A Study of the Selection of Reading Strategies among Genders by EFL College Students  

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Abstract  
The purpose of this study was aimed to probe the question whether foreign language reading strategies use among EFL college freshmen differ according to different genders and the differences of frequency using types of reading strategies. Results indicated that the differences between male and female students on the types of reading strategies were significant, male students reported greater strategy use than their female counterparts regarding memory, cognitive, compensation strategies, while fewer males than females used strategies of meta-cognitive and social-affective while reading. In addition, males were more worried about unknown words compared to their counterparts while reading.

Keywords: Gender difference; Reading strategy; Meta-cognitive reading strategy

1. Introduction  
English reading is a fundamental form of language inputs, and a psycholinguistic process for active reconstruction of a message from written language. Reading is not only essential to in-school academic learning but also to lifelong learning (Dole, Duffy, Roehler & Pearson, 1991; Durkin, 1993). During reading, readers generalize some positive reading behaviors and afford reference for learners to learn English; the reader’s task is to comprehend the text that a writer creates, thereby the construction of reading comprehension from text is considered to be the most crucial academic skill learned in school, since it is an indication of the subjects’ meaningful interpretation of the selected passages in reading texts (Mastropiere & Scruggs, 1997) The reading process is the interaction between what the author has written and the reader’s own background and experience. In other words, it is a cognitive process and the reduction of uncertainty about meaning. Even though we know of the importance of reading strategies,
little research exists on whether or not ESL males and females have similar or different strategic reading habits. Although students’ perspectives are different, it is hard for a teacher to cater to each of the students’ needs. It would be useful for instructors to know male and female students’ preferences regarding learning styles as well as the factors influencing their reading habits. Thus, teachers can make a more educated decision by understanding the underlying factors for male and female students’ differing choices between strategic reading selections.

According to Rumelhart’s interactive model of reading (1994), reading is an interactive process, a synthesis activity, which involves both sensory information (graphemic information, and visual information), and nonsensory information (orthographic knowledge, lexical knowledge, syntactical knowledge, semantic knowledge, and pragmatic knowledge), all of “these sources of knowledge come together at one place, and the reading process is the product of the simultaneous joint application of all the knowledge sources” (p. 1164).

2. The Importance of Reading Strategy

Several researchers have proclaimed that EFL reading as a complete grasp of meaning in a written text in which a dynamic and growing appreciation of interrelationships in the text is required (Yang, 2002). Studies describe reading as an interactive cognitive process in which readers interact with the text using their prior knowledge and cultural background (Carrell & Eisterhold, 1983; Carrell, 1987; Pritchard, 1990; McNamara & Kintsch, 1996; Huang, 1997), and the success of reading comprehension depends on factors such as types of text, the genre of text structure, readers' language proficiency, text difficulty, and task demands (Alderson, 2000). Research findings have indicated that reading strategies, in particular, are important to students’ comprehension, and not only can improve reading comprehension, but also differentiate good comprehenders from poor ones (Kletzien, 1993; Dole, Brown, & Trathen, 1996). Reading strategies indicate how readers conceive of a task, how they make sense of what they read, and what they do when they don't understand. Basically, reading strategies can be any comprehension-enhancing action taken by the readers. These strategies consist of a whole range of strategies including skimming and scanning, contextual guessing, and reading for meaning, utilizing background knowledge, recognizing text structure, and so forth. (Cohen, 1998; Hsu, 2006).

The importance of using reading strategies has been found to be obligatory and is especially critical for those English as a ESL/EFL learners desirous of a high level of English language literacy and success in US academic institutions (Schunk & Rice, 1992; Sheorey & Mokhtari, 2001). The application of reading strategies as heuristics and aids that can facilitate reading comprehension and overcome comprehension breakdowns at both the word and sentence levels (Aarnoutse & Schellings, 2003). Academic reading requires in-depth comprehension; it also includes "the active monitoring and consequent regulation and orchestration of these processes in relation to
the cognitive objects or data on which they bear, usually in the service of some concrete goal or objective” (Adamson, 1992, p.232).

3. Gender Differences in Reading Strategy Use

Gender difference also plays a significant role in reading research, empirical studies have shown that male and female learners act differently in EFL reading performance and strategy use such as Griva, Alevriadou, & Geladari (2009), who studied the gender differences on the effects of selections of EFL reading strategies use, concluded that female students were reported making extensive use of a wider range of strategy repertoire and showed more strategic knowledge and flexibility in using both cognitive and metacognitive strategies. A study investigated by Brantmeier (2003), found that male and female readers reading comprehension performance varied according to the topics of the texts due to their differences on background knowledge, especially when the content of the reading passages were feminine-related, female readers tended to do better than their counterparts. Furthermore, a lot of research findings show that males and females use different strategies in language learning particularly in reading comprehension (Chavez, 2001; Abu-Rabia; 1999; Sheorey, 1999; Kaylani, 1996; Green, & Oxford, 1995; Mayer, 1996). In addition, males and females may use the same number of strategies in language learning but females are more skillful at applying these strategies qualitatively, (Young & Oxford, 1997, Clark, Osborne & Akerman, 2008). It has also been found that females show a more positive attitude to reading (Swalander & Taube, 2007), and the girl students used listening strategies more frequently and held more positive attitudes toward English listening than the boy students (Norton, 2000, Abilock, 2002).

Several studies show that females tend to be more active strategy users than their male counterparts, most of which were carried out using Oxford’s Strategy Inventory for Language Learning or SILL. A study of gender and English learning strategy use using the SILL was conducted by Xu (2004), who studied 1554 students as participants from junior high schools through satisfied cluster random sampling, found that female students scored higher grades in cognitive strategy and compensation strategy than male students. Another related study also pointed out that significant differences were found between males and females in the categories of compensation and affective strategies, yet not in the other four categories of memory, cognitive metacognitive, and social strategies (Goh and Foong, 1997). However, in Phakiti study (2009) found there were no gender differences in either reading performance or use of cognitive and metacognitive strategies.

4. Purpose of the study

English reading is not only an obligatory course for those English as a Second Language (ESL) students of English language literacy in academic institutions, but also the main medium to absorb outside knowledge and learn other curricular areas. There are growing numbers of research the field of reading strategy use among EFL learners. However, little knowledge has been declared about the differences on the favorite reading strategy use between males and females learners, especially at college level. Thus, the purpose of this study is to explore whether the application of reading strategies were varied according to gender diversities. Based on this notion, the research question was thereby framed as follows: “Do gender differences exist in reading strategies use among EFL college students? In keeping with this purpose, the following hypothesis was proposed: “There are no significant differences existing in reading strategies use among EFL college students”. We hope such a study may provide language instructors with some insight into the type of language learning pedagogy to which males and females may be more suited.

5. Methodology
5.1 Participants

In this study, the participants were daytime college freshmen from a university of technology with varied majors, who were taking the freshman English course for two hours a week among 4 classes (i.e., Industrial engineering & management; electronic; Applied foreign languages and Cosmetology and styling). Originally, the formal questionnaires were distributed to 159 participants, but of the 159 returned questionnaires, 3 questionnaires were discarded as invalid; therefore, the acceptable, valid questionnaires were 156 copies. The valid responses consisted of 84 males, accounting for 52.8 %, and 72 females, accounting for 45.3 %, approximately a response rate of 98.1% of all collected.

5.2 Instrument

A modified version of 39-item questionnaire called “Strategy Inventory for EFL Students’ Reading” was developed, which partially derived from the strategy taxonomy of Oxford (1990), but in order to fix the EFL cultural distinction and the intention of this research survey, several new items were added. In addition, in order to eliminate the possible misunderstandings on survey items due to language barriers, the questionnaire was administered to participants with Chinese version of students’ mother tongue. The statements on the questionnaire consists of five types of reading behaviors: memory, (items 1 to 8), cognitive (items 9 to 18), compensation (items 19 to 24), metacognitive (items 25 to 31), and social-affective (items 32 to 39). The internal consistency reliability coefficients for each subscale were .78, .79, .65, .75, .83 respectively and reliability for the total items was .92. In order to avoid unnecessary misreading and miscomprehension, the instrument was conducted in participants’ mother tongue — Mandarin Chinese.

5.3 Pilot Study

Before the formal study, the researcher conducted a pilot study to ascertain the appropriateness of the data collection instruments, and administration procedures. The pilot administration was conduct during the participants’ regular class to 89 college freshmen students, including 45 females and 44 males. All the participants completely answered questionnaires and both of them were classified as valid responses. In order to recognize if the questionnaire could reach internal consistency, the researcher utilized Statistic Package for the Social Science (SPSS) version 13.0 to conduct the value of Cronabch alpha coefficient. The internal reliability coefficient of the pre-test of the pilot study yield to 0.91 means there is high reliability, and the statements in the questionnaire could be formally conducted in the official study. Also, three EFL professors who specialized in the field of English teaching helped to review the validity of the questionnaire and adequacy of the wording, some problems related to the miscomprehension and inappropriateness of the questionnaire were therefore modified to improve the efficiency of the survey. Therefore, this process yielded the complete “Strategy Inventory for Language Learning” form for the present study.

6. Data analysis

After the data were collected, the Statistical Package for the Social Sciences, version 13.0 was employed to run the data by using descriptive statistical methods. Frequencies and percentages for all items of the questionnaires were obtained. Moreover, t-tests, ANOVA, and Pearson correlation were performed; the level of statistical significance for all ANOVA and t-tests was set at .05, and for correlation tests, at .01. The Independent- Samples t-test revealed that there were significant difference between males and females in terms of five types of reading behaviors on memory(t = 65.78, p<.05),
cognitive ($t = 70.19, \ p < .05$), compensation strategies ($t = 67.56, \ p < .05$), meta-cognitive ($t = 70.41, \ p < .05$), and social-affective reading strategies ($t = 66.46, \ p < .05$).

Results indicated the most frequently used reading strategy by male students was “I like to study English articles.” (No. 32); the least frequently used strategy by male students was “I make guesses from the context when I encounter an unfamiliar word.” (No. 20) The most frequently used reading strategy by female students was “I make plans and urge myself to read as often as possible.” (No. 31) The least frequently used strategy by female students was “I make guesses from the context when I encounter an unfamiliar word.” (No. 20).

Table 1 presented the results of the MANVO for gender differences in the five types of reading behaviors, including memory, cognitive, compensation, metacognitive, and social-affective strategy use.

Table 1. Multivariate Test for Students’ Reading Strategy Use by Genders

| Effect                  | Value   | $F$    | df  | Error df | $P$  |
|-------------------------|---------|--------|-----|----------|------|
| Gender* Memory          | Wilk’s Lambda | .64    | 1.45 | 60.00    | 728.82 | .017 |
|                         | Multivariate sig. | .48    | 1.45 | 60.00    | 738.00 | .013 |
| Gender* Cognitive       | Wilk’s Lambda | .62    | 1.44 | 64.00    | 710.86 | .017 |
|                         | Multivariate sig. | .51    | 1.44 | 64.00    | 718.00 | .017 |
| Gender* compensation    | Wilk’s Lambda | .72    | 1.64 | 40.00    | 748.86 | .008 |
|                         | Multivariate sig. | .35    | 1.69 | 40.00    | 782.00 | .006 |
| Gender* meta-cognitive  | Wilk’s Lambda | .66    | 1.60 | 52.00    | 737.98 | .005 |
|                         | Multivariate sig. | .44    | 1.61 | 52.00    | 754.00 | .005 |
| Gender* social-affective| Wilk’s Lambda | .47    | 2.33 | 64.00    | 706.94 | .000 |
|                         | Multivariate sig. | .85    | 2.37 | 64.00    | 714.00 | .000 |

As indicated in Table 2, there were significant differences in the overall and specific types of strategy use between male and female students. The means for the use of five strategy types among male and female students were within the range of 2.29 to 2.78 and 2.17 to 2.97 respectively. Among the five types of reading behaviors, male students reported greater strategy use than their female counterparts on memory, cognitive, compensation strategies, while fewer reported than females for those strategies of social-affective meta-cognitive strategy use.
Among the five types of reading behaviors, male students reported greater strategy use than their female counterparts on memory, cognitive, compensation strategies, while fewer reported than females for those strategies of social-affective meta-cognitive strategy use. Both male and female students ranked the same order of the use of five strategy types. The top three types of strategy choice were found to be social-affective, meta-cognitive, and memory. The two bottom ones were compensation and cognitive strategies. On the whole, participants in either male or female students, showed the use of social-affective reading strategies more frequently, followed by meta-cognitive, and memory reading strategies, with cognitive and compensation reading strategies being the least two employed.

Comparing the mean figures with those from males, the female students have a lower mean scores across two of the top three items in the memory reading strategy use, except for “I use new English words in a sentence so I can remember them” (No.2). Both male and female students all listed “I take notes when I read important words or sentences” (No.18) and “I analyze sentence patterns and grammar structures while reading” (No.12) as two of the top three most-used cognitive reading strategies, whereas, male students listed “I make summaries while reading” (No.10) as one of their top three choices, and female students listed “I try not to translate word-for-word while reading” (No.11) as one of their top three choices. Comparing the mean figures with those from females, the male students have higher mean scores across two of the top three items in the cognitive reading strategy use.

A closer examination of the top three compensating reading strategies most often used among male and female students showed that the “I study English without looking up every unfamiliar word.” (No.19), had the highest average frequency for both males and females. However, for those male students the next was “I underline or make a notation for unclear words or phrases, for instance, with a question mark or some other symbols” (No.23), followed by “I make guesses on what the information will lead to or what the ending will be like” (No.21). As for those females, the next was “I make guesses on what the information will lead to or what the ending will be like” (No.21), followed by “I underline or make a notation for unclear words or phrases, for instance, with a question mark or some other symbols” (No.23). Comparing the mean figures with those from females, the male students have a higher mean scores across two of the top three items in the compensation reading strategy use, except for “I study English without looking up every unfamiliar word.” (No.19). In addition, both male and female students all listed the same top three metacognitive reading strategies as their most often used ones and with the same orders. They all listed “I make plans and urge myself to read as often as possible.” (No.31), followed by “I estimate how much time I will spend on a reading.” (No.29) and “I reread because I
appreciate the writing style of an article.” (No.28). Comparing the mean figures, female students reported
greater strategy use than their male counterparts on metacognitive strategy use.

A closer examination of social-affective reading strategy use showed that male and female students
all listed “I like to study English articles.” (No.32) and “I discuss an English article I read with my
classmates or friends.”(No.39) as two of their top three most-used social-affective reading strategies,
whereas, male students listed “When my reading comprehension is blocked. I still insist on reading
through the whole article.” (No.35) as one of their top three choices, while female students listed “I listen
to the music while I am reading.” (No.33) as one of their top three choices. Comparing the mean figures
with those from males, the female students have higher mean scores across top three items in the social-
affective reading strategy use.

7. Results, Conclusion and Recommendation

The present findings were consistent with previous studies (Ehrman & Oxford, 1989; Young &
Oxford, 1997; Sheorey, 1999; Norton, 2000; Clark, Osborne & Akerman, 2008) that there were gender
differences on the selection of reading strategies among genders of EFL college students. This finding is
similar to those of Young & Oxford, 1997; Sheorey, 1999), that female students were found to report
significantly more use of metacognitive and social-affective strategies than their counterparts, whereas
males reported higher use of memory, cognitive and compensation strategies than their counterparts. The
results of this study were opposite to the previous research (Green & Oxford, 1995; Sy, 1996; Chen,
1999; Phakiti ,2009), women used more learning strategies than men. Instead, in the present study,
females were only found to report more use of metacognitive and social-affective strategies than males.
But females demonstrated lower levels of strategy use than males in memory, cognitive, compensation
learning strategy. However, in this study, males and females were found to employ the same order of
preference in their reading strategy use.

Among their top three memory reading strategies, we found that females outperform on the strategy
of “I use new English words in a sentence so I can remember them” than males, which indicted .female
students were more agile in applying new knowledge to help learning or produce target language, while
males outperform on the strategy of “I read with imagining. For instance, when I read “The old man and
the sea, I would imaging I am on the sea.” than females, it means that males were more capable of
creating mental linkages and are more accustomed to the model of applying the visual and auditory
stimuli to improve reading outcomes results when reading.

Among their top four cognitive reading strategies, we found that male students on average
performed three higher levels of strategy use than females. "Cognitive reading strategies" is about taking
notes, summary, drawing stress, etc., however, females employed the mode of I notice headings,
subheadings and topic sentences of an article to help understand, which wasn't found in males’ choices,
and outperform on the strategy of “I try not to translate word-for-word while reading” than males. This
indicated females utilized more top down strategies than males.

Both male and female students listed the same top three compensation strategies as their most often
used ones. However, female students performed lower strategies use in two of them than males, except
for “I study English without looking up every unfamiliar word”. Among their top three compensation
strategies found that both EFL students no matter males or females knew how to make guesses
from the context without looking up every unfamiliar word; to predict what the ending will be like and to
underline or make a notation for unclear words or phrases when reading. In other words, both male and
female students employed three main approaches of top-down, bottom-up, and parallel processing to help study English.

Among their top three of metacognitive strategies we found that both male and female students all listed the same types of items as their most often used strategies and with same order of preference. However, females were found to report significantly more use of metacognitive strategies than males. The possible interpretations for this result are due to females who tend to be better language learners in L2 learning environments as found in previous research.

Among the top three social-affective strategies we found that male and female students listed the same two types of strategy as two of their top three most frequently used strategies. Female students on average performed higher levels of strategy use than females in this item, which indicated female students knew how to interact with teachers or peers or by using effective control over emotions to facilitate learning and employed self-reinforcement to enhance English learning.

All in all, based on the findings, metacognitive and cognitive strategies were most correlated with overall strategy use; these two types best predicted college EFL students’ strategic behaviors of reading. Significant gender effects were found in the use of individual strategies; females significantly employed more underlining and highlighting strategies as noticing subheadings and topic sentences of an article and tried not to translate word-for-word while reading, namely, females were employed more bottom-up strategies and were better in practicing from top to bottom and from bottom to top in their interaction with the reading passages.

Among the five types of reading behaviors, participants in either male or female students showed the use of social-affective reading strategies more frequently, followed by meta-cognitive, and memory reading strategies, with cognitive and compensation reading strategies being the least two employed. However, females use metacognitive strategies and social/affective strategies more often than males do. It indicated that EFL learners not only knew how to interact with others or self-assurance, or go through the processes of questioning, cooperation, self-talk, and self-reinforcement, but also became aware of multiple strategies using both word analysis and contextual clues to determine the meaning of an unfamiliar word. Namely, implementing both top-down and bottom-up strategies to facilitate their English learning.

It is hoped that this research will provide a valuable insight into foreign language learning for learners, teachers, and shed light on future gender research in particular. In addition, teachers may note that EFL learning requires a higher level of psychological process. Thus, teachers may through systematic instruction help learners to think metacognitively about the strategies they could use to improve their reading comprehension and become an autonomous strategic learner and reader. This study may also function as a trigger for EFL teachers in terms of the curriculum planning, the selection of reading content across strategies use of EFL with different genders and therefore it may benefit both genders in different ways. Lastly, the present study implemented a quantitative method only, future researchers may try to combine a multiple-task, using a semi-constructed assessment to interview the participants to get qualitative data, it may provide a key to a better understanding of gender differences in strategy use.

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