Internet for academic purposes.
18	I use tables, figures, and pictures in the online text to increase my understanding.
20	I use context clues to help me better understand what I am reading online.
23	I use typographical features like bold face and italics to identify key information.
24	I critically analyze and evaluate the information presented in online texts.
26	I check my understanding when I come across new information.
27	I try to guess what the content of the online text is about when I read.
30	I check to see if my guesses about the online text are right or wrong.
32	I scan the online text to get a basic idea of whether it will serve my purposes before I choose to read it.
33	I read pages on the Internet for fun.

Finally are Support Reading Strategies. These strategies are what readers use to support comprehension by highlighting, using dictionary etc. Table 3 lists the items that determine students' use of support reading strategies.

Table 3
Support Reading Strategies

Item No.	Description of Items
4	I take notes while reading online to help me understand what I read.
7	When an online text becomes difficult, I read aloud to help me understand what I read.
12	I print out a hard copy of the online text then underline or circle information to help me remember it.
15	I use reference materials (e.g. an online dictionary) to help me understand what I read online.
21	I paraphrase (restate ideas in my own words) to better understand what I read online.
25	I go back and forth in the online text to find relationships among ideas in it.
29	I ask myself questions I would like to have answered in the online text as I read it.
37	When reading online, I translate from English into my native language.
38	When reading online, I think about information in both English and my mother tongue.

Descriptive statistics was used to identify which strategies were mostly used among Malaysian ESL university students. Results were gathered from 109 respondents. The mean and the standard deviations were then calculated for the three parts of OSOR. Table 4 below shows the results.

Table 4
Mean and Standard Deviations for Three Strategies of OSOR

Strategies	N	Mean, $\bar{x}$	Standard Deviation, SD
Problem Solving	109	3.6991	0.8577
Global Reading	109	3.3917	0.9402
Support Reading	109	3.2356	1.0890

Results obtained proved that among all 109 respondents, the most used strategies is Problem Solving Strategies with mean of 3.6991, followed by Global Reading Strategies with mean of 3.3917 and the least used is Support Reading Strategies with mean value of 3.2356. These findings are consistent with the one reported by Chatpunnarangsee and Pookcharoen (2013). Detailed descriptions for the three parts of strategies are illustrated by the figures below.

Problem Solving Strategies
This study revealed the three most frequent strategies used under problem solving strategies were P9, P11 and P16. Strategy number 9, "I read slowly and carefully to make sure I understand what I am reading online" received the highest mean, $\bar{x}$ = 4.03. Out of 109 respondents, 51.4% answered *"4" I usually do this* and 27.5% answered *"5" I always or almost always do this* to this question. This suggest that a total of 78.9% or 86 students chose to read their text slowly and carefully to make sure they will understand the text and get clear information about the text they read online. The second highest strategy used is strategy number 11. The figure below shows the most strategies used under problem solving strategies in percentages.
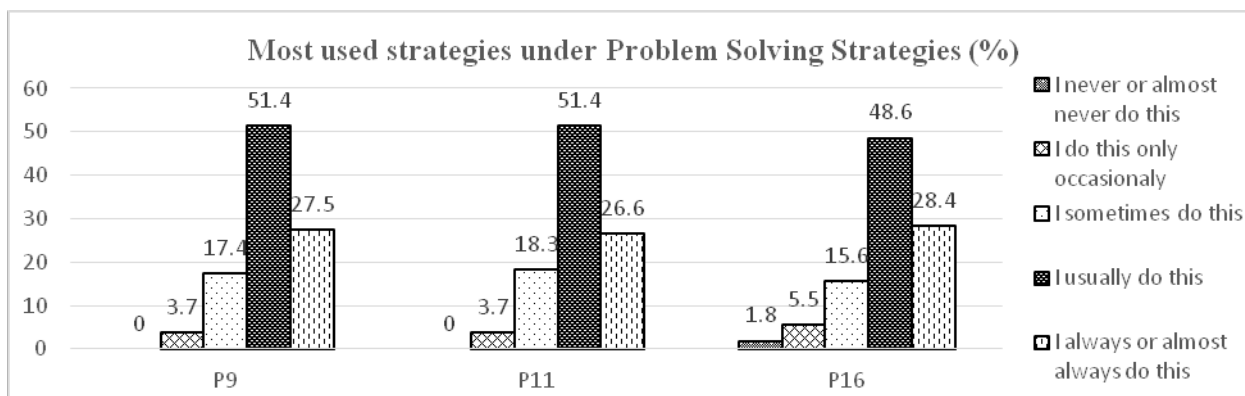
Figure 1
Most used strategies under Problem Solving Strategies (%)

A total of 78% of the overall students answered *"4" I usually do this* and 27.5% answered *"5" I always or almost always do this* to the question, "I try to get back on track when I lose concentration". Strategy number 16 received a total of 77% of the overall students answered *"4" I usually do this* and 27.5% answered *"5" I always or almost always do this* to the question, "When an online text becomes difficult, I re-read it to increase my understanding". These top three strategies used revealed the seriousness among the students when they read their academic texts online. The combination of these three strategies led to one direction that is to improve their understanding.

Furthermore, from the semi-structured interviews, some of the students indicated the need to "read thoroughly all the text" because they feel they "don't want to miss any points". Most of the students also indicated the need to "repeat reading the text I don't understand". One student indicated the need to "read it again and again and try to match the meaning with the whole sentence". Hence, they are aware of the need to be able to use proper metacognitive reading strategies to better understand the text they are reading because to one of the students who said "If I read just randomly, blindly read, then I can't understand the whole thing I am reading".

Global Reading Strategies
The figure below shows the most strategies used under global reading strategies in percentages.
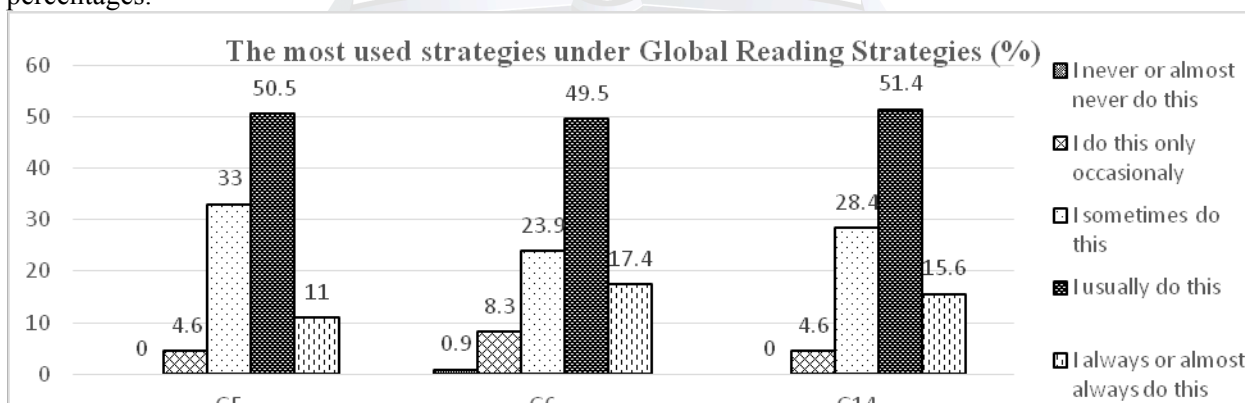

Figure 2
The most used strategies under Global Reading Strategies (%)

Figure 2 showed that two highest respond are for option *"3" I sometimes do this* and option *"4" I usually do this*. Strategy number 14 gave the highest mean among 18 strategies listed under global reading strategy. This strategy states that, "When reading online, I decide what to read closely and what to ignore". About 79.8% from 109 respondents said *"3" I sometimes do this* and *"4" I usually do this* to this question. This is followed by strategy number 6, "I take an overall view of the

online text to see what it is about before reading it". Strategy number 5, "I think about what I know to help me understand what I read on-line" took the third place among all 18 strategies with the mean value of 3.69. Both strategies also gave highest respond in the two same options, *"3" I sometimes do this* and *"4" I usually do this*. These three top strategies showed a little uncertainty in using global reading strategies since they had started to choose option *"3" I sometimes do this*. Strategy number 5, 6 and 14 chosen by the respondents also led to the same direction as what has been showed in problem solving strategies that is to increase their understanding.

Similarly as indicated in the semi-structure interviews, one of the students indicated the need to "scan through everything to find whether it is interesting or not and if it is interesting, I'll continue reading". While another student stated "before reading I usually find what I need to read first and what I'm searching for". This student also believes the need to be aware of reading strategies as "It is very important as it will enhance our understanding and also improve our reading skills".

Support Strategies

The figure below shows the most strategies used under support strategies in percentages.
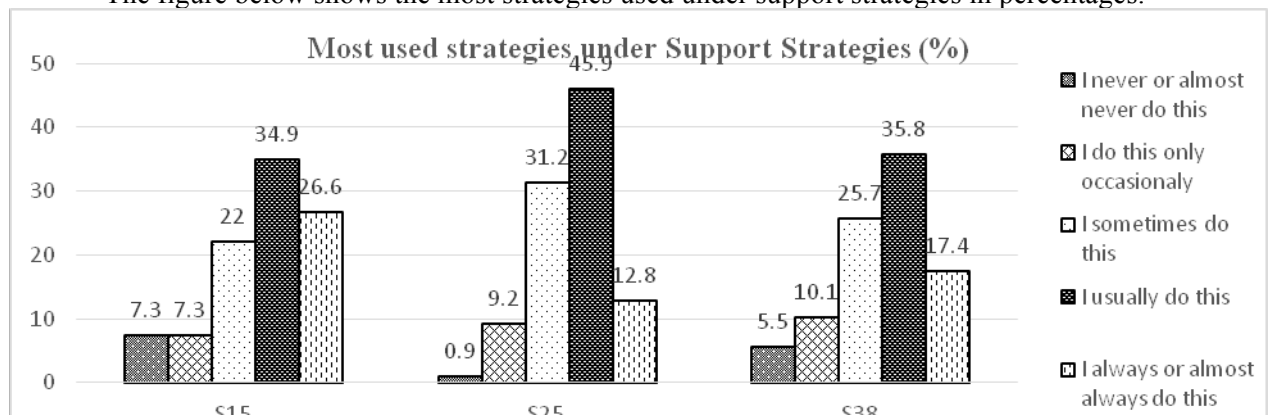

Figure 3
Most used strategies under Support Strategies (%)

Three most frequent used strategies under support strategies were strategies number 15, 25 and 38. Strategy number 38, "When reading online, I think about information in both English and my mother tongue" received the lowest mean, $\bar{x}$ = 3.52. This question only received 103 responds where 61.5% of them answered *"3" I sometimes do this* and *"4" I usually do this*. The second highest strategy used is strategy number 25. A total of 77.1% of the 109 respondents answered *"3" I sometimes do this* and *"4" I usually do this* to the question, "I go back and forth in the online text to find relationships among ideas in it". While strategy number 15 gave the highest mean, $\bar{x}$ = 3.67. This question received a total of 61.5% for options *"4" I usually do this* and *"5" I always or almost always do this*. Strategy number 15 proves that respondents need to use supporting materials like online dictionary to help them understand the text better. In strategy number 25, the respondents try to find relationships that exist by reading back and forth to help them understand the online text. Strategy number 38 suggests that, by translating what they read to their mother tongue, they will have better understanding of what they read.

Most of the students indicated need to "Google the meaning" for words they do not understand while others indicated the need to "refer to dictionary" whether it is online or not and sometimes "use thesaurus to find out real meaning of it and look at related articles recommended". One of the students believes it is important to "read hardcopy not online, print it and highlight important points". Interestingly, students are also aware of the metacognitive reading strategies as "it will encourage us to read a lot and increase our vocabulary".

Conclusion

In conclusion, the results indicated that respondent's perceived problem solving reading strategies to be more useful than global and support strategies. This study revealed that the metacognitive online

reading strategies chosen are interrelated and led to one same objective that is to improve their understanding towards the text they read online. Furthermore, students are aware of the importance of metacognitive online reading strategies as it will allow them to understand what they are reading especially for academic purposes. Students will reap the benefits when they are able to synthesize and evaluate the materials they are reading (Coiro & Dobler, 2007) and also be critical towards their learning.

However, it should also be noted that the results of this study only indicated the students' perceived use and awareness of metacognitive online reading strategies rather than the actual use of these reading strategies. It is imperative to study the actual use of these reading strategies, which is a future plan for doctoral study by the author. This, in the hopes to further gain insights into the actual level of reading strategy used among ESL tertiary level students. Therefore, it is hoped further research into this would yield more information for teachers, educators and students to be more aware of the acquired reading strategies to enable better comprehension when reading academic texts online.

References

Anderson, N. J. (2003). Scrolling, clicking, and reading English: Online reading strategies in a second/foreign language. *The Reading Matrix,* 3, 1-33.

Brown, A. L. (1980). Metacognitive development and reading. In R.J. Spiro, B. Bruce & W.F. Brewer (Eds), *Theoretical issues in reading comprehension* (pp.453-479). Hillsdale, NJ: Erlbaum.

Chatpunnarangsee and Pookcharoen (2013). A Metacognitive-Based Analysis of Online Reading Strategies among Thai EFL Undergraduate Students. *Journal of Liberal Arts*, 13 (2), 117-142.

Coiro, J.& Dobler, E.(2007). Exploring the online reading comprehension strategies used by sixth-grade skilled readers to search for and locate information on the Internet. *Reading Research Quarterly*, 42(2), 214-257.

Jaengsaengthong, W. (2007). *The study of online reading strategies of graduate students majoring in English at Naresuan University*. Unpublished MA thesis. Naresuan University.

Pookcharoen, S. (2007). Exploring how teaching morphemic analysis fosters Thai EFL students' vocabulary development. *Journal of English Studies*, 3, 85-105.

Pandian, A. (2007). Literacy skills in higher education: A comparative study between public and private university students. In Sarjit Kaur, Morshidi Sirat & Norzaini Azman (Eds.), *Globalisation and internationalization of higher education in Malaysia* (pp. 286-302). Penang: University of Science Malaysia (USM) Press.

Sheorey, R., & Mokhtari, K. (2002). *Differences in the metacognitive awareness of reading strategies among native and non-native readers*. System, 29, 431-449.

Thang, S.M., & Azarina, A. (2008). Investigating readiness for autonomy: A comparison of Malaysian ESL undergraduates of three public universities. *Reflections on English Language Teaching,* 6(1), 1-18.

Vandergrift, L. (2002). It was nice to see that our predictions were right: Developing metacognition in L2 listening comprehension. *The Canadian Modern Language Review*, 58, 555-575.

Zuhana, M. Z., Wong, B. E. & Shameem, R. G. (2014) Critical Reading Ability and its Relation to L2 Proficiency of Malaysian ESL Learners. *3L: The Southeast Asian Journal of English Language Studies – Vol 20(2): 43 – 54*.

Appendix 1

Interview Guide

1. Can you tell me what strategies you use when you read your textbooks or any other materials for academic purposes?
2. Can you tell me more about the things you normally do before, during and after reading online texts?
3. What do you do when you have a problem understanding what you were reading online?
4. Is having the appropriate reading strategy important? Why?