Exploring the Relationships between Reading Anxiety and Reading Strategy Use among University Students in Taiwan

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Abstract: The study mainly focused on investigating English as Foreign Language (EFL) reading anxiety and reading strategy comparing genders and language proficiency levels. The participants chosen for the study were 223 participants from an university in Taiwan. The data collection was carried out in two stages. The first investigation was conducted at the beginning of the semester. The final investigation was conducted at the end of the semester after the participants had received the reading comprehension strategy training. The participants were asked fill out The Foreign Language Reading anxiety Scale (FLRAS), and the Survey of Reading Strategies (SORS) questionnaires to explore the differences between the pre-test and post-test. The results of this study have stated that the scores participants got on the FLRAS and the SORS were statistically negatively correlated. The negative correlation between two variables indicated that when students’ reading anxiety level increased, their use of reading strategy use decreased. Regardless of male or female group, it was concluded that their degree of reading anxiety had been reduced and their reading strategy degree increased after receiving the reading comprehension strategy instruction. Also, the reading strategy instruction did have an influence on all of three global, problem-solving, and support reading strategy use for the lower and intermediate proficiency level students.

With respect to the high proficiency level students, it is obvious that the reading strategy instruction did have an impact on global and problem-solving strategy uses for them with the exception of support strategies. Implications for EFL educators to recognize the directions of instructional practices for enhancing reading comprehension are presented.

Key words: reading anxiety, reading strategies, university students

1. Introduction

No one can deny that foreign language anxiety has a great impact on language learners. Generally speaking, foreign language anxiety is an emotionally and physically uncomfortable learning experience for some learners. For example, foreign language anxiety has been found to have negative effects on academic achievement (e.g., lower grades) (MacIntyre and Gardner, 1991), and the social context (e.g., communicating less) (MacIntyre and Gardner, 1994). Recent
years have witnessed the emphasis on the relationship between EFL (English as a Foreign Language) anxiety and four skills-listening, speaking, reading, and writing (Horwitz, 2001). In terms of four language skills, Saito, Garza, and Horwitz (1999) state that reading is a significant source for provoking learning anxiety in a classroom. However, the affective role of EFL reading anxiety is not yet fully understood. Little research has been conducted on the relationship between EFL learning anxiety and reading anxiety (Matsuda and Gobel, 2004). Also, Saito et al. (1999) mentioned that EFL reading anxiety is distinct from general EFL anxiety and concluded that EFL learners’ levels of reading anxiety were correlated with their reading achievement. Another vital variable related to EFL reading achievement is learners’ usage of reading strategies. A substantial amount of research explored the relationship between reading strategy use and reading comprehension, since the efficient use of reading strategies improves learners’ reading comprehension (Lee, 2007; Wu, 2005). Besides this, Aebersold and field (1997) mention that successful readers are believed to be those who use successful reading strategies effectively. Grabe and Stoller (2002) revealed effective strategies for reading including rapid and automatic word recognition skills, a large recognition of vocabulary, sound knowledge of syntactic structure and discourse organization, and metacognitive awareness of reading purposes and test comprehension. However, little attention has been paid to the relationships between reading anxiety and reading strategies. These two vital variables would have effects on reading comprehension performance. Therefore, the present study attempts to fill in the gap and explore the interrelationship among them with respect to EFL reading. Specifically, this study examined the following three research questions.

1. Is there any relationship between English as a Foreign Language (EFL) reading anxiety and reading strategies used by the university students?

2. What are the effects of reading strategy instruction on EFL university students’ reading anxieties and strategies in terms of gender (male and female)?

3. What are the effects of reading strategy instruction on EFL university students’ reading anxieties and reading strategies used in terms of various language levels (high, average, low)?

2. Literature Reviews

2.1 EFL Language Anxiety and EFL Reading Anxiety

According to Horwitz (2001), language anxiety is a kind of anxiety specifically associated with second/foreign language learning contexts. Horwitz, Horwitz and Cope (1986) stated foreign language anxiety is “a distinct complex of self-perception, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process” (p.128). Besides this, they also identified three kinds of related anxieties as components of foreign language anxiety: communication apprehension (the fear of
communicating with other people), test anxiety (fear of exams and other assignments adopted to evaluate the students’ performance), and fear of negative evaluation (the worry about how others view the learner). For many students, foreign language class can be more anxiety-provoking than the other courses they attend (Kitano, 2001). MacIntyre (1999) synthesizes some findings of language anxiety research and provides the following general conclusions: (1) anxiety is provoked from negative learning experiences early in the language learning experience; (2) language anxiety negatively correlates with L2 learning achievement and with self-perception of L2 proficiency; and (3) anxious learners get lower grades, spend more time studying, and so on.

To date, findings of research studies concerning anxiety and EFL reading are so limited, and therefore no generalizations specific to EFL reading can be formulated in Taiwan. This study was conducted in order to better understand the role and importance of EFL reading anxiety. Firstly, the term EFL reading anxiety should be made clear. When EFL readers read EFL texts, they might try to decode unfamiliar vocabulary, writing system, and cultural materials. If they encounter reading difficulties and obstacles, they might get stuck in reading and so provoke reading anxiety. The kind of learning anxiety aroused during the process of reading EFL texts noted as reading anxiety (Saito et al., 1999). Sellars (2000) mentioned that reading anxiety is a distinct variable in EFL learning. Furthermore, learners with higher levels of overall foreign language learning anxiety revealed higher levels of reading anxiety. Also, there is a negative relationship between reading anxiety and EFL reading comprehension. Young (2000) also found that the higher the reading anxiety, the lower learners rate their level of comprehending the texts. Hus (2004) stated that anxious learners tended to recall less content of the text than less anxious learners. The finding echoes Sellar’s (2000) result, and the students with high level of reading anxiety and language anxiety could recall less content of the text. In addition to this, In’nami (2006) also found that language-skill-specific anxiety and learning achievements are negatively correlated. In other words, learners with higher listening, speaking, reading, and writing anxiety tended to have lower listening, speaking, reading, and writing achievement respectively. Liu (2006) revealed that reading anxiety levels varied in conjunction with language proficiency, and students at the advanced level seem to be less anxious compared with beginner and intermediate level students.

2.2 EFL Reading Strategy

Broadly speaking, reading strategies are skills or actions taken to improve understanding and comprehension, as well as solve difficulties encountered in reading a text. These strategies consist of a whole range of strategies, including skimming and scanning, contextual guessing, recognizing text structure, paraphrasing, visualizing the information, asking oneself questions, translating, and using a dictionary, and so forth. The successful use of these reading strategies improve readers’ reading comprehension (Huang, Chen, & Lin, 2009). Skilled readers know to use effective strategies to facilitate the functioning of various cognitive processes and construct meaningful understanding of the text, but poor readers simply read the text word by word.
without adopting any strategies (Lau & Chan, 2003). Singhal (2001) indicated that age also makes a contribution to strategy usage and selection, and she pointed out the less frequent and ineffective usage of strategies by younger and less proficient learners. Besides this, Song (1999) has shown that reading strategy use is also positively correlated with reading comprehension achievement.

As mentioned above, most of studies just focus on the relationship between anxiety and performance or between strategies and performance, but the relationship between anxiety and strategies seems to be neglected. According to Young (2000), reading anxiety is negatively correlated to the use of reading comprehension strategies. In other words, the higher reading anxiety is felt, few strategies are chosen by readers, or the more strategies learners use during their reading process, the lower learners’anxiety degree is.

3. Method

3.1 Participants

The participants in this study were 223 (102 male and 121 female) freshmen. The participants were placed into three proficiency level groups (pre-intermediate, intermediate, and upper-intermediate) based on their English scores on the University Entrance Exam. The participants were drawn from three different English language proficiency level groups: 92 were pre-intermediate; 70 were intermediate; and 61 were upper-intermediate English language learners. All were enrolled in the freshmen English reading course offered by the school.

3.2 Instruments

The present study employed two kinds of instruments: The Foreign Language Reading anxiety Scale (FLRAS), and the Survey of Reading Strategies (SORS). The FLRAS (see Appendix A) designed by Satio et al. (1999) contains 20 items measuring foreign language reader’s anxiety, and the internal consistency of the FLRAS was 92. The SORS (see Appendix B) designed by Sheorey and Mokhtari (2001) contains 30 items investigating the readers’ strategies, and the internal consistency of the SORS was 86. It included three subcategories: global reading strategies, problem solving strategies, and support strategies. Statements 1-13 refer to global reading strategies, and they allow readers to monitor their reading. Statements 14-21 belong to problem solving strategies, and they help readers to solve their reading obstacles. Statements 22-30 are support strategies that are efficient mechanisms to enhance reading comprehension. All the items except the background questionnaire items were placed on a 5-point Likert scale ranging from “strongly disagree” to “strongly agree”.

3.3 Data Collection
The data collection was carried out in two stages. The first investigation was conducted at the beginning of the semester. The participants were asked to fill out the Foreign Language Reading anxiety Scale (FLRAS) and the Survey of Reading Strategies (SORS) questionnaires. Then, they were taught how to use metacognitive reading strategies in order to reduce reading anxiety as well as increase reading strategy during 32 hours of English reading lectures. On the whole, there are three kinds of elements in metacognitive reading strategies instruction, including global reading strategies, problem solving strategies, and support strategies. During the course, students were given lectures that related to basic fundamental metacognitive reading strategies, including planning, monitoring, and evaluating strategies (Israel, 2007). Generally speaking, planning strategies are used before reading; activating readers’ background knowledge to get ready for the text. Also, previewing the title and subtitle of the text, pictures, and illustrations can help readers grasp the overview of the text. Readers may also preview the general information in the text and its structure. Monitoring strategies occur during reading. Some strategies are summarizing, inferring the main idea of each paragraph, inferring unknown vocabulary, and self-questioning. Evaluating strategies are employed after reading. For instance, after reading a text, readers may think about how to apply what they have read to other situations and use critical thinking toward the contents of a text. In short, metacognitive reading strategies are divided into three domains of planning (pre-reading), monitoring (during reading), and evaluating (post-reading) strategies, and each domain has a variety of strategies that require readers’ metacognitive processing. On the whole, the master teacher taught these reading strategies in the class for an entire semester.

In the second stage, after the instruction of these metacognitive reading strategies at the end of the semester, the participants were given the same two kinds of questionnaires to fill out again. They were informed that these data were not related to their course grades and were assured anonymity to increase the probability of honest responses.

3.4 Data Analyses

In order to answer whether there is any relationship between the Foreign Language Reading anxiety Scale (FLRAS), and the Survey of Reading Strategies (SORS) among these participants, a Pearson Product Moment Correlation Coefficient was calculated. Paired-sampled t test was conducted to examine the differences between FLRAS and SORS to various genders in the pre-test and post-test. One-way ANOVA was adapted to explore the differences between FLRAS and SORS to various language proficiency levels in the pre-test and post-test. The data was analyzed to obtain descriptive and inferential statistics, the results of which are reported below.

4. Results

Question one: Is there any relationship between English as a Foreign Language (EFL) reading anxiety and reading strategies used by university students? To find out whether there is a
relationship between FLRAS and SORS among all participants, a Pearson Product Moment Correlation Coefficient was calculated. The scores participants got on FLRAS and SORS were statistically correlated and the correlation coefficient was found to be -0.53. The negative correlation between two variables indicated that when students’ reading anxiety level increased, their use of reading strategy decreased. The results also revealed that there was a significant negative relationship between reading anxiety and global, problem solving, and support reading strategies with correlation coefficient (r) of 0.43 (p<.05), 0.46(p<.0001), and 0.34(p<.0001) respectively. Their percentage of variance being r²=.18, r²=.21, r²=.12 respectively. This indicated that the correlation coefficient of reading anxiety and global, problem solving, and support reading strategies can explain 18%, 21%, 12% of the variations respectively. This implied that most of the participants preferred to use global, problem solving reading strategies compared to support reading strategies after receiving the reading strategy instruction. Learners such as these in this study tended to learn by using not only bottom-up but also top-down processing models.

Question two: 2. What are the effects of reading strategy instruction on EFL university students’ reading anxieties and strategies in terms of gender (male and female)?

Table 2 showed that the mean scores on FLRAS and SORS in the pre-test and post-test of male and female participants. Paired-sampled t-test was conducted to examine the effects on reading anxiety and reading strategy on the mean score between the pre-test and post-test on each group, and the effects of each domain was statistically significant at the .0001 probability level. According to the analyses of paired-sampled t-test, there was a significant difference between male and female groups, due to t(222)=12.72, p<.0001. The male group had a lower mean score in the post-test (M=2.20, SD=0.42) than that in the pre-test (M=3.16, SD=0.40) in terms of their anxiety degrees. On the other hand, The male group had a higher mean score in the post-test (M=3.23, SD=0.21) than that in the pre-test (M=2.42, SD=0.87) in the global strategy domain. It also showed a higher mean score in the post-test (M=3.32, SD=0.21) than that in the pre-test (M=2.35, SD=0.35) in the problem-solving strategy domain. Interestingly, it also identified a higher mean score in the post-test (M=3.31, SD=0.54) than that in the pre-test (M=2.31, SD=0.45) in support domain.

The female group also had lower mean score in the post-test (M=2.84, SD=0.42) than that in the pre-test (M=3.42, SD=0.34) in terms of their anxiety degrees. On the other hand, The female group had a higher mean score in the post-test (M=3.59, SD=0.31) than that in the pre-test (M=2.81, SD=0.43) in the global strategy domain. It also showed a higher mean score in the post-test (M=3.53, SD=0.20) than that in the pre-test (M=2.75, SD=0.41) in the problem-solving strategy domain. Interestingly, it also identified a higher mean score in the post-test (M=3.41, SD=0.73) than that in the pre-test (M=2.55 SD=0.75) in the socio-affective domain.
Regardless of male or female group, it is concluded that their degree of reading anxiety degree had been reduced and their degree of reading strategy increased after receiving the reading comprehension strategy instruction. It is obvious that the reading comprehension strategy instruction has an effective impact on male and female groups.

Question Three: 3. What are the effects of reading strategy instruction on EFL university students’ reading anxieties and strategies in terms of various language levels (high, average, low)?

One-way analysis of variable (ANOVA) was generated to compare the mean scores between the impacts of FLRAS and SORS on various proficiency levels. Results showed a statistically significant difference on FLLAS in the low proficiency level with F (2, 89) = 453.16, p < .0001, intermediate proficiency level with F (2, 67) = 836.27, p < .0001 respectively. The low proficiency group had a lower mean score in the post-test (M=3.23, SD=0.43) than that in the pre-test (M=4.23, SD=0.43) in terms of their degree of anxiety. The intermediate proficiency group had lower mean score in the post-test (M=2.69, SD=0.43) than that in the pre-test (M=3.43, SD=0.136) in terms of their anxiety degrees. On the other hand, The low proficiency group had higher mean score in the post-test (M=3.21, SD=0.45) than that in the pre-test (M=1.59, SD=0.23) in the global strategy domain. It also showed a higher mean score in the post-test (M=3.54, SD=0.41) than that in the pre-test (M=2.32, SD=0.24) in the problem-solving strategy domain. Interestingly, it also identified a higher mean score in the post-test (M=3.52, SD=0.24) than that in the pre-test (M=2.33 SD=0.15) in the support domain.

The intermediate proficiency group had a higher mean score in the post-test (M=3.24, SD=0.21) than that in the pre-test (M=2.54, SD=0.43) in the global strategy domain. It also showed a higher mean score in the post-test (M=3.53, SD=0.53) than that in the pre-test (M=2.87, SD=0.65) in the problem-solving strategy domain. Interestingly, it also identified a higher mean score in the post-test (M=3.35, SD=0.32) than that in the pre-test (M=2.55, SD=0.34) in the support domain. As mentioned above, it is clear that the reading strategy instruction did have an influence on all of three global, problem-solving, and support reading strategy uses for the lower and intermediate proficiency level students.

With respect to the high proficiency level, results also showed no statistically significant difference on FLLAS, due to p > .05, results showed a statistically significant difference on SORS in the high proficiency level with F (2, 58) = 69.42, p < .05 in the global domain, with F (2, 58) = 3.95, p < .01 in the problem-solving domain respectively, expect for the support domain because of p = .453. It also showed a higher mean score in the post-test (M=4.43, SD=0.31) than that in the pre-test (M=4.32, SD=0.24) in the global strategy domain. Interestingly, it also identified a higher mean score in the post-test (M=4.42, SD=0.32) than that in the pre-test (M=4.12 SD=0.40) in problem-solving domain. It is obvious that the reading strategy instruction
did have an impact on global and problem-solving strategy uses for the high proficiency level students but not support strategies.

5. Conclusions and Discussions

Based on the results, the relationships between FLRAS and SORS were negatively correlated. In other words, foreign language reading anxiety has a great impact on learning reading strategies. Some research findings highlight the importance of minimizing reading anxiety for improving reading performance and the learning opportunities provided through the adoption of group reading activities (Crawford, 1998; Crawford and Fountain, 1995). In addition to this, reading strategy instruction, tasks in cooperative groups provide opportunities for learners to model and evaluate the usefulness of comprehension strategies as they read (Koda, 2005). When learners work cooperatively in small groups, they can read texts more efficiently and effectively and adopt comprehension strategies to better comprehend the reading texts (Vaughn & Edmonds, 2006). The group dynamics generated in cooperative reading group work ensure skillful reading and active engagement with the text (Koda, 2005). According to Saito, Garza, and Horwitz (1999), unfamiliar scripts and writing systems of foreign language reading would cause reading anxiety. Basically, the reader has to decode the symbols he or she encounters into sounds, and associate the sounds with words, and then attempt to process the meaning of the text. In a logographic writing system, in theory, each symbol represents one idea. The outstanding example of a logographic system is Chinese. Chinese calligraphy is a writing system with many symbols and one that has strong aesthetic elements thereby varying from English (Singhal, 1998). In the Chinese writing system, each character is composed of a phonetic compound that offers clues to pronunciation and a radical, which provides clues to meaning (Sharp, 2003). Birch (2002) also argues that there is no doubt that Chinese is a logographic writing system and English is an alphabetic writing system. The logographic writing system is completely different from the alphabetic writing. Because of this radical difference, it is why Chinese students might suffer from reading anxiety when reading English texts.

The results showed that the FLRAS scores were negatively correlated with the SORS scores. Among the three subcategories, the FLRAS scores were negatively correlated with global, problem solving, and support reading strategies, respectively, and was weakly correlated with support strategies As mentioned above, this is similar to the conclusion drawn by Lien’s (2011) findings. Besides this, the results also identified that global, problem solving, and support reading strategies have an impact on lower and intermediate proficiency level students. On the other hand, global and problem solving reading strategies have an effect on higher proficiency level students, with the exception of support reading strategy. In other words, higher proficiency level students seemed to have fewer chances to use bottom-up reading strategies (such as translation, using a dictionary) to make sense of the texts. This might suggest that higher
proficiency level students should be taught more effective support reading strategies, and teachers should teach them to adopt basic support mechanisms to help them understand texts.

6. The Research Limitations

Although the study has revealed that some interesting findings that might inform EFL reading instruction, it has a number of limitations. First of all, one limitation of the present study was the small number of participants which was 223 university students, and the results can not be generalized to all Taiwan EFL university settings. The second limitation is about the reliability of the questionnaire responses. Although students reported reading anxiety and use of reading strategies, it is not an easy job to know whether they are actually facing reading anxiety and using reading strategies. Future research should incorporate think-aloud protocols or interviews to further explore actual reading anxiety faced and reading strategies used. Finally, it is difficult to measure affective variables during a certain period, so it would also useful to conduct a longitudinal study to explore their reading anxiety and reading strategies.

7. References


Appendix A: Foreign Language Reading Anxiety Scale

1. I get upset when I am not sure whether I understand what I am reading in English.
2. When reading English, I often understand the words but still can’t quite understand what the author is saying.
3. When I am reading, I get so confused I can’t remember what I am reading.
4. I feel intimidated whenever I see a whole page of English in front of me.
5. I am nervous when I am reading a passage in English when I am not familiar with the topic.
6. I get upset whenever I encounter unknown grammar when reading English.
7. When reading English, I get nervous and confused when I don’t understand every word.
8. It bothers me to encounter words I can’t pronounce while reading English.
9. I usually end up translating word by word when I am reading English.
10. By the time you get past the funny letters and symbols in English, it’s hard to remember what you are reading about.
11. I am worried about all the new symbols you have to learn in order to read English.
12. I enjoy reading English.
13. I feel confident when I am reading in English.
14. Once you get used to it, reading English is not so difficult.
15. The hardest part of learning English is learning to read.
16. I would be happy just to learn to speak English rather than having to learn to read as well.
17. I don’t mind reading to myself, but I feel very uncomfortable when I have to read English aloud.
18. I am satisfied with the level of reading ability in English that I have achieved so far.
19. English culture and ideas seem very foreign to me.
20. You have to know so much about English history and culture in order to read English.

Appendix B: Survey of Reading Strategies

1. I have a purpose in mind when I read.
2. I think about what I know to help me understand what I read.
3. I take an overall view of the text to see what it is about before reading it.
4. I think about whether the content of the text fits my reading purpose.
5. I review the text first by noticing its characteristics like length and organization.
6. When reading, I decide what to read closely and what to ignore.
7. I use tables, figures, and pictures in text to increase my understanding.
8. I use context clues to help me better understand what I am reading.
9. I use typographical features like bold face and italics to identify key information.
10. I critically analyze and evaluate the information presented in the text.
11. I check my understanding when I come across new information.
12. I try to guess what the content of the text is about when I read.
13. I check to see if my guesses about the text are right or wrong.
14. I take notes while reading to help me understand what I read.
15. When text becomes difficult, I read aloud to help me understand what I read.
16. I underline or circle information in the text to help me remember it.
17. I use reference material (e.g., a dictionary) to help me understand what I read.
18. I paraphrase (restate ideas in my own words) to better understand what I read.
19. I do back and forth in the text to find relationships among ideas in it.
20. I ask myself questions I like to have answered in the text.
21. When reading, I translate from English into my native language.
22. When reading, I think about information in both English and my mother tongue.
23. I read slowly and carefully to make sure I understand what I am reading.
24. I try to get back on track when I lose concentration.
25. I adjust my reading speed according to what I am reading.
26. When text becomes difficult, I pay closer attention to what I am reading.
27. I stop from time to time and think about what I am reading.
28. I try to picture or visualize information to help remember what I read.
29. When text becomes difficult, I re-read it to increase my understanding.
30. When I read, I guess the meaning of unknown words or phrases.