ESL Students' Online and Offline Reading Strategies: Scrolling, Clicking, Flipping and Reading

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ABSTRACT

In this borderless world, computers and the Internet have become important tools of communication and learning and they have also become an important part of our lives. The opportunity to seek information through the computer has made reading an important language skill. Despite the importance of reading and technology, little research to date has been carried out to compare the reading strategies employed by readers when reading online compared to offline. Such studies are important because awareness of the similarities and differences on the strategies employed between these two modes of learning will enable teachers to help develop students' reading ability. Hence, this study investigates if there is a difference between online and offline strategies used by second language readers. The participants in this study were ESL undergraduates at a university in Malaysia. The instrument employed was the Survey of Reading Strategies (SORS) (Sheorey and Mokhtari, 2001) and Online Survey of Register Strategies (OSORS) by Anderson (2003). These questionnaires tap three different types of information: global reading strategies, problem solving strategies, and support strategies. The results of the study are discussed in terms of their pedagogical implications in the L2 classroom.

Introduction

The emergence of computers and the Internet entails the changing nature of literacy. The role of the new literacy is emphasized by Leu (2002) as

it "includes the skills, strategies, and insights necessary to successfully exploit the rapidly changing information and communication technologies that continuously emerge in our world" (p. 313). However, with the new text formats replacing the conventional printed text and the new ways of dealing with information, reading processes can be a challenge in the aspects of cognitive and aesthetics aspects (Spires and Estes, 2002). Electronic texts which incorporate hyperlinks and hypermedia "introduce some complications in defining comprehension because they require skills and abilities beyond those required for the comprehension of conventional, linear print" (RAND Reading Study Group, 2002: 14). The changing nature of reading comprehension is further illustrated by RAND Reading Study Group (2002) through reading comprehension model. The model covered three elements which help the readers in meaning construction and the interpretation of information. They are "the reader who is doing the comprehending, the text that is to be comprehended and the activity in which comprehension is embedded" (p. 11).

The first element is explained by Coiro (2003) as she described three characteristics of web-based texts; that is non-linear hypertexts, multiple-media texts and interactive texts. Non-linear hypertexts enable the readers to navigate in a non-linear way depending on any information that is personally relevant to them. Challenges occur as these readers need to choose hyperlinks which will help them in searching for meaning. Moreover, they should be able to return to the original page. These require reasoning skills as Tapscott summarizes the process as (1998; 63), "It's point, read, think, click". Next are the multiple-media texts. Unlike conventional texts, electronic texts can include a range of multiple-media formats such as icons, symbols, audio and video clips and texts which are interactive and animated. This format provides new ways in delivering meaning and without the expertise in the new literacies, readers are unable to interpret the information. Lastly are interactive texts which allow the readers to be personally involved and literally create their own story from the information gathered in the text. This is in contrast with the conventional text where the story line is determined by the author thus minimizing readers' personal involvement. However, readers should be skillful and plan their reading process in advance.

The second element is the reading activity which involves the purpose, process and consequences of reading electronic texts. The purpose and process of reading are broad as "they demand fairly high levels of thinking and collaborative problem solving that may surprise readers used to more traditional reading tasks". Meanwhile the consequences of reading include the knowledge gained from the electronic texts as well as its application.

Lastly is the reader of the text. Technology-embedded texts are sources to ignite readers' cognitive capabilities. It serves to compensate inadequate reading ability by inserting additional features such as audio and video clips and interactive activities designed to build comprehension skills. Moreover, the features also attract the students' interest to engage themselves in autonomous learning.

The reading comprehension occurs within the readers' socio-cultural context. Since reading comprehension model is a social process, technology provides the opportunities for interactions to take place. This results in the sharing of knowledge which promotes critical thinking as well as deeper understanding of the texts. The model shows that there is a pressing need for students to be taught on how to read not just online, but also offline.

When reading online, students also should be made aware of the offline reading strategies that they can use. Strategies which are similar (offline and online) could be transferred from one mode to another. According to the Common Underlying Proficiency hypothesis, literacy skills can be transferred provided that there is adequate exposure to the target content and sufficient motivation for learners. There is a common underlying proficiency that facilitates literacy development and assists the transfer of language skills to transfer. Therefore, such a transfer is possible (Cummins 1979; 1991). Realizing the difference in strategy used between these two modes of reading will make readers more competent and as a result better language learners.

Several researches have been done to investigate the reading processes while reading online and offline. Stakhnevich (2002) conducted a study on thirty-one ESL students to investigate the impact of the web's instructional media on L2 comprehension during independent learning. The subjects were divided into two groups. The first group used web glosses and online dictionary while the second group used the printed version of Merriam-Webster dictionary. Next, they were instructed to complete a comprehension task. The results of the study indicate that the web medium evokes better reading comprehension than traditional print medium. These findings were supported by Hoffman (1998) who examined the effects of hypertext environment on the reading comprehension of L2 learners in an intermediate-level college German class. Fourteen subjects were divided into two groups and they were given different treatments. Both groups were instructed to read four stories in hypertext and print text. It was discovered that the subjects who read the hypertext outperformed those who read print text on three

of the four stories read. The hypertext group read more quickly and produced fewer errors while reading compared to the print text group.

These findings differ from the results of a study done by Crow (1996) in determining if hypertext documents can be read and comprehended at the same level as linear documents. In one of the experiments, fifteen subjects were subjected to different conditions while they were reading; paper condition, low resolution CRT screen condition and high resolution CRT screen. The findings showed that there are no differences between hypertext and paper when reading comprehension and reading from a computer monitor regardless of screen resolution is slower than reading from paper text.

To date, not much research has been targeted to explore online reading strategies by learners. One such study conducted by Anderson (2003). Discovered that the majority of the reading strategies used are problem solving strategies compared to global and support strategies. However, in a study done by Konishi (2003), it is interesting to note that both global and support strategies were widely utilized by readers when reading hypertext. Participants were said to make inferences and linked the new information with their prior knowledge pertaining to the content of the text. They also applied navigational strategies such as browsing, skimming, searching and scanning, scrolling up and down the pages when reading.

A comprehensive review of literature found no research conducted to specifically compare the reading strategies used in different contexts offline and online by the same readers in an ESL situation. This will provide insight on the similarities and differences of online and offline reading strategies employed. If there are similarities in strategies used, information can be gained not just on what strategies can be transferred, but also the different tasks that could be employed for positive transfer to take place. Differences on strategies suggest new sets of reading literacy need to be developed among students. With the implementation of smart schools in Malaysia, proficiency in the new literacy is considered essential for the students' future.

Research Questions

This survey addresses the following research questions:

1. What are the online reading strategies used by second language readers?

2. What are the offline reading strategies used by second language readers?
3. Is there a difference in their use of online and offline reading strategies?

From the above research questions the following hypothesis is constructed.

Are there any significant differences in ESL students' use of online and offline reading strategies?

Methodology

Subjects

The subjects of this study were 109 ESL learners from a higher learning institution in Malaysia. These students were working on their Bachelor of Education (TESL) degrees and their age ranged between 20-22 years. All of the students were computer literate as they had taken courses related to the use of the computer for learning and teaching.

Instruments

Two sets of questionnaires were employed. The first set is the Survey of Reading Strategies (SORS) developed by Sheorey and Mokhtari (2001) which was designed to investigate metacognitive reading strategy awareness of post-secondary students who were native and non-native speakers of English. This questionnaire measures three categories of reading strategies: global reading strategies, problem-solving reading strategies and support strategies. Global strategies are strategies that readers apply to monitor their understanding and manage their reading. Examples of global strategies are using prior knowledge about the target content, looking at the overall organization of the text before reading in detail and reading with a specific purpose in mind. Problem-solving strategies are used when readers "work directly with texts" (Mokhtari and Sheorey, 2002: 4) when there is a problem in comprehension. These are the specific strategies readers use such as adjusting the speed of reading, visualizing and making guesses of unknown words in order to overcome comprehension problems. Finally, support strategies are "basic support mechanisms intended to aid the reader in comprehending the text" (Mokhtari and Sheorey 2002: 4). Examples of such strategies are

taking notes, reading aloud, underlining, paraphrasing and making use of reference materials. There are a total number of 30 items in SORS out of which are global, support and problem solving strategies. It uses the five-point Likert scale to measure the subjects' responses.

Anderson (2003) adapted the SORS and developed the Online Survey of Reading Strategies (OSORS). Anderson (2003) maintained the three original categories – global, problem-solving and support strategies. However, 8 items were added. OSORS comprises a total number of 38 online reading strategies – 18 items on global reading strategies, 11 items on problem-solving strategies and 9 items on support strategies. The reliability of the OSORS is reported as r = 0.92. It also uses the five-point Likert scale to measure the subjects' responses.

Data Collection

The researchers personally collected the data. Data collection was carried out during class time in the language lab or at the lecture halls. The subjects were required to complete the background questionnaire before answering the survey. The researchers were there to provide any assistance or answer any queries. The students took about 20-25 minutes to complete the questionnaire.

Data Analysis

Paired sample T-tests were carried out to measure the mean differences between two modes of reading within a specific group. This is to find out if there are any significant differences on the use of different types of strategies for a specific group of learners. Macro and micro analysis of the data were conducted. Macro analysis refers to the use of the three different categories of strategies and the overall use of strategies i.e. the combination of the three categories. Micro analysis refers to the use of each individual strategy listed under the three different categories.

Results

The results of the study will be presented in accordance with the research questions listed in this study.

RQ1. What are the online reading strategies used by second language readers?

RQ2. What are the offline reading strategies used by second language readers?

The first two research questions seek to identify the online and offline reading strategies used by the L2 readers. It is discovered that the top ten online reading strategies used by the second language learners comprise 6 global strategies and 4 problem solving strategies (refer to Table 1). No support strategy is used as top ten. This shows that readers use 46% of the global strategies listed (recall that they are a total number of 13 items for global strategies) and 50% of problem-solving strategies listed. The two strategies used the most are G 1 readers have a purpose in mind when they read on-line and P31 which states that readers will make guesses of unknown words or phrases. At the second place is P 16 when online text becomes difficult, readers re-read it to increase their understanding and at the third place, is p13 I adjust my reading speed according to what they are reading online which is closely followed by p11, I try to get back on track when they lose concentration.

For the top ten offline micro analysis of reading strategies, second language learners reported 6 problem solving strategies, 3 global strategies and 1 support strategy. This indicates that they employ 75% of problem-solving strategies listed followed by 15.4% global strategies and 22% support strategy. The need strategy used the most is P 11 where readers would adjust their reading speed according to what they are reading. This is closely followed by both S2 which states that readers would take notes while reading to help them understand what they read and P25, when online text becomes difficult, readers re-read it to increase their understanding. This is followed by P 28 which is When I read I guess the meaning of unknown words or phrases and this is closely related to P9 I try to get back on track when I lose concentration

The bottom ten online strategies (refer to Table 3) comprise 6 support strategies, 3 global strategies and only 1 problem-solving strategy. The findings indicated that 66.7% of support strategies are used least. This is followed by 23% of global strategies listed. Out of the three types of strategies, it appears that problem solving is the least used at only 12.5% of the list given.

Similarly, the bottom ten offline strategies also comprise 6 support strategies, 3 global strategies and only 1 problem-solving strategy. This indicates 66.7% of support strategies listed used offline. This is also

Table 1: Total Use of Online and Offline Reading Strategies

Top Online						Top Offline					
Problem Solving		Global		Support		Problem Solving		Global		Support	
Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	PercenTage
4	50	6	46	0	0	6	75	3	15.4	1	22

Bottom Online						Bottom Offline					
Problem Solving		Global		Support		Problem Solving		Global		Support	
Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	Percentage	Total	PercenTage
3	12.5	1	23	6	66.7	3	12.5	1	23	6	66.7

Table 2: Top Ten Reading Strategies

	Online					Offline			
	Type of strategy	Statement	Mean	SD		Type of strategy	Statement	Mean	SD
1	G1	I have a purpose in mind when I read on-line.	4.03	0.81	1	P11	I adjust my reading speed according to what I am reading.	4.22	0.71
2	P31	When I read online, I guess the meaning of unknown words or phrases.	4.03	0.87	2	S2	I take notes while reading to help me understand what I read.	4.21	0.70
3	P16	When online text becomes difficult, I re-read it to increase my understanding.	4.00	0.86	3	P25	When text becomes difficult, I reread it to increase my understanding.	4.21	0.83
4	P13	I adjust my reading speed according to what I am reading online.	3.99	0.73	4	P28	When I read I guess the meaning of unknown words or phrases.	4.19	0.88
5	P11	I try to get back on track when I lose concentration.	3.98	0.78	5	P9	I try to get back on track when I lose concentration	4.18	0.69
6	G32	I scan the online text to get a basic idea of whether it will serve my purposes before choosing to read it.	3.96	0.86	6	P14	When text becomes difficult, I pay closer attention to what I am reading.	4.06	0.77
7	G5	I think about what I know to help me understand what I read online.	3.89	0.84	7	P19	I try to picture or visualize information to help remember what I read.	4.04	0.82
8	G6	I take an overall view of the online text to see what it is about before reading it.	3.89	1.05	8	S10	I underline or circle information in the text to help me remember it.	4.02	0.96
9	G27	I try to guess what the content of the online text is about when I read	3.88	0.75	9	G24	I try to guess what the content of the text is about when I read.	4.01	0.79
10	G14	When reading online, I decide what to read closely and what to ignore	3.82	0.96	10	G3	I think about what I know to help me understand what I read.	4.00	0.72

Table 3: Bottom Ten Reading Strategies

	Online					Offline			
	Type of strategy	Statement	Mean	SD		Type of strategy	Statement	Mean	SD
1	G3	I participate in live chat with native speakers of English.	2.27	1.20	1	S29	When reading I translate from English into my native language.	2.65	1.16
2	S14	When reading on-line, I translate from English into my native language.	2.48	1.14	2	S5	When text becomes difficult I read aloud to help me understand what I read.	3.24	1.30
3	G2	I participate in live chat with other learners of English.	2.58	1.18	3	S30	When reading I think about the information in both English and my mother tongue.	3.25	1.18
4	S15	I use reference materials (e.g. an on-line dictionary) to help me understand what I read on-line.	2.76	1.16	4	S2	I take notes while reading to help me understand what I read.	3.26	0.93
5	S16	When on-line text becomes difficult, I read aloud to help me understand what I read.	2.89	1.22	5	P16	I stop from time to time and think about what I am reading.	3.33	0.79
6	S4	I take notes while reading on-line to help me understand what I read.	2.96	1.09	6	G21	I critically analyze and evaluate the information presented in the text.	3.33	0.80
7	S38	When reading on-line, I think about information in both English and my mother tongue.	3.05	1.13	7	S13	I use reference material (e.g. a dictionary) to help me understand what I read.	3.41	1.18
8	P19	I stop from time to time and think about what I am reading on-line.	3.24	0.93	8	S26	I ask myself questions I like to have answered in the text.	3.41	0.88
9	G24	I critically analyze and evaluate the information presented in the on-line text.	3.27	0.78	9	G8	I review the text first by noting its characteristics like length and organization.	3.55	1.05
10	S29	I ask myself questions I like to have answered in the on-line text.	3.28	0.90	10	G20	I use typographical features like bold face and italics to identify key information.	3.56	1.04

RQ3: Is there a difference in their use of online and offline reading strategies?

followed by 23% of global strategies listed. And, out of the three types of strategies listed, problem solving is the least used at only 12.5%.

The online reading strategies used least are participating in live chats with other speakers (G 3). This is followed by S37 where when the readers are reading on-line, they tend to translate from English into their native language. Related to G3, is (S 3), where they also do not participate in live chats with other learners of English.

Meanwhile, the bottom offline reading strategies used are S 29 where the readers will translate from English into their native languages when reading. This is followed by S 5; When text becomes difficult I read aloud to help me understand what I read. At the third place is S 30, when reading I think about the information in both English and my mother tongue which is closely followed by S2 I take notes while reading to help me understand what I read.

To answer RQ 3, the results of the study will be presented in terms of its macro analysis and micro analysis. The macro analysis show that there are similarities and differences in the online and offline reading strategies used by second language learners. The descriptive statistics (refer to Table 4) indicate that the strategies that are used most by learners when reading online are global strategies (m = 64.5, s.d = 8.6), followed by problem-solving strategies (m = 41.2, s.d = 5.4) and support strategies (m = 28.0, s.d. = 5.4). Similarly, the offline strategies that are used most by learners are also global strategies (m = 48.7, s.d = 6.8), followed by problem-solving strategies (m = 32.0, s.d. = 4.0), and finally, support strategies (m = 30.5, s.d. = 5.2). The mean values for the total number of strategies employed is higher for online reading (m = 133.82, s.d. = 17.3) compared to offline reading (m = 111.27, s.d. = 14.3). Closer analysis of the data indicates that the mean values for the different type of strategies and the total number of strategies are consistently higher when reading online except for support reading strategies.

To compare if the differences in the mean values are significant, paired sample t-tests were conducted. It is found that the difference in the types of strategies used between online and offline reading are significantly different. It is found that online reading employs significantly more number of total strategies compared to offline reading ($t = 19.23$, $p = 0.0$). There is also significantly more global strategies employed when reading online compared to offline ($t = 26.44$, $p = 0.00$). Problem solving online strategies are also significantly higher compared to problem solving offline ($t = 24.7$, $p = 0.0$). In contrast to the above three findings, support

Table 4: Descriptive Statistics of Online and Offline Reading Strategies

Online								Offline							
Problem Solving		Global		Support		Overall		Problem Solving		Global		Support		Overall	
Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
41.28	5.4	64.53	8.7	28.01	5.4	133.82	17.3	32.01	4.0	48.71	6.8	30.54	5.2	111.27	14.3

strategies for offline reading has significantly higher mean values compared to reading online ($t = 5.7$, $p = 0.0$).

The micro analysis involved comparing the mean values of matching items between online and offline strategies. There are 30 pairs of matching items altogether, of which 13 are global, 9 support and 8 problem solving strategies. Results of the micro analysis indicate that there are 11 individual strategies which are used significantly different. Among the 11, one is global strategy, four are support strategies and finally, six are problem solving strategies. The strategies which are used significantly different are listed in Table 5:

Table 5: Strategies which are Significantly Different between Online and Offline

Type of Strategy	Statement	Mean	SD	T-value	Sig.
Pair 1	G1 I have a purpose in mind when I read.	4.21	0.71	2.028	<0.05
	G1 I have a purpose in mind when I read online.	4.03	0.81		
Pair 2	S2 I take notes while reading to help me understand what I read.	3.26	0.93	3.206	<0.05
	S4 I take notes while reading on line-o help me understand what I read.	2.96	1.09		
Pair 3	S5 When text becomes difficult I read aloud to help me understand what I read.	3.24	1.30	2.742	<0.05
	S7 When on-line text becomes difficult I read aloud to help me understand what I read.	2.90	1.22		
Pair 4	P9 I try to get back on track when I lose concentration.	4.18	0.69	2.886	<0.05
	P11 I try to get back on track when I lose concentration.	3.98	0.78		
Pair 5	S10 I underline or circle information in the text to help me remember it.	4.02	0.96	5.377	<0.05

(*continued*)

Cont'd Table 5: Strategies which are Significantly Different between Online and Offline

Type of Strategy	Statement	Mean	SD	T-value	Sig.
	S12 I print out a hard copy of the on-line text then underline or circle information in the text to help me remember it.	3.37	1.24		
Pair 6	P11 I adjust my reading speed according to what I am reading.	4.22	0.71	3.179	<0.05
	P13 I adjust my reading speed according to what I am reading on-line.	3.99	0.73		
Pair 7	S13 I use reference material (e.g. a dictionary) to help me understand what I read.	3.41	1.18	5.117	<0.05
	S15 I use reference material (e.g. a dictionary) to help me understand what I read on-line.	2.76	1.16		
Pair 8	P14 When text becomes difficult, I pay closer attention to what I am reading	4.06	0.77	2.335	<0.05
	P16 When on-line text becomes difficult, I pay closer attention to what I am reading	4.00	0.86		
Pair 9	P19 I try to picture or visualize information to help remember what I read.	4.04	0.82	3.034	<0.05
	P22 I try to picture or visualize information to help remember what I read on-line.	3.81	0.87		
Pair 10	P25 When text becomes difficult, I reread it to increase my understanding.	4.21	0.83	2.181	<0.05
	P28 When on-line text becomes difficult, I reread it to increase my understanding.	4.0	0.86		
Pair 11	P28 When I read I guess the meaning of unknown words or phrases.	4.19	0.88	2.069	<0.05
	P31 When I read online I guess the meaning of unknown words or phrases.	4.03	0.87		

Discussion

The findings of this study suggest that there is a marked differences between online and offline reading. Online reading employs significantly higher global and problem solving strategies compared to offline reading. This suggests that online reading utilizes higher levels of reading comprehension strategies which involves higher levels of comprehension monitoring and working directly with the text to overcome comprehension problems.

The macro analysis is supported by micro analysis where students employ strategies such as reading with a purpose in mind; scanning to select information which are relevant to the purpose of reading. This is reflected in items P11, G1, G32 and G14 as the top ten online reading strategies selected. Students also think at the top down level or the global view of the text (G6) when they read online, where they relate their prior knowledge to the text (G5), predict and guess the meaning of the text (G27, P31). The study provides evidence that online reading involves the utilization of higher levels of reading strategies.

In contrast, offline reading utilizes significantly more support strategies. Support strategies are utilized when readers face difficulties in reading and resorted to strategies which can help repair and aid their comprehension. Most of these strategies are bottom up strategies such as taking notes while reading (S2) which is the second highest online strategies employed and S10 which is underlining and circling the information to help readers remember the text. S10 is the eighth highest offline reading strategies employed.

Analysis of the micro analysis of the online reading strategies used least also provide evidence that 66% of the support strategies listed are used least. Examples of such support strategies are translation (S14, S38), use of reference materials such as dictionaries (S15), reading aloud when text becomes difficult (S16), taking notes (S4), self-questioning (S29). This further supports that online reading involves higher level of cognitive processes where readers read the text globally utilizing their prior knowledge, reading critically and closely monitoring their understanding of the text. Comprehension difficulties are overcome by guessing the overall meaning of the text rather than resorting to the use of other supportive materials such as dictionaries. This indicates that readers who are involved in online reading tend to use higher level reading strategies as their ability to make guesses and read at the macro level are qualities of good readers. Poor readers tend to avoid taking risks in reading whenever they find difficulties in comprehending. They tend to slow down their reading, resort to other reference materials such as dictionaries, circle information, notes taking and reading aloud instead of continuing reading and making guesses in the process.

There are many reasons why reading online induces readers to employ higher level reading strategies. One reason is the nature of the online reading text. Online text is non-linear where hypertexts, hyperlinks, web-based, multiple-media and interactive texts require readers to navigate, assess and select information which are relevant to the purpose

of reading in search for meaning. New literacies relevant to online reading require readers who are skillful in knowing, using, evaluating and orchestrating a wide range of strategies to gather and interpret information.

Another reason is the nature of the online task. Online tasks require expertise in the new literacies which involves the ability to use and manage audio and video clips, hyperlinks, hypertexts etc. Learning the new format and sources of information allows readers to have better access to information and be actively involved in information gathering. Learning to use electronic texts can be a challenge in the cognitive aspects where readers need to work on not just the comprehension of the text but also the electronic features in which comprehension is embedded.

The third reason relates to the readers of the text. The process of online reading requires readers to be active and interactive where they are engaged in higher levels of thinking compared to offline reading. Readers will need to monitor their comprehension closely and learn to become autonomous learners. Online reading requires them to make decisions such as on what to do, where to go, how to choose, when and why to select information. They will also be working at their own pace and rate of learning. This allows them to become not just better readers but also independent and autonomous learners.

Conclusion

From the results and discussion we have learned that the three strategies (global, support and problems-solving) employed when reading online and offline are essential for both types of reading. As these strategies help readers to better comprehend offline reading materials, they also help comprehension in online reading, hence, they are all of equal importance.

The teaching, learning and the practice of these strategies are immensely vital for better reading and comprehension for both learners and teachers. Therefore, training teachers of English language in the use of these strategies is a must so that they could use these strategies themselves to better improve their reading skills (both online and offline) and later teach these strategies to students so that they would be better readers of English and better readers per se. This is also important as courses and workshops on reading strategies for offline and online reading should be held for teachers for their professionalism development. As most teachers might be more acquainted with offline reading materials

and its reading strategies, given the importance of technology and its prospects for the future, more emphasis should be given to the online reading materials. This is where teachers can exercise more on these strategies using the online reading texts that the younger students nowadays are more familiar with.

In terms of the teaching of reading strategies using offline and online reading texts, it is suggested for teachers to teach students to use these strategies using both offline and online reading texts. The learning of reading strategies using both online and offline reading texts is very beneficial for students as they (the strategies) complement each other when reading online or offline as the students develop and evolve as better English language users and better readers. However, teachers must take note of many aspects when teaching the students to read (especially when reading online) using these strategies. Teachers must take into consideration of the students' level of reading abilities, students' interests, the texts' level of difficulty, and also purpose of the reading. All of these aspects, if not taken into consideration, might hinder the process of using the strategies effectively and ultimately will risk the comprehension of the text (whether online or offline).

When teaching online reading strategies or using online texts, teachers must also realize that as much as the online text might be interesting and stimulating (visually and audibly), they can also be disruptive to the flow of reading and comprehension of the text. This is as the use of hyperlinks and hypertexts in the online reading texts have been found to be disturbing to students' level of comprehension as they find these hyperlinks and hypertexts more 'attractive' than the actual text itself. There are two things that the teachers can do to overcome this problem. The first suggestion is to choose online reading texts that are not too flashy and abundant with hypertexts or hyperlinks; and the other suggestion is to teach the students to read the text through without paying particular attention in the hyperlinks or hypertexts unless it is necessary (or required) for them to do so.

Interestingly, there are quite a few points that can be taken into consideration as far as implications for research is concerned. The researchers would like to suggest for further research of the same nature to be done on different samples of students or readers. It would be very interesting if more research can be done on the use of strategies for different age groups, especially the computer-savvy younger generation as opposed to the more conventional group of people who are not as computer savvy. More comparative studies should also be carried out to

discover the level of reading skills of those who are proficient in the English language and those who are not, and how their proficiency level might hinder or elevate their comprehension of the online text.

It is also recommended for further research to be done on the effects of hyperlink and hypertexts in students' reading abilities and their comprehension level with and without hyperlinks and hypertexts in the online reading texts. From the study that the researchers have done, they found hypertexts and hyperlinks to be disruptive of the students' flow of reading the online reading materials. It would be very interesting to see if further in-depth researches could be done in determining the extent to which the hyperlinks and hypertexts hinder the process of online reading and comprehension. It would also be both interesting and beneficial if research could provide solutions on how to decrease or eliminate the negative effects of hyperlinks and hypertexts when reading online materials.

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