The Effect of Teaching Reading Strategies on EFL Learners’ Reading Anxiety

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Abstract
The present study was conducted to explore the effects of teaching reading strategies on English as a Foreign Language (EFL) learners’ reading anxiety. To fulfill the purpose of this study, 55 intermediate EFL learners were selected among a total number of 90 through their performance on a sample piloted Preliminary English Test (PET), and then randomly assigned to two experimental and control groups (27 in the control and 28 in the experimental groups). Subsequently, the Foreign Language Reading Anxiety Scale (FLRAS) was administered between the two groups to make sure that both groups were homogeneous in terms of their reading anxiety at the outset. Then both groups underwent the same amount of teaching time (14 sessions) by the same teacher using the same textbook. The students in the experimental group also received the instruction of the Super Six Comprehension Strategies (i.e. making connections, predicting, questioning, monitoring, visualizing, and summarizing). Finally, the FLRAS was administered again as the posttest to both groups and their mean scores on the test were compared through an independent samples t-test. The results (t = 2.718, p = 0.009 < 0.05) led to the rejection of the null hypothesis, thereby indicating that there was a significant difference between the experimental group and control group. In other words, the instruction of reading strategies significantly lowered EFL learners’ reading anxiety.

Keywords: ELT, reading anxiety, reading strategies

1. Introduction

1.1 Reading Strategies

Second language reading comprehension is a skill of paramount importance in all ELT contexts. “It is the basis of instruction in all aspects of language learning: using textbooks for language courses, writing, revising, developing vocabulary, acquiring grammar, editing, and using computer-assisted language learning programs” (Mikulecky, 2008, p. 1).

One well-established procedure for teaching reading is EFL learners’ use of reading strategies. The relationship between reading strategy use and reading comprehension has been of interest to many researchers since the efficient use of reading strategies benefits learners’ reading comprehension to some degree (Afflerbach, Pearson, & Paris, 2008; Allen, 2003; McKeown & Gentilucci, 2007; Wu, 2011). Reading strategies, as Brantmeier (2002) indicates, are “the comprehension processes that readers use in order to make sense of what they read” (p. 1); they are characterized as approaches, actions, and procedures used to improve reading comprehension.

Reading strategies are considered as one of the features of cognitive psychology which are essential for successful comprehension (May, 2001; Walker, 2000; Zare, 2013); accordingly, these strategies have been defined by Cohen (1990) as mental processes that readers consciously select to use to complete reading tasks successfully or as “techniques and methods readers use to make their reading successful” (Baker & Boonkit, 2004, p. 302).

Moreover, reading strategies have been defined as plans and behaviors for solving problems when faced in constructing meaning (Janzen, 2003). Janzen believes that these strategies range from bottom-up strategies to more
comprehensive ones like top-down strategies. Bottom-up strategies are defined as making use of information, which is already present in the data such as understanding the text by analyzing the words and sentences in the text itself, or looking up an unfamiliar word in the dictionary. On the other hand, top-down strategies make use of previous knowledge such as connecting what is being read to readers background knowledge (Janzen, 2003).

Some other strategies include evaluating, asking questions, checking for answers, making predictions, summarizing, paraphrasing, and translating (Zare & Othman, 2013). In addition, research studies have shown that successful comprehension does not happen automatically (Cubukcu, 2008) but it depends mostly on directed cognitive effort which includes knowledge about and regulation of cognitive processing (Batumlu & Erden, 2007). During reading, the cognitive effort is expressed through strategies which are “procedural, purposeful, effortful, willful, essential, and facilitative in nature” (Alexander & Jetton, 2000, p. 295). Alexander and Jetton further write that, “The reader must purposefully or intentionally or willfully invoke strategies” (p. 295) and does so to regulate and enhance learning and comprehension.

Al Melhi (2000) has uncovered that some differences exist between successful and less successful readers in terms of their actual and reported reading strategies, their use of reading strategies, their strategy awareness, and their perception of the good reader. Accordingly, strategic awareness and monitoring of the comprehension process are significantly important features of competent reading (Sheorey & Mokhtari, 2001). Such awareness and monitoring in the literature is often referred to as metacognition which includes knowledge of strategies for processing texts, the ability to monitor one’s own comprehension, and the ability to modify strategies when needed (Auerbach & Paxton, 1997).

1.2 Foreign Language Anxiety

Many foreign language learners experience foreign language anxiety (FLA) which is “a situation-specific and unique type of anxiety closely related to the acquisition of a foreign language” (Horwitz, Horwitz, & Cope, 1986, p. 125). Although language anxiety can sometimes work as a helpful energizer for L2 learning, the harmful effects of anxiety which is considered debilitating anxiety (Brown, 1994) cannot be easily ignored in the context of L2 teaching. Evidence of negative relations between anxiety and achievement has been studied in several researches to find the processes which are likely to be involved in such a negative relation (Al-Shboul, Ahmad, Nordin, & Rahman, 2013; Ay, 2010; Cubukcu, 2007; Jafarigohar, 2012).

Early studies in this field have focused on FLA in general. The four skills of learning a foreign or second language, i.e. speaking, listening, reading, and writing, were included under the concept of FLA (Bailey, Onwuegbuzie, & Daley, 2000; Burden, 2004; Casdado & Dereshiwsky, 2004; Cheng, 2004; Horwitz, 1986; Horwitz, 2001; Sanchez-Herrero & Sanchez, 1992).

1.3 Foreign Language Reading Anxiety

Recent research in the area of FLA has proved that each skill has its own anxiety such as foreign language listening anxiety (Chang, 2010; Kimura, 2008), foreign language reading anxiety or FLRA (Çetinkaya, 2011; Kuru-Gonen, 2005; Shariati & Bordbar, 2009), foreign language writing anxiety (Cheng, 2002; Cheng, Horwitz, & Schallert, 1999), and foreign language speaking anxiety (Cheng et al., 1999; Osboe, Fujimura, & Hirschel, 2007).

Saito, Graza, and Horwitz (1999) were the first scholars who revealed that FLRA is a distinct phenomenon but related to FLA in general. FLRA is seen as a “mediating variable that intervenes at some point between the decoding of a text and the actual processing of textual meaning” (Horwitz et al., 1986, p. 215) and believed to originate from unfamiliar writing systems or learners’ difficulty in pronouncing words and sentences.

Horwitz et al. (1986) suggest two basic options to reduce FLA: helping students cope with anxiety producing situations and making the learning context less stressful. In case of FLRA, Saito et al. (1999, p. 216) suggest that teachers could prepare the students for “the possibility of reading difficulties and possible anxiety when introducing reading assignment.” They also suggest that to reduce anxiety, teachers should develop reading practices that are more effective than word for word translation and help learners abandon their “unrealistic expectations for understanding everything they read” (p. 216).

In line with what has been discussed so far, this study sought to investigate whether teaching reading strategies has any significant effect on EFL learners’ FLRA. Accordingly, the following research question was raised:
Q: Does teaching reading strategies have any significant effect on EFL learners’ reading anxiety?

2. Method

2.1 Participants

For the purpose of this study, 90 intermediate EFL learners with the age group of above 18 from a private language school in Tehran were considered based on convenient sampling. Following their performance on a sample Cambridge ESOL PET, 55 of them were chosen and randomly assigned to two experimental and control groups (27 in the control and 28 in the experimental). There were also 30 participants with almost the same language proficiency background as the 90 learners mentioned above who sat for the piloting of the test.

2.2 Instrumentations and Materials

2.2.1 Preliminary English Test (PET)

A sample PET was administered for the participant selection process as described above. The speaking section of the PET was not administered and both researchers whose inter-rater reliability had been established in the piloting phase ($r = 0.823, p = 0.0001 < 0.01$) scored the writing papers.

2.2.2 Foreign Language Reading Anxiety Scale (FLRAS)

In order to measure the participants’ level of anxiety, the FLRAS was used. This questionnaire was developed by Satio et al. (1999) to measure FLRA and is a five-point Likert type: so each item in the questionnaire is answered on a scale from 1 to 5. The scores will represent the following respectively: 5 = Strongly Agree; 4 = Agree; 3 = Neither Agree Nor Disagree; 2 = Disagree; 1 = Strongly Disagree). The highest degree of anxiety receives a 5 and the lowest receives a 1. There are 20 items in the FLRAS and the possible range of scores is 20 to 100. A higher score indicates more anxiety on the students’ part.

Saito et al. (1999) reported that the FLRAS had shown an acceptable level of reliability with an internal consistency coefficient of 0.86. For face and content validity, two experts in TEFL and psychology checked the items for verification. Saito et al. tested the construct validity of the FLRAS by calculating the correlation between the FLRAS and the FLCAS (Foreign Language Classroom Anxiety Scale). A correlation coefficient of 0.64 ($n = 383, p < 0.01$) was found, which means that although there was a significant overlap between the two constructs, 59% of the variance was not shared by the two constructs. The FLRAS represented a construct that was related to but distinct from the construct represented by the FLRAS. Hsiao (2002) also used confirmatory factor analysis to analyze the construct validity of the Chinese version of the FLRAS and the result supported the unidimensionality of the scale and claimed that the scale was reliable and valid for eliciting FLRA of Chinese college foreign language learners. The FLRAS had also been reported to have a good internal consistency of 0.86 (Cronbach’s alpha, $n = 383$) among learners of French, Russian, and Japanese in American Universities (Saito et al., 1999). Moreover, Zhao, Guo, and Dynia (2013) examined and reported the internal consistency of the FLRAS with a Cronbach’s alpha value of 0.834.

The FLRAS was employed both at the outset of the study to check homogeneity of the learners in terms of their anxiety and as the post-test.

2.2.3 Course Book

The same course book – Developing Skills (L. G. Alexander) – was used in both classes. It is an integrated course for intermediate and pre-intermediate students. It is the third volume of the New Concept English series which has four books. Each of the four books can be used independently. Developing Skills has three units, each of which including 20 passages. Twenty-eight passages were covered during the instruction period.

2.3 Procedure

In order to achieve the objectives of this study, the researchers went through the following procedures. As the first step, the researchers piloted the sample PET test among a group of 30 students with almost similar language features of the main group. Following item analysis and the removal of 10 malfunctioning items, the modified test was administered and the two groups were formed as described earlier.

Next, the FLRAS was administered between the two groups and eventually the instruction commenced after the above process. The course consisted of 14 sessions of 105 minutes two days a week and both groups were taught by the same
teacher (one of the researchers). An average of 45 minutes was allocated to reading each session in both groups. Both groups received the same reading materials; however, the experimental group underwent the treatment, i.e. the reading strategy instruction.

2.3.1 Instruction in the Control Group

In the control group, the main focus was on teaching the meaning of words, explaining structural points where necessary, and answering the comprehension questions following each passage. The activities all aimed at increasing the students’ knowledge of language in order to help them in reading and understanding English passages. Every session, the students were asked to read the two texts assigned for that session and also answered the comprehension and grammar exercises related to those passages before coming to class. In class, first the exercises were checked and then a student was asked to read aloud the passage and the teacher elaborated on the structural complexities and explained the meaning of expressions.

2.3.2 Instruction in the Experimental Group

In the experimental group, the same teaching procedure was practiced; however, the participants also underwent the reading strategies instruction. According to the New South Wales Department of Education, there are the ‘Super Six’ Comprehension Strategies, which are Making connections, Predicting, Questioning, Monitoring, Visualizing, and Summarizing. Every other session, one strategy was taught to the students explicitly in the following manner: First, the teacher explained what the strategy was and why that strategy was useful and necessary for comprehension. Second, the teacher modeled the strategy, i.e., he read a section of the text aloud and used a Think Aloud and a Visual (symbol, chart, etc.) to share ideas with students. Think Aloud involves orally explaining precisely what triggers thoughts and how it affects understanding. Third, the next section of the text was read and the students were asked to work with a partner to apply the new strategy. Then the responses from paired students were discussed and another section of the text was subsequently read aloud. Afterwards, the teacher monitored the students as they worked independently. Finally, the students reflected on how using the strategy helped them to understand a text. At the end of the treatment, the FLRAS was administered as the posttest to both groups.

3. Results

3.1 Participant Selection

Following the piloting of the sample PET (with the reliability index of 0.87 estimated through the Cronbach alpha procedure), the test was administered for participant selection. Table 1 below shows the descriptive statistics of this administration with the mean being 58.11 and the standard deviation 6.76, respectively.

| Table 1. Descriptive statistics of the PET administration |
|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation |
| PET Administration | 90 | 37.0 | 69.0 | 58.106 | 6.7651 |
| Valid N (listwise) | 90 | | | | |

The reliability of the PET in this actual administration for homogenization of the participants was also calculated: 0.83. Subsequently, the selected participants were randomly assigned into an experimental and a control group.

3.2 FLRAS at the Outset

Once the 55 participants were divided into the two groups, they all sat for the FLRAS at the outset. The descriptive statistics of this administration is presented in Table 2 below. As it can be seen, the mean and standard deviation of the control group were 58.19 and 9.02, respectively while those of the experimental group stood at 57.75 and 10.32, respectively.
Furthermore, the reliability of the FLRAS at the outset was 0.87. To make sure that the participants in both groups bore no significant difference in terms of their anxiety at the outset, an independent samples $t$-test was required. However, as the skewness ratio in the control group was violated ($-0.944 / 0.448 = -2.107$ which fell outside the acceptable ±1.96), the nonparametric equivalent Mann-Whitney was employed. Tables 3 and 4 show the results for this statistical procedure.

Table 3. Mann-Whitney test: Ranks

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Sum of ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cont Pre Anxiety</td>
<td>27</td>
<td>58.19</td>
<td>943.00</td>
</tr>
<tr>
<td>Exp Pre Anxiety</td>
<td>28</td>
<td>57.75</td>
<td>887.00</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4. Mann-Whitney test: Test statistics

<table>
<thead>
<tr>
<th></th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>422.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>887.000</td>
</tr>
<tr>
<td>Z</td>
<td>.479</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.632</td>
</tr>
</tbody>
</table>

a. Grouping Variable: Group

According to Table 4, the results of the Mann-Whitney test indicated that at the 0.05 level of significance, there was no significant difference between the mean rank of the control group (58.19) and that of the experimental group (57.75) on the FLRAS ($U = 422, N_1 = 27, N_2 = 28, p = 0.48 > 0.05$); consequently, any probable differences in terms of reading anxiety at the end of the treatment could be attributed to the effect of the treatment.

3.3 Post-test

Table 5 below displays the descriptive statistics for the post-test.
Table 5. Descriptive statistics of the anxiety post-test

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum Statistic</th>
<th>Maximum Statistic</th>
<th>Mean Statistic</th>
<th>Std. Deviation Statistic</th>
<th>Skewness Statistic</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cont Pre Anxiety</td>
<td>27</td>
<td>37</td>
<td>65</td>
<td>55.74</td>
<td>8.122</td>
<td>-0.735</td>
<td>0.448</td>
</tr>
<tr>
<td>Exp Pre Anxiety</td>
<td>28</td>
<td>35</td>
<td>69</td>
<td>50.00</td>
<td>7.538</td>
<td>0.144</td>
<td>0.441</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As it can be seen, the mean and standard deviation of the control group were 55.74 and 8.12, respectively, while those of the experimental group stood at 50.00 and 7.54, respectively. The reliability of the scores in this administration was also 0.81.

3.4 Testing the Hypothesis

To verify the null hypothesis of the study, the researchers conducted the independent samples $t$-test. Prior to this, the normality of distribution of these scores within each group had to be checked. Going back to Table 5, the skewness of the control group was $-1.64 (-0.735 / 0.448)$ while that of the experimental group was $0.33 (0.144 / 0.441)$. Both values fell between ±1.96 meaning that they were both normal distributions and thus running an independent samples $t$-test was legitimized.

Table 6. Independent Samples t-Test of the control and experimental groups on the post-test

<table>
<thead>
<tr>
<th></th>
<th>Levene’s Test for Equality of Variances</th>
<th>$t$-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$F$</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal Variances Assumed</td>
<td>.385</td>
<td>.537</td>
</tr>
<tr>
<td>Equal Variances Not Assumed</td>
<td>2.7</td>
<td>15</td>
</tr>
</tbody>
</table>

As Table 6 indicates, with the $F$ value of 0.385 at the significance level of 0.537 being larger than 0.05, the variances between the two groups were not significantly different. Therefore, the results of the $t$-test with the assumption of homogeneity of the variances were reported here. The results ($t = 2.718$, $p = 0.009 < 0.05$) indicate that there was a significant difference between the mean scores of the two groups at the post-test.

It can thus be concluded that the presupposed null hypothesis was rejected meaning that the difference observed between sample means was large enough to be attributed to the differences between population means and therefore not due to sampling errors.

Following the rejection of the null hypothesis, the researchers were interested to know how much of the obtained difference could be explained by the variation in the two levels of the independent variable. To determine the strength of the findings of the research, that is, to evaluate the stability of the research findings across samples, the effect size...
was also estimated to be 1.03. According to Cohen (1988, p. 22), a “value exceeding 0.8 is generally considered a large effect size.” Therefore, the findings of the study could be considered strong enough for the purpose of generalization.

4. Discussion

As stated earlier, this study was conducted in order to find any significant impact of teaching reading strategies on EFL learners’ FLRA. The findings of the study showed a significant difference between the experimental group and control group thus demonstrating that the instruction of reading strategies had a significant impact on EFL learners’ FLRA. Accordingly, using reading strategies discourages anxiety among learners.

Many studies have reported a negative correlation between FLRA and reading comprehension achievement (Baker & Boonkit, 2004; Cubukcu, 2008; Hong, 2007; Marzban & Akbarnejad, 2012; Soleimani, 2008; Willingham, 2006; Zare, 2013). The findings of this study are in line with Lien’s study (2011) in which the results indicated that EFL learners in the low-anxiety group were confident and tended 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. However, the participants in the high anxiety group seemed to employ support strategies such as translation, paraphrasing, or using a dictionary to help themselves understand the text. Lien concluded that highly anxious learners might just want to know the meaning 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.

According to Horwitz et al. (1986), educators can help foreign language learners to reduce FLRA by improving the learners’ self-confidence to deal with the personal factor. They can prepare the students for the factors that may cause FLRA before asking the students to read in front of the class or they might discuss these factors to help the students reflect their feelings which can help in reducing FLRA and encourage them to read in the foreign language for the purpose of knowledge.

In a slightly similar study, Oyetunji (2011) tried to implement a reading strategy instruction program (RSI) to see what effect it would have on L2 students’ use of strategies during reading on L2 students’ reading comprehension, and on L2 students’ English academic performance; the results showed that there was a significant difference between the self-reports responses of the participants and their actual performance in reading text.

5. Conclusion

Given the fact that anxiety can impact foreign language reading, this study examined the possible solution of using reading strategies to tackle the problem. Based on the above arguments, students might benefit from special instructions in specific strategies to help them decrease their anxiety and consequently improve their reading comprehension. In this study, explicit instruction was performed and the results revealed that explicit instruction of reading strategies need to be applied to influence students’ reading comprehension positively. Accordingly, teaching reading strategies could be incorporated within the pedagogical curriculum to help students improve their reading comprehension.

In order to truly evaluate the reading comprehension ability of the students, language instructors are recommended to first lower the anxiety level of the students in such a way that this affective factor does not interfere with their reading performance. Furthermore, language teachers could teach high anxious listeners those reading strategies that they are not familiar with. Also, they could teach the students that employing a single strategy such as translation from English to L1 cannot be applied to all situations and having a repertoire of reading strategies that can be employed in different situations is necessary.

In the memorable words of Stevick (1980), language instructors can work to provide a secure environment for the students to feel safe for running risks and making guesses. Language instructors could point out that high expectations like expecting to understand every single word in the reading passage brings about anxiety. Giving language learners some opportunities to share the feeling that they experience in reading classes can also be helpful because in this way, they can come up with some creative solutions for solving these negative feelings. As the findings of this study revealed, FLRA and reading strategies move in two opposite lines so explicit teaching of reading strategies from the earliest stages of language learning by language instructors is recommended.
To include the instruction of these super six strategies within ELT writing programs (or mainstream them in contexts where they already exist), teacher training centers and language schools need to familiarize teachers with such strategies. This training could be done both for teachers who are being trained to become teachers or those already engaged in the practice of pedagogy in the form of in-service courses.

Syllabus designers and materials developers could also provide the content of teaching material with comprehensible and proper tasks and exercises to familiarize learners with these strategies dubbed the “super six” strategies. As was mentioned before, one of the factors that induces anxiety among foreign language learners, especially novice ones, is the rate of delivery. Therefore, for elementary level students, materials writers can provide instructional materials as opposed to authentic reading materials. In addition, authentic reading materials include some vocabularies and structures which are beyond the proficiency level of elementary students. Also, the difficulty level of authentic materials is higher than instructional ones that can frustrate the less proficient readers. They should also allocate some pages of each chapter to explaining about reading strategies that can compensate the lack of comprehension.

In the process of conducting this study, certain suggestions for other studies in line with the one at stake came to the researchers’ mind which are:

1. In this study, the effect of teaching ‘Super Six’ Comprehension Strategies (according to the New South Wales Department of Education and Training) was investigated. Another study could be conducted to find out whether teaching support strategies could have the same impact or not.
2. The current research only investigated the effect of teaching reading strategies on EFL learners’ debilitative anxiety. Further research needs to be conducted to evaluate the influence of reading strategies on FLRA with a distinction between debilitative anxiety and facilitative anxiety.
3. This research was carried out among adults; the same experiment could be implemented among other age groups to see whether the latter is a factor in the effectiveness of teaching reading strategies or not.
4. In this study, both males and females participated but their possible differences were not taken into account; it would be interesting to see whether gender is also a factor.

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