

The Relationship between EFL Learners' Reading Anxiety Levels and Their Metacognitive Reading Strategy Use

Behzad Ghonsooly

Associate professor in Applied Linguistics

Ferdowsi University of Mashhad, Iran

E-mail: ghonsooly@yahoo.com

Zahra Loghmani (Corresponding author)

Ferdowsi University of Mashhad, Iran

E-mail: leilaloghmani@yahoo.com

Received: June 29, 2012 Accepted: July 7, 2012 Published: September 1, 2012

doi:10.5296/ijl.v4i3.2021 URL: <http://dx.doi.org/10.5296/ijl.v4i3.2021>

Abstract

This study investigated the relationship between EFL learners' Foreign Language Reading Anxiety levels and their use of Reading Strategies. 196 senior university EFL learners majoring in either English translation or English literature participated in the first phase of the study. They were all asked to answer the Foreign Language Reading Anxiety Scale (FLRAS). Subsequently 46 participants were selected based on their FLRAS scores -23 of them were low-anxiety group and 23 were high-anxiety group- for the second stage of the study. All of the 46 final contributors responded to the Survey of Reading Strategies (SORS). The results indicated no significant relationship between their FLRAS scores and SORS scores. However further analysis of descriptive data revealed that actually there are some differences in their reading strategy use. Accordingly, low anxiety group used Global and Problem-solving Reading Strategies more frequently while high anxiety group applied Support Strategies more often. The possible effects of gender on RA and Reading Strategy use were also examined and no significant relationships were identified.

Keywords: Reading anxiety, Metacognitive Reading strategies, Gender

1. Introduction

One of the most widely studied concepts in learning situations is the notion of anxiety. According to Spielberger (1983) anxiety is, “the subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the autonomic nervous system”. Anxiety can be “general personality trait that was relevant across several situations (MacIntyre & Gardner (1991)”. Among these situations is language learning circumstances in which Anxiety becomes one of the major emotional states among foreign language learners. Research indicates that Language Anxiety can be seen in all domains of language learning, accordingly this study tries to examine anxiety, associated with Foreign Language Reading situations.

Zbornik and Wallbrown (1991) first introduced the concept of Reading Anxiety (RA). They suggested that, “reading anxiety represents a specific aspect of general anxiety that has been invested in the reading process” (Zbornik & Wallbrown, 1991: p. 3).

The other important contributing factor regarding the quality of reading an English material is the cognitive and metacognitive reading strategies that EFL learners use while reading. Scholars are all agreed that awareness and monitoring one’s comprehension process are two important factors that can distinguish between skilled and unskilled foreign language readers (Mokhtari and Reichard, 2002). Consequently, in the present investigation it is tried to examine the relationship between these two important concepts by answering the following research questions and forming the resulting hypothesis.

- 1) Is there any significant relationship between Iranian EFL learners’ RA levels and their use of Reading Strategies?
- 2) Is there any gender-based difference between Iranian EFL learners’ RA levels?
- 3) Is there any difference between Iranian EFL learners’ application of Reading Strategies based on their gender?

Based on these research questions the subsequent hypotheses were made:

- 1) There is no significant relationship between Iranian EFL learners’ RA levels and their use of Reading Strategies.
- 2) There is no significant difference between Iranian EFL learners’ RA levels based on their gender.
- 3) There is no difference between Iranian EFL learners’ application of Reading Strategies, based on their gender.

2. Literature Review

2.1 Reading Anxiety

Although there are many research articles about the notion of Language Anxiety (LA) and its influence on language learning process, the focus of most of these studies are on oral performance of language learners (Aida, 1994; Horwitz et al., 1986; Koch & Terrell, 1991;

Phillips, 1992; Price, 1991; Young, 1991; Daly, 1991). Perhaps this is it because as Horwitz et al. (1986) concluded, “speaking in the target language seems to be the most threatening aspect of foreign language learning” (p. 23). However, a more detailed analysis of students’ performance in different language skills identified the existence of anxiety related to listening, writing, and reading as well as in speaking. Thus inquiries on the effect of anxiety on different language skills began to appear in the 1990s (e.g., Cheng, Horwitz & Schallert, 1999; Saito, Horwitz, & Garza, 1999; Vogely, 1998). Yet the concept of RA had not drawn scholar’s attention until recently (Saito et al., 1999). Even so, these domains of language learning are still open to more investigation (Saito, Horwitz, & Garza, 1999; Sellers, 2000). As stated by Brantmeier (2005), “to date, the database of research concerning anxiety and L2 reading is not complete and therefore no generalization specific to reading can be formulated” (p. 69).

According to Saito et al. (1999), two aspects of foreign language reading can be considered as potential sources of anxiety: (a) unfamiliar script and writing system and (b) unfamiliar cultural material. “With respect to the unfamiliar writing system, it seems likely that the less the learner can depend on the reliability of a specific system of sound-symbol correspondences, the more anxiety he or she would be expected to experience in the act of reading. In this case the reader would experience anxiety as soon as he or she attempts to decode the script because the reader would immediately experience difficulty in processing the text” (Saito et al., 1999). It can be imagined that learners feel anxious as soon as they start to extract meaning from the foreign language words, which are written in exotic symbols (Zhao, 2009).

Based on their two potential sources of foreign language RA, Saito et al. (1999), also hypothesized that, the level of RA would be different with respect to different writing systems and fluctuate between different target languages. As an example, they observed that learners of Japanese were the most anxious language learners, followed by learners of French.

What was previously mentioned as possible sources of Foreign Language Anxiety, such as competitiveness, learner beliefs, instructor beliefs, teacher’s comments on the learner’s performance, fear of negative evaluation and classroom procedure can be considered as potential sources of Foreign Language Reading Anxiety (Zhao, 2009).

Since it was believed that language learners could apply reading strategies as effective tools to help them in comprehending a text, some studies proposed that among different language skills, reading causes the least level of anxiety for foreign language learners (Abu-Rabia, 2004; Brantmeier, 2005 cited in Zhao, 2009). However, most recent attempts to understand the nature of skill-specific anxieties revealed that RA actually does exist and it has negative effects on the cognitive abilities of the learners (Saito et al., 1999; Sellers, 2000; Lee, 1999). Jafarigohar (2012) mentioned in his research that reading in a foreign language results in anxiety and insufficient language attainment “in conjunction of students’ levels of reading anxiety and general foreign language anxiety” (Saito, Thomas, & Horwitz, 1998, p. 202).

Regarding the possible effects of gender in RA level very little research has been conducted so far. However, as Chavez (2001) suggested, trying to find gender-based differences (if there is any) in any context, would be so important since if they really exist they may lead teachers and researchers to search for ways to reduce their effects, and finding ways of letting both genders benefit from the same level of opportunities and achievement. Accordingly, in this investigation it is tried to examine the possible effect of gender on RA levels of Iranian EFL learners.

2.1.1 Foreign Language Reading Anxiety Scale (FLRAS)

Saito et al. (1999) developed the foreign Language Reading Anxiety Scale (FLRAS), which consists of 20 five- point Likert scale ranging from “strongly agree” to “strongly disagree”. Students' self-reports of anxiety are elicited by this scale over various dimensions of reading, their target language reading perceptions, and their perceptions of the difficulty level of reading in their own language compared with the target language (Saito et al. 1999, p. 204 cited in Ghonsooly 2010).

2.2 Reading Strategies

Being a university student requires reading a large number of texts differing in their level of difficulty, style, length, topic etc. Student’s prior knowledge, which plays an important role in reading comprehension, is also different among learners. The interaction of these factors makes the reading process at an advanced level a highly complex activity, which entails both cognitive and metacognitive processing (Magliano& Trabasso, 1999; Wade & Reynolds, 1989). These cognitive and metacognitive processing are the focal points in reading strategy studies (Carson, Chase, & Gibson, 1993; Simpson & Nist, 2000).

Reading strategies, as Brantmeier (2002) indicated, are “the comprehension processes that Readers use in order to make sense of what they read” (p. 1). Reading comprehension is described in terms of a constructive process in which readers dynamically try to use different cognitive and metacognitive strategies for comprehending a text (Dole et al. 1991; Pressley & Afflerbach, 1995; Harvey & Goudvis, 2000; Allen, 2003; Israel, 2007 cited in Kamijo, 2010).

Different scholars have classified reading strategies, employed by EFL learners into different categories. For example, some divided these strategies into “global” and “local” (Carrell, 1989 & Oxford, 1997), some divided them into “supervising”, “support”, “paraphrase” strategies on the basis of how these strategies help reader to comprehend (Anderson, 1991; Block, 1986; Carrell, 1989; cited in Song, 2010).

In accordance with Garner (1987), reading strategies, which she defined as “generally deliberate, planful activities undertaken by active learners, many times to remedy perceived cognitive failure” (p. 50), promote reading comprehension and may be teachable (cited in Mokhtari and Reichard, 2002). Garner (1994) was in harmony with Paris, Lipson, and Wixon (1994) that reading strategies can and should be thought to the point of automaticity, after which they become skills, and that learners must know not only what strategies to use but also when, where, and how to use them (cited in Mokhtari and Reichard, 2002). As it is mentioned in Song (2010), some EFL learners are unable to comprehend reading materials not because

they don't have adequate proficiency level or prior knowledge, but just because they don't know how and when to use comprehension strategies (Carrell, 1983b; Hosenfeld, 1977; Young & Oxford, 1997).

2.3 Metacognitive Reading Strategies

In an article, Hong-Nam and Leavell (2011) stated that readers, who have difficulty in reading comprehension or retention of the presented information in a text, are struggling with a variety of tasks. For example, some of them may have difficulty in distinguishing critical from the trivial information or it may be difficult for them to choose or prioritize information across multiple texts. Nevertheless, what are the most critical deficiencies are that they may lack many cognitive and metacognitive strategies that reading comprehension calls for (Kiewra, 2002). In the same way, a number of experiential inquiries have recognized a positive relationship between metacognitive strategy use and reading comprehension (Block, 1992; Carrell, 1989; Garner, 1987; Olshavsky, 1976-1977; Pressley & Afflerbach, 1995).

As many studies indicated, superior readers use cognitive and metacognitive strategies more effectively and appropriately (Baker & Brown, 1984; Garner, 1987; Afflerbach, 2002). Brown (1994) describes 'cognitive strategies' as particular learning tasks, which involve more straight manipulation of the learning material itself (Cited in Hamdan et al. 2010). They are mental processes used for obtaining, storage, retrieval, and use of information (Hamdan et al., 2010).

Brown (1980) held that despite the concept of metacognition is comparatively new, skills that are now associated with this notion have long been applied by so many learners. Many of these metacognitive abilities are involved in reading processes such as clarification of the reading objectives, identification of the important aspects of the text and attending to the main aspects of the reading material instead of non-important parts (Brown, 1980).

Researchers are convinced that the ability to use metacognitive monitoring is the distinctive factor that can distinguish skilled from unskilled foreign language readers (Mokhtari and Reichard, 2002; Anderson, 2002; Cohen, 2003; Santana 2003).

Oxford (1990) defines 'metacognitive strategies' as "actions which go beyond purely cognitive devices, and which provide a way for learners to coordinate their own learning process" (p. 136). In reading situations, these strategies involve specifying a purpose for reading, planning how to read, self-monitoring for accurate understanding and self-evaluating for how well the reading objectives are being satisfied (Nebiel Dhieb, 2003). Metacognitive reading strategies help readers focus on the reading task and allow them to activate their prior information for the fullest comprehension of the text (Nist & Simpson, 2000, p. 647).

Regarding general language learning strategy use, some studies discovered small differences between male and female's strategy applications (Shmais, 2003; Szoke & Sheorey, 2002). However, according to Poole (2005), very few researches have been conducted to explore gender differences in the use of Foreign Language Reading Strategies.

Phakiti (2003) tried to find probable male/female differences of 384 (male 173 and female 211) Thai college students in their use of reading strategies. Despite no significant difference were

identified in terms of their cognitive reading strategy use, significant differences were found in their use of metacognitive reading strategies. Accordingly, Male used those strategies more effectively than female.

Similarly, in another study Poole (2005) studied the difference between 248 advanced male and female ESL learners (male 138, female 110) in their reading strategy use. He found very small differences in the reading strategy use of the two groups. He also suggested that differences in the reading strategy use of advanced ESL learners were caused by factors other than their genders.

2.3.1 Survey of Reading Strategies (SORS)

According to Mokhtari and Sheorey (2002), the development of the Survey Of Reading Strategies (SORS) questionnaire, was first motivated by the application of another instrument, Metacognitive Awareness of Reading Strategies Inventory (MARSI), which was created by Mokhtari and Reichards (2002), to examine the students' perceived use of reading strategies while reading academic materials. Because MARSI was designed for students who were native speakers of English, it seemed unsuitable to be used for non native English learners. Consequently they used MARSI to produce SORS questionnaire, which was applicable for both ESL and EFL learners. As it was stated in Mokhtari and Sheorey (2002), "the major impetus for using MARSI to develop SORS was to enable it to be used with adolescent and adult students for whom English is a second or foreign language". To achieve this objective they made three important adjustments to MARSI. First they changed the wordings of some sentences to be more comprehensible to non native English speakers. Then based on relevant literature on cross-linguistic reading strategies (Jimenez, Garsia and Pearson, 1996), they added two basic strategies which commonly were used by non-native English readers. Those strategies were "translating from one language to another" and "thinking in the native and target language while reading". As the final step they eliminate two strategies - "summarizing information read" and "discussing what one reads with others"- because they were not considered as actual reading strategies in the current research literature.

The SORS, according to Mokhtari and Sheorey (2002), "measures three broad categories of reading strategies: global reading strategies, cognitive strategies and support strategies." The succeeding paragraphs devoted to a brief explanation of each category, provided by Mokhtari and Sheorey (2002):

"Global Reading Strategies (GLOB) are those intentional, carefully planned techniques by which learners monitor and manage their reading, such as having a purpose in mind, previewing the text as to its length and organization, or using typographical aids and tables and figures (13 items).

Problem Solving Strategies (PROB) are the actions and procedures that readers use while working directly with the text. These are localized, focused techniques used when problems develop in understanding textual information; examples include adjusting one's speed of reading when the material; becomes difficult or easy, guessing the meaning of unknown words, and rereading the text to improve comprehension (8 items).

Support strategies (SUP) are the basic support mechanism intended to aid the reader in comprehending the text such as using a dictionary, taking notes, underlining, or highlighting textual information (9 items).”

the SORS questionnaire consists of 30 questions and uses a 5-point Likert Scale scoring procedure. Students are asked to select a number -1= I never or almost never do this, 2= I do this only occasionally, 3=I sometimes do this, 4= I usually do this, and 5= I always or almost always do this - indicating the degree to which they engage in a behavior when reading academic materials. Accordingly the higher their total scores on SORS are the more frequent is their use of metacognitive reading strategies.

3. Methodology

3.1 Participants

Participants of this study were 196 Iranian university EFL learners. All of them were senior students majoring in either English literature or English translation. Out of the initial participants, 46 EFL learners were chosen according to their scores on FLRAS. Correspondingly, 23 of them scored below 44, who were supposed as low anxiety group, while 23 of them scored more than 64 who constituted the high anxiety group. Among The total 46 participants were 13 male and 33 female EFL learners who were all native speakers of Persian and had studied English for more than 10 years at schools, private classes, and university.

3.2 Instrumentation

The first instrument used in the current investigation was Foreign Language Reading Anxiety Scale (FLRAS) developed by Saito et al. (1999) which consists of 20 Five-point Likert Scale questions. Its theoretical range of scores is 20 to 100 and higher scores indicate higher reading anxiety. The other instrument was Survey of Reading Strategies (SORS) designed by Mokhtari and Sheorey (2002) which was used to scrutinize the EFL learners' applied strategies while reading. SORS consisted of three subcategories: Global Reading Strategies (GLOB), Problem-solving Reading Strategies (PROB), and Support Reading Strategies (SUP). This questionnaire has 30 Five-point Likert Scale questions and its range of possible scores is 30 to 150.

3.3 Procedure

The participants were asked to fill out both FLRAS and SORS.

3.4 Data Analysis

To answer the first research question a Pearson Product-moment correlation coefficient between FLRAS scores and SORS scores and descriptive analyses of SORS subcategories were applied. Answering the second and third research questions, two independent samples T-Tests were used to compare FLRAS scores and SORS scores of male and female participants.

4. Result

The information presented in Table.1, indicates that the participants of the current investigation were placed in average group in both FLRAS (M: 49.48, SD: 15.87) and SORS (M: 113.7, SD: 14.75).

Table 1. Descriptive statistics for FLRAS and SORS scores

	Mean	Std. Deviation	N
FLRAS	49.48	15.873	46
SORS	113.70	14.757	46

In table. 2, the most and the least reading strategies, which are usually applied by Iranian EFL learners who participated in this study, are shown. Accordingly, three problem solving and three support-reading strategies were among the most and the least reading strategies applied by EFL learners respectively.

Table 2. Percentages of the most and the least strategy use

Strategy use	Strategy Type	%
MOST	14. When text becomes difficult, I pay closer attention to what I am reading (PROB)	93%
	10.I underline or circle information in the text to help me remember it (SUP)	87%
	9.I try to get back on track when I lose concentration (PROB)	85%
	25.When text becomes difficult, I reread to increase my understanding (PROB)	85%
LEAST	29.When reading , I translate from English into my native language (SUP)	54%
	30.When reading, I think about information in both English and my mother tongue (SUP)	36%
	5.When text becomes difficult, I read aloud to help me understand what I read (SUP)	30%
	28.When I read , I guess the meaning of unknown words or phrases (PROB)	26%

To answer the first research question, concerning the relationship between RA levels and reading strategy use, first in Table. 3, the descriptive statistics of SORS scores for both low and high anxiety groups are presented. It is demonstrated that the mean SORS score of the low anxiety group (M: 116) is higher than that of the high anxiety group (M: 111).

Table 3. Descriptive statistics of SORS scores.

	N	Minimum	Maximum	Mean	Std. Deviation
SORS low	23	69	138	116.09	16.503
SORS high	23	74	129	111.30	12.694
Valid N (list wise)	23				

The results of the correlation analysis between the EFL learners' scores on FLRAS and their scores on SORS, did not reveal any significant relationship ($r = -.148$, $p : .325$) (Table. 4). These results lead us to suppose that the first null hypothesis must be confirmed, However further analysis seems quite necessary for the conclusion.

Table 4. Correlation between FLRAS scores and SORS scores

		FLRAS46	SORS 46
FLRAS 46	Pearson Correlation	1	-.148
	Sig. (2-tailed)		.325
	N	46	46
SORS 46	Pearson Correlation	-.148	1
	Sig. (2-tailed)	.325	
	N	46	46

As it is mentioned in the literature review, The SORS, according to Mokhtari and Sheorey (2002), “measures three broad categories of reading strategies: global reading strategies, cognitive strategies and support strategies.” Since only a small difference has been identified between the total scores of SORS, obtained by the low anxiety and high anxiety groups, the researcher decided to further analyze each of these two groups' answers to SORS' subcategories.

Table 5. Descriptive statistics of Global Reading Strategies

	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
GLOB low	23	39	25	64	1180	51.30	8.396
GLOB high	23	30	29	59	1087	47.26	6.757
Valid N (list wise)	23						

The two groups' mean scores for global reading strategy use (low anxiety M: 51.30, SD: 8.39; high anxiety M: 47.26, SD: 6.75) are presented in Table. 5. This information indicates that low FLRAS group use of global reading strategies is somehow more than the high FLRAS group.

In Table.6, the mean scores of the problem-solving reading strategy use of both groups (low anxiety M: 33.13, SD: 4.65; high anxiety M: 31.83, SD: 3.53) are indicative of the fact that, like the global reading strategies, low FLRAS group are more problem-solving strategy users than the high FLRAS group.

Table 6. Descriptive statistics of Problem-solving Reading Strategies

	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
PROB low	23	21	18	39	762	33.13	4.654
PROB high	23	17	21	38	732	31.83	3.537
Valid N (listwise)	23						

Table 7. Descriptive statistics of Support Reading Strategies

	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
SUP low	23	20	19	39	728	31.65	5.820
SUP high	23	18	21	39	740	32.17	4.499
Valid N (listwise)	23						

In Table. 7, the descriptive statistics of the last subcategory of SORS is presented. The average scores of the two groups (low anxiety M: 31.65, SD: 5.82; high anxiety M: 32.17, SD: 4.49) show that high anxiety group is slightly more support strategy users than the low anxiety group.

According to the analysis of the EFL learners' answers to SORS Subcategories, it can be concluded that that actually there are some differences between the application of metacognitive reading strategies with the low FLRAS group and high FLRAS groups, however the difference is not big enough to draw a secure conclusion.

To answer the second and third research questions regarding the existence of any gender-based difference in RA levels and use of Reading Strategies, two independent samples t-test was used.

The first independent samples t-test was used to compare the FLRAS scores of male and female participants (Table. 9). The results indicate that there is no significant difference between male (M: 51.77, SD: 4.43) and female (M: 48.58, SD: 15.98; $t(44) = 610, p = .545$) FLRAS scores. Despite it is evident that in the present study, male participants were more anxious than female participants (Table. 8), the second null hypothesis must be confirmed.

Table 8. Group statistics for male and female FLRAS scores

	1:MALE 2:FEMALE	N	Mean	Std. Deviation	Std. Error Mean
FLRAS	1	13	51.77	15.980	4.432
	2	33	48.58	15.986	2.783

Table 9. Independent samples T-Test for male/female FLRAS means

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
FLRAS	Equal variances assumed	.269	.607	.610	44	.545	3.193	5.234	-7.355	13.742
	Equal variances not assumed			.610	22.043	.548	3.193	5.233	-7.659	14.045

Table 10. Group statistics for Male/Female SORS scores

	1:MALE 2:FEMALE	N	Mean	Std. Deviation	Std. Error Mean
SORS	1	13	110.69	17.480	4.848
	2	33	114.88	13.658	2.378

The second independent samples t-test (Table.11) was applied to compare SORS scores of male and female contributors. The results reveal that there was no significant difference between male and female participants in their reading strategy use (female M: 110.69, SD: 17.48, male M: 114.88, SD: 13.65; t (44): -.864 and p: .392). Nevertheless as it is indicated in Table.10 female participants used reading strategies more frequently than male participants. Yet based on the t-test results the third null hypothesis is also confirmed.

Table 11. Independent samples T-Test for Male/Female SORS means

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
SORS	Equal variances assumed	1.480	.230	-.864	44	.392	-4.186	4.846	-13.953	5.580
	Equal variances not assumed			-.775	18.074	.448	-4.186	5.400	-15.528	7.155

To further analyze the possible differences in application of reading strategies between male and female participants, their scores of SORS subcategories are presented in Table.12.

Table 12. Descriptive statistics of male/female SORS subcategories

	N	Range	Minimum	Maximum	Sum	Mean	Std. Deviation
Male GLOB	13	35	29	64	632	48.62	9.023
Female GLOB	33	36	25	61	1635	49.55	7.412
Male PROB	13	17	21	38	416	32.00	4.546
Female PROB	33	21	18	39	1078	32.67	4.029
Male SUP	13	20	19	39	391	<u>30.08</u>	6.089
Female SUP	33	17	22	39	1077	<u>32.64</u>	4.636
Valid N (list wise)	13						

The figures in Table.12 indicate female used all three SORS subcategories (Global: female M: **49.55**, male M: **48.62**; Prob: female M: 32.67, male M: 32; Sup: female M: 32.64, male M: 30.08) more frequently than male participants.

5. Discussion

To answer the first question concerning the relationship between FRAS scores and SORS scores, the correlation analysis did not reveal any significant relationship. However, as the literature indicated a significant relationship between the two variables (Lien, 2011; Oh, 1990, Sellers, 2000), further analysis of the data seemed quite necessary.

Table.3, suggests that the average use of reading strategies for low FLRAS group was more than the SORS mean of the high FLRAS group (low M:116, high M: 111). The results also indicate that there were actually some other differences between the two groups' reading strategy use for example the average score of the low anxiety group for Global Reading Strategies (M: 51.30) was higher than that of the high anxiety group (M: 47.26). Concerning the Problem Solving reading strategies, despite the difference was very small, it still existed (low M: 33.13 and high M: 31.83) and low FLRAS group were more Problem Solving strategy users than the high FLRAS group. Lastly the high anxiety group used Support strategies a little (M: 32.17) more than the low group (M: 31.65). The findings of this study are compatible with Lien (2011) who discovered that Taiwanese EFL learners, who gained low scores on FLRAS, used Global reading strategies most, while high FLRAS group, used Support reading strategies more frequently.

The most evident difference between the two groups was in their Global reading strategy use, which lower anxiety group used considerably more often than the high anxiety group. According to Lien (2011), this might suggest that, members of the low FLRAS group were more self-assured and confident about their abilities in reading comprehension, so they had a tendency to use Global Reading Strategies such as "guessing, referring to their background knowledge, or using tables or pictures to enable them to monitor or manage their reading". The interesting result was that in response to question number 12 of SORS (When reading, I decide what to read closely and what to ignore.), 87% of the low anxiety group answered they usually or almost always do that, while only 48% of the high anxiety group responded positively to this strategy use. This indicates that the low anxiety group EFL learners were more competent in reading the text holistically, which is consistent with Sellers (2000).

Regarding the Problem-solving reading strategies, which low anxiety group applied them more appropriately, the noteworthy issue was the participants' answers to question number 28 (when I read, I guess the meaning of unknown words or phrases.). To answer this question, 79% of the low anxiety group responded positively while 52% of the high anxiety group had courage to guess the meaning of unknown words while reading. They are according to Lien (2011), "usually less confident in enjoying the content of reading texts. While they are reading, they might just want to know the meanings of unfamiliar words and sentences. Ensuring understanding of the meanings of words or sentences will ease their anxiety and let them feel secure in reading."

The other point, which seems stimulating about the response analysis of low and high anxiety group to SORS' subcategories, is their replies to questions number 29 and 30, which were both Support strategies. For question number 29, 74% of the low anxiety group replied to "when reading, I translate from English into my native language" with that they almost never or only

occasionally do that, while 52% of the high anxiety group replied that they usually or almost always do that. Regarding question number 30 (when reading, I think about information in both English and my mother tongue.), 52% of the low anxiety group answered positively while only 17 % of the high anxiety group answered the same. In the process of learning a foreign language, the ability to think in L2 is one of the most difficult aspects of language learning, and only those who are highly proficient in a language have the ability to think in that language. These results can be an indication of the higher proficiency level of low anxiety EFL learners.

Moreover The findings revealed that both male and female contributors of the current study, paid closer attention and reread when the text became difficult, used to underline or circle important information of a text to better remember that and concentrate more when their minds became absent, as the most commonly used reading strategies. Besides when they were in the process of reading a text, rarely translated or thought of the reading content in Persian. Correspondingly, Reading aloud and guessing the meaning of unknown words were also among the least reading strategies used by Iranian EFL learners. However, as it is previously mentioned regarding guessing the meaning of unknown words, low anxiety EFL learners were more active users of this strategy while high anxiety learners used to translate and thought of the material in Persian more commonly.

In this study, the possible effects of gender on RA and Reading Strategy use were also explored. The findings indicate that there was actually no gender-based difference in both FLRAS and SORS scores of the participants. These results are consistent with Shariati and Bordbar (2009) who found no significant relationship between FLRAS scores and gender. Other scholars (e.g. Sheorey & Mokhtari. 2001, Young & Oxford. 2003 and, Poole. 2005) also found no significant relationship between Reading Strategy use and gender difference.

Despite the difference between male and female FLRAS and SORS scores were not significant, the data revealed that female EFL learners used reading strategies more regularly than male participants and their mean scores in all three subcategories of SORS: Global, Problem-solving, and Support Reading Strategies, were higher than male participants . Furthermore since their average FLRAS score was smaller than male average score, it can be concluded that they were less anxious in reading situations.

References

- Abu-Rabia, S. (2004). Teachers' role, learners' gender differences, and FL anxiety among seventh-grade students studying English as a FL. *Educational Psychology*, 24, 711-721. <http://dx.doi.org/10.1080/0144341042000263006>
- Afflerbach, P. (2002). Verbal Reports and Protocol Analysis. In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, & R. Barr (Eds.), *Handbooks of Reading Research*, 3, 163-179. Mahwah, NJ: Lawren Erlbaum.
- Aida, Y. (1994). Examination of Horwitz, Horwitz, and Cope's construct of foreign language anxiety: The case of students of Japanese, *Modern Language Journal*, 78(2): 155-168. <http://dx.doi.org/10.1111/j.1540-4781.1994.tb02026.x>

- Allen, S. (2003). An analytic comparison of three models reading strategy instruction. *International Review of Applied Linguistics*, 41, 319-338. <http://dx.doi.org/10.1515/iral.2003.015>
- Anderson, N. (2002). The role of metacognition in second language teaching and learning. Eric Digest, [Online] Available: <http://www.cal.org/resources/digest/0110anderson.html>.
- Anderson, N. J. (1991). Individual differences in strategy use in second language reading and testing. *The Modern Language Journal*, 75(4), 460-472. <http://dx.doi.org/10.1111/j.1540-4781.1991.tb05384.x>
- Baker, L., & Brown, A. B. (1984). Metacognitive Skills & Reading. In D.P Pearson, R. Barr, M.L
- Block, E. (1986). The comprehension strategies of second language readers. *TESOL Quarterly*, 20(3), 463-494. <http://dx.doi.org/10.2307/3586295>
- Block, E. (1992). See how they read: Comprehension monitoring of LI and L2 readers. *TESOL Quarterly*, 26, 319-343. <http://dx.doi.org/10.2307/3587008>
- Brantmeier, C. (2002). Second language reading strategy research at the secondary and university levels: Variations, disparities, and generalizability. *The Reading Matrix*, 2(3), 1-14. Available online at <http://www.readingmatrix.com/articles/brantmeier/article.pdf>
- Brantmeier, C. (2005). Anxiety about L2 reading or L2 reading task? A study with advanced language learners. *The Reading Matrix*, 5, 67-83.
- Brown, A. L. (1980). Metacognitive development and reading. In R. J. Spiro, B. C. Bruce and W. F. Brewer (Eds.), *Theoretical issues in reading comprehension*. (pp. 453-481), Hillsdale, NJ: Erlbaum.
- Carrell, P. L. (1983). Three components of background knowledge in reading comprehension. *Language Learning and Communication*, 2, 25-33.
- Carrell, P. L. (1989). Metacognitive awareness and second language reading. *Modern Language Journal*, 73(2), 121-134. <http://dx.doi.org/10.1111/j.1540-4781.1989.tb02534.x>
- Carson, J. G., Chase, N. D., & Gibson, S. U. (1993). Academic demands of the undergraduate curriculum: What students need. (ERIC Document Reproduction Service No. ED366260).
- Chavez, M. (2001). *Gender in the classroom*. Boston: McGraw-Hill.
- Cheng, Y., Horwitz, E., & Schallert, D. (1999). Language anxiety: differentiating writing and Speaking components. *Language Learning* 49, 3:417-446. [Online] Available: <http://www.swetswise.com/eAccess/viewTitleIssues.do?titleID=12262>.
- Cohen, A. D. (2003). "The learner/s side of foreign language learning: Where do styles, strategies, and tasks meet?" *IRAL*, 41, pp. 279-291. <http://dx.doi.org/10.1515/iral.2003.013>

- Daly, J. (1991). Understanding communication apprehension: An introduction for educators. In E.K. Horwitz & D. J. Young (Eds.). *Language Anxiety: From Theory and Research to Classroom Implications*. Englewood Cliffs, NJ: Prentice Hall.
- Dole, Janice, Gerald G. Duffy, Laura R. Roehler, & P. David Pearson. (1991). Moving from the Old to the new: Research on reading comprehension instruction. *Review of Educational Research*, 61(2), 239-264.
- Garner, R. (1987). *Metacognition and Reading Comprehension*, Cognition and Literacy Series, Norwood, NJ: Ablex.
- Garner, R. (1994). Metacognition and executive control. In R. B. Ruddell, M. R. Ruddell, & H. Singer (Eds.), *Theoretical models and processes of reading* (4th ed.). Newark, DE: International Reading Association.
- Ghonsooly, B., & Elahi. M. (2010). Learners' self-efficacy in reading and its relation to foreign language reading anxiety and reading achievement. *Journal of English Language Teaching and Learning*, 53(217).
- Hamdan, A. R., Ghafar, M. N., Sihes, A. J., & Atan, S. B (2010). The Cognitive and Metacognition Reading Strategies of Foundation Course Students in Teacher Education Institute in Malaysia. *European Journal of Social Sciences*, 13(1).
- Harvey, S., & Goudvis, A. (2000). *Strategies that work: Teaching comprehension to enhance understanding*. Portland, ME: Stenhouse.
- Hong-Nam, K., & Leavell, A.G. Reading Strategy Instruction, Metacognitive Awareness, and Self-perception of Striving College Developmental Readers. *Journal of College Literacy & Learning*, 37.
- Horwitz, E. K., Horwitz, M. B., & Cope, J. A. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, 70(2), 125-132. <http://dx.doi.org/10.1111/j.1540-4781.1986.tb05256.x>.
- Hosenfeld, C. (1977). A preliminary investigation of the reading strategies of successful and unsuccessful second language learners. *System*, 5(2), 110-123. [http://dx.doi.org/10.1016/0346-251X\(77\)90087-2](http://dx.doi.org/10.1016/0346-251X(77)90087-2)
- Isreal, E. S. (2007). *Using metacognitive assessment to create individual reading instruction*. NJ: International Reading Association.
- Jafarigohar, M., & Behrooznia, S. (2012). The Effect of anxiety on reading comprehension among distance EFL learners. *International Education Studies*, 5 (2).
- Jimenez, R., Garcia, G., & Pearson, P. (1996). The reading strategies of bilingual Latina/ostudents who are successful English readers: Opportunities and obstacles. *Reading Research Quarterly*, 31, 90-112. <http://dx.doi.org/10.1598/RRQ.31.1.5>
- Kamijo, T. (2010). Metacognitive reading strategies in EAP and their pedagogical application: Extended research and its applications. [Online] Available: www.ritsume.ac.jp.

Kamil & P. Mosenthal (Eds.). *Handbook of Reading Research*. New York: Longman Inc.

Kiewra, K. A. (2002). How classroom teachers can help students learn and teach them how to learn. *Theory into Practice*, 41(2), 71-80. http://dx.doi.org/10.1207/s15430421tip4102_3

Koch, A. S., & Terrell, T. D. (1991). Affective reactions of foreign language students to natural approach activities and teaching techniques. In E. K. Horwitz & D. J. Young (Eds.), *Language anxiety: From theory and research to classroom applications*: 109–126. Englewood Cliffs, NJ: Prentice-Hall.

Lee, J. F. (1999). Clashes in L2 reading: Research versus practice and readers' misconceptions. In D. J. Young (Ed.), *Affect in foreign language and second language learning: a practical guide to creating a low-anxiety classroom atmosphere* (pp. 49-63). New York: McGraw-Hill.

Lien, H.Y. (2011). EFL learners' reading strategy use in relation to reading anxiety. *Language Education in Asia*, 2(2), 199-212. <http://dx.doi.org/10.5746/LEiA/11/V2/I2/A03/Lien>

MacIntyre, P.D., & Gardner, R.C. (1991). Language anxiety: its relationship to other anxieties and to processing in native and second languages. *Language Learning*, 41(4): 513-53. <http://dx.doi.org/10.1111/j.1467-1770.1991.tb00691.x>

Magliano, J. P., & Trabasso, T. (1999). Strategic procession during comprehension. *Journal of Educational Psychology*, 91(4), 615-629. <http://dx.doi.org/10.1037/0022-0663.91.4.615>

Mokhtari, K., & Reichard, C. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of Educational Psychology*, 94(2), 149-259. <http://dx.doi.org/10.1037/0022-0663.94.2.249>

Mokhtari, K., & Sheorey, R. (2002). Measuring ESL students' awareness of reading strategies. *Journal of Developmental Education*, 25(3), 2-10.

Nebiela Dhieb, H. (2003). "Evaluating the effectiveness of metacognitive strategy training for research articles in an ESP context", *English for Specific Purposes*, 22, pp. 387-417. [http://dx.doi.org/10.1016/S0889-4906\(03\)00017-6](http://dx.doi.org/10.1016/S0889-4906(03)00017-6)

Oh, J. (1990). On the relationship between anxiety and reading in English as a foreign Language among Korean university students in Korea. *Dissertation Abstracts International*, 52(05), 1669.

Olshavsky, J. E. (1976-1977). Reading as problem solving: An integration of strategies. *Reading Research Quarterly*, 12, 654-674. <http://dx.doi.org/10.2307/747446>

Oxford, R. (1990). *Language Learning Strategies: What Every Teacher Should Know*. New York: Newbury House.

Oxford, R. L. (1997). Cooperative learning, collaborative learning, and interaction: Three communicative strands in the language classroom. *The Modern Language Journal*, 81, 443-456. <http://dx.doi.org/10.1111/j.1540-4781.1997.tb05510.x>

Paris, S., M. Lipson, & K. Wixon (1994). Becoming a Strategic Reader. IN R Ruddell, and H. Singer (Eds.). *Theoretical Models and Processes of Reading* (4th ed.). Newark, DE: International Reading Association. Pp. 381-390.

Phakiti, A. (2003). A closer look at gender and strategy use in L2 reading. *Language Learning*, 53, 649-702. <http://dx.doi.org/10.1046/j.1467-9922.2003.00239.x>

Phillips, E. M. (1992). The effects of language anxiety on students' oral test performance and attitudes. *The Modern Language Journal*, 76 (1), 14-26. <http://dx.doi.org/10.1111/j.1540-4781.1992.tb02573.x>

Poole, A. (2005). Gender Differences in Reading Strategy Use Among ESL College Students. *Journal of College Reading and Learning*, 36 (1).

Pressley, M., & Afflerbach, P. (1995). *Verbal protocol of reading: The nature of constructively responsive reading*. NJ: Lawrence Erlbaum Associates, Inc.

Price, M. L. (1991). The subjective experience of foreign language anxiety: Interviews with highly anxious students. In E. K. Horwitz & D. J. Young (Eds.), *Language anxiety: From Theory and research to classroom applications*: 101–108. Englewood Cliffs, NJ: Prentice-Hall.

Saito, Y., Horwitz, E. K., & Garza, T. J. (1999). Foreign language reading anxiety. *The Modern Language Journal*, 83(2), 202-218. <http://dx.doi.org/10.1111/0026-7902.00016>.

Saito, Y., Thomas, G. J., & Horwitz, E. K. (1998). Foreign Language Reading Anxiety. *The Modern Language Journal*, 83(2), 202-218. <http://dx.doi.org/10.1111/0026-7902.00016>

Santana, J. C. (2003). *Moving Towards Metacognition*, Unpublished master's thesis, Universidad Panamericana, Guadalajara. [Online] Available: www.readingmatrix.com/conference/pp/proceedings2005/santana.pdf

Sellers, V. D. (2000). Anxiety and reading comprehension in Spanish as a foreign language. *Foreign Language Annals*, 33(5), 512–520. <http://dx.doi.org/10.1111/j.1944-9720.2000.tb01995.x>

Shariati, M., & Bordbar, A. (2009). Interrelationship among Foreign Language Reading Anxiety, Reading Proficiency and Text Feature Awareness in the University Context. *IJALS*, 1(2).

Sheorey, R., & Mokhtari, K. (2001). Differences in the metacognitive awareness of reading strategies among native and non-native speakers. *System*, 29(4), 431-449. [http://dx.doi.org/10.1016/S0346-251X\(01\)00039-2](http://dx.doi.org/10.1016/S0346-251X(01)00039-2)

Shmais, W. A. (2003). Language learning strategy use in Palestine. *TESL-EJ*, 7(2), A-3. [Online] Available: <http://writing.berkeley.edu/TESL-EJ/ej26/a3.html> (February 5, 2005)

Simpson, M. L., & Nist, S. L. (2000). An update on strategic learning: It's more than textbook reading strategies. *Journal of Adolescent and Adult Literacy*, 43(6), 528-541.

Song, J. (2010). The effects of anxiety on Korean ESL learners' reading strategy use and reading comprehension. M.A. thesis.

Speilberger, C. (1983). Manual for the state-trait anxiety inventory. Palo Alto, CA: Consulting Psychologist Press.

Szoke, E., & Sheorey, R. (2002). A comparative study of the learning strategies of Hungarian and Russian college students. *Novelty*, 9(3), 23-36.

Vogely, A. J. (1998). Listening comprehension anxiety: Students' reported sources and solutions. *Foreign Language Annals*, 31, 67-80.
<http://dx.doi.org/10.1111/j.1944-9720.1998.tb01333.x>

Wade, S. E., & Reynolds, R. E. (1989). Developing metacognitive awareness. *Journal of Reading*, 33(1), 6- 14.

Young, D. J. (1991). Creating a low-anxiety classroom environment: What does language anxiety research suggest? *Modern Language Journal*, 75, 426-437.
<http://dx.doi.org/10.1111/j.1540-4781.1991.tb05378.x>

Young, D. J., & Oxford, R. (1997). A gender-related analysis of strategies used to process Written input in the native language and a foreign language. *Applied Language Learning*, 8(1), 43-73.

Young, D. J., & Oxford, R. L. (1993). Attending to learner reactions to introductory Spanish textbooks. *Hispania*, 76, 593-605. <http://dx.doi.org/10.2307/343837>

Zbornik, J. J., & Wallbrown, F. H. (1991). The development and validation of a scale to measure reading anxiety. *Reading Improvement*, 28(1), 2-13.

Zhao, A. (2009). Foreign language reading anxiety: investigating English-speaking university students learning Chinese as a foreign language in the united states. (Doctoral dissertation). Retrieved from Pro Quest Dissertations and Theses.