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# An Exploration of EFL Students' Use of Online English Reading Strategies at University Level

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Abstract

The purpose of this survey method study was to explore English as Foreign Language (EFL) learners' online English reading strategies using Taiwanese university students as examples. The relationships between online English reading strategy and individual students' characteristics were also examined. Data was obtained through a self-developed questionnaire with a cluster sample of 537 students from 11 universities. The collected data was then analyzed using descriptive analysis, t-test, and one way ANOVA in SPSS v.23, with the significance level set at .05. The results indicated that the participated students used online English reading strategies in a medium level. No significant difference was found in students' uses of these strategies in genders and years of English learning experience, but in grade level and perceived reading ability. This study results provided information that completes the literature and implications for practice and directions for further research.

Keywords: English as foreign language (EFL); Online reading; Online reading strategy; university student.
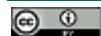
1. Introduction

Knowledge has been long recognized as the ability competitiveness index in today's knowledge-based economy and success of individual highly depends on the acquisition of knowledge through reading (Kefela, 2010), Especially, with the advent and the popularity of the Internet technology, to send and receive electronic mail, to participate in social networking sites, to browse the website and to search information must rely on reading ability. It is obvious that our reading has changed from print to digital reading. The internet is English-oriented, yet most of the students feel helpless when reading English online and have reading difficulties and prefer reading in print rather than online (Liu, 2006; Spencer, 2006; Woody *et al.*, 2010), Therefore it is vital for students to develop strategies to comprehend and respond to online information so that they may further become proactive, creative and a knowledge of the members of this global village (Brantmeier, 2002; Coiro, 2003; Sutherland-Smith, 2002).

The use of EFL effective online reading strategies has been broadly recognized to be mandatory and is especially imperative; however, the digital generation are not capable enough, despite that they might have grown up with easy access to digital information and communication technologies (Henry, 2006), When doing online reading, readers usually experience non-sequential information flow which means one hyperlink word or term might lead to a new piece of information. Reading then becomes interactive that readers need to make deci-sions about where to go with the text. Readers need to change their reading habits and deal with fluid infor-mation environments which is very different from the traditional reading. It is critical to locate the online in-formation you need and synthesize it into meaningful chunks of information. However, it is challenge to most readers because online reading comprehension required established and new prior knowledge sources. Readers need to regularly make, check, and regulate inferences using strategies that are similar to those skilled readers use in printed texts and to engage in using a multilayered inferential reading process. This is also why online reading is difficult to many readers and especially difficult to those who are EFL or ESL students (Chen, 2003), Longer time would require for them to read English, the universal language of internet and different strategies need to be used when reading a second or foreign language.

In the last two decades, a great amount of studies have been done to explore English as a second or foreign language print reading (Block, 1986; Campbell, 2002; Day and Bamford, 1998; Lee, 2015; Mokhtari and Sheorey, 2008; Plakans, 2009), there is little empirical research focus on English online reading. The importance of reading comprehension strategy was also explored, ex. (Brantmeier, 2002; Mokhtari and Reichard, 2002), how-ever, there is little research available that investigate the perspective of online reading strategy Not until the past decade, scholars started to study English online reading comprehension strategies in the countries (Akyel and Erçetin, 2009; Anderson, 2003; Ariew and Ercetin, 2004; Arnold, 2009; Coiro and Dobler, 2007), but mostly focused on online reading comprehension strategy instruction (Chang, 2005; Chun, 2001; Huang and Chern, 2006; Huang *et al.*, 2009), None of the above are emphasis on the overall use of online reading comprehension strategy, and not in Taiwan. Therefore, this study aimed at probing EFL learners' uses of online English reading strategies in Taiwan for the purposes of providing educators and instructors the information they need to make the best possible decisions about their teaching. With this in mind, this research described in this paper aimed to answer the following research questions:

1. What is the overall use of online English reading strategies of university EFL students in Taiwan?

2. What are the differences among Taiwanese university EFL students' online English reading strategies in terms of their background characteristics?

2. Material and Method

This study was carried out to examine Taiwanese university EFL students' use of online English reading strategy. Survey method design was used in this study. Data was collected from a survey of Taiwanese university students' online English online reading comprehension strategy. The results were discussed in the conclusion section.

2.1. Participants

The participants for this study were 249 (46.4%) junior and 288 (53.6%) senior EFL students enrolled in various undergraduate programs from 11 universities in Taiwan Island wide. Approximately 292 (54.4%) of the participants were male and 245 (45.6%) of them were female and 88.3% were under 22 years old. The majority of the students have learned English for more than 10 years and perceived their own reading ability with an average level (49.5%).

2.2. Instrument

A survey named "EFL learners' online English reading strategies questionnaire" was developed to learn Taiwanese university EFL students' overall use of online English reading strategies. The steps used to develop the questionnaire were: (a) reviewed the related literature; particularly Mokhtari and Reichard's Survey of Reading Strategy created in 2002, (b) interviewed 10 students, c) the author reviewed each item and reduced the number of items, d) experts' opinions were obtained to meet the content validity of the questionnaire. Based on the above steps, the final survey was developed. Subsequently, the survey was pilot tested on 150 students to assess the reliability level. Cronbach's alpha reliability analysis revealed a score of .948, which showed that the instrument was highly reliable.

The final survey included 36 Likert types of questions measuring three categories of English reading strategies: namely, global reading strategies (GLOB), problem-solving strategies (PROB), and support strategies (SUP). The final instrument was then conducted to the students in the class time by the instructor in their universities. Students reported their use of the strategies on a five-point Likert scale from "Strongly Agree to Strongly Disagree". The survey also asked participants' personal information, namely, gender, age, grade level, and per-ceived reading ability.

2.3. Data Analysis

For the purpose of answering the research questions, the descriptive statistics of the responses were reported. A strategy was interpreted as a frequently used strategy if reported as "Strongly Agree (M = 4.20~5.00)" or "Agree (M = 3.40~4.19)". Then, the independent t-test was performed to compare the differences on students' use of online English reading strategies in terms of gender and grade level. One-way ANOVAs were used to access the statistically significant differences of age and perceived reading ability.

3. Results
3.1. Research Question 1: What is the Overall Use of Online English Reading Strategies of University EFL Students in Taiwan?

Based on the suggestion by Oxford (1990) for the usage frequency of language learning strategy in Table 1: low (2.4 or lower), medium (mean of 2.5 to 3.4), and high (mean of 3.5 or higher), the results showed that the students used the strategies (M = 3.31) for their online English readings in a medium to high level. Further, according to the mean score of each strategy category, students have a significantly high usage of Support Strategy (M = 3.33) than Problem Solving Strategy (M = 3.28) and Global Strategy (M = 3.27).

Table-1. Means and standard deviations of online English reading strategies

Strategies		Mean	SD
Global		3.27	.698
1	I have a purpose in mind when I read English online.	3.45	1.034
2	I participate in live chat with other learners of English.	2.25	1.157
3	I participate in live chat with native speakers of English.	2.13	1.037
5	I think about what I know to help me understand English I read online.	2.81	1.067
6	I take an overall view of the on-line English text to see what it is about before reading it.	3.52	1.007
8	I think about whether the content of the online English text fits my reading purpose.	3.41	1.011
10	I review the on-line English text first by noting its characteristics like length and organization.	3.45	1.092
14	When reading English on-line, I decide what to read closely and what to ignore.	3.48	.989
17	I use tables, figures, and pictures in the on-line English text to increase my understanding.	3.41	.970
19	I use context clues to help me better understand what I am reading on-line.	3.35	1.009
22	I use typographical features like bold face and italics to identify key information.	3.46	1.014
23	I critically analyze and evaluate the information presented in the on-line text.	2.96	1.222
25	I check my understanding when I come across new English information.	3.48	1.043
26	I try to guess what the content of the on-line English text is about when I read.	3.27	1.043
29	I check to see if my guesses about the on-line text are right or wrong.	3.53	1.075
31	I scan the on-line text to get a basic idea of whether it will serve my purposes before choosing to read it.	3.25	1.061
Problem Solving		3.28	.717
9	I read slowly and carefully to make sure I understand English I am reading online.	3.65	1.022
11	I try to get back on track when I lose concentration.	3.31	.997
13	I adjust my reading speed according to English I am reading online.	3.56	2.157
16	When on-line English text becomes difficult, I pay closer attention to what I am reading.	3.42	1.057
18	I stop from time to time and think about what I am reading online.	3.63	1.069
21	I try to picture or visualize information to help remember what I read online.	3.26	1.133
27	When on-line text becomes difficult, I read aloud to help me understand what I read.	3.16	1.002
30	When I read online, I guess the meaning of unknown words or phrases.	3.38	1.022
32	I critically evaluate the on-line text before choosing to use information I read online.	3.31	.951
33	I can distinguish between fact and opinion in online texts.	3.61	.949
34	When reading online, I look for sites that cover both sides of an issue.	2.47	1.259
Support		3.33	.706
4	I take notes while reading English online to help me understand what I read.	3.24	.977
7	When online English text becomes difficult, I re-read it to increase my understanding.	3.43	.934
12	I print out a hard copy of English on-line text then underline or circle information to help me remember it.	3.53	1.039
15	I use reference materials (e.g. an on-line dictionary) to help me understand English I read online.	3.44	1.002
20	I paraphrase (restate ideas in my own words) to better understand what I read online.	3.30	.973
24	I go back and forth in the online English text to find relationships among ideas in it.	3.23	.967
28	I ask myself questions I like to have answered in the on-line text.	3.08	1.072
35	When reading online, I translate from English into my native language.	3.57	1.123
36	When reading online, I think about information in both English and my mother tongue.	3.54	1.094

3.2. Research Question 2: What are the Differences among Taiwanese University EFL Students' Online English Reading Strategies in Terms of Their Background Characteristics?

As illustrated in Table 2 the results of the independent t-test indicated that no significant difference was found on students' uses of online English reading strategies between genders. Female and male students reported encountering practicing the strategies in similar frequencies. However, significant difference was found between junior and senior students' uses of online English reading strategies. Junior students (M = 3.368) reported using more online English reading strategy than senior students (M = 3.264).

Table-2. Independent t-test results between female and male students as related to online English reading strategies

	Male		Female			
	M	*SD*	*M*	*SD*	*t*	*p*
Strategy	3.297	.697	3.327	.682	-.416	.556
	Junior		Senior			
	M	*SD*	*M*	*SD*	*t*	*p*
Strategy	3.368	.635	3.264	.730	1.417	.030*

Note: N =537. df = 382. *P< .05

As shown in Table 3, there was no significant differences among the students regarding online English reading strategy use in terms of years of English learning experience. The results indicated that students with different years of English learning experience reported encountering practicing the strategies in similar frequencies. However, significant difference was found one the uses of online English reading strategies in terms of perceived reading ability. The Post hoc test revealed that students with higher perceived reading ability (F = 33.994, p <.01) used more

strategies which means that the participants' perceived reading ability significantly influenced their usage of online English reading strategies.

Table-3. ANOVA result among different years of English learning experience and perceived reading ability as related to online English information searching strategies and reading strategies

	Source	*SS*	*df*	*MS*	*F*	*Sig.*
Years of English learning experience	Between	2.262	5	.452	1.103	.359
	Within	135.795	331	.410		
	Total	138.056	336			
Perceived reading ability	Between	47.415	4	11.854	33.994	.000*
	Within	130.066	373	.349		
	Total	177.481	377			

Note: Sig. = significance. *p < .01.

4. Discussion

Current and previous studies on English reading strategies from the students' perspectives (Akyel and Erçetin, 2009; Brantmeier, 2002; Oxford, 1990; Park and Kim, 2011;2017; Sheorey and Mokhtari, 2001), highlighted the prominence of recognizing online reading strategy for EFL students. The study findings suggested that it is beneficial to identify actual use of online English reading strategy to encourage the strategies usage other than just blindly increasing the students' English reading abilities. Further, it is important to encourage students to build awareness of strategies through strategy instruction in reading (Almasi and Fullerton, 2012; Chamot and Kupper, 1989; Kern, 1989), More precisely, a training course on online reading strategy can assist students to get acquaint with various strategies, identify effective strategy and speed up their online reading. It is suggested that further research be undertaken in the teaching of online reading strategy to students in class.

5. Conclusion

The main purpose of this study was to investigate EFL learners' online English reading strategies using a group of Taiwanese university EFL students as an example. The results indicated that participated students have a medium level of online English reading strategy usage. The results of t-test revealed a significant difference of the strategy use in terms of students' grade level, but not genders. Junior students used more online English reading strategies than Senor students could be due to the fact that compulsory EFL courses are only required in the first two year of college study in Tawian. Junior students have just completed the course while Senior students haven't studied English for at least a year. In addition, one-way ANOVA results showed no significant differences among the participated students regarding online English reading strategy use in terms of years of English learning experience, but perceived reading ability. This finding supported the study results of Singhal (2001), that good readers tend to use more reading strategy than poor readers.

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