Lowering Foreign Language Anxiety through Self-Regulated Learning Strategy Use

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Received: July 15, 2015   Accepted: November 20, 2015   Online Published: November 25, 2015
doi:10.5539/elt.v8n12p209     URL: http://dx.doi.org/10.5539/elt.v8n12p209

Abstract
Foreign language classroom anxiety (FLCA) and self-regulated learning strategies (SRLSs) are important factors that influence language learning process in negative and positive ways respectively. The aim of this study was to explore the relationship between FLCA and SRLSs. To this end, 100 university students majoring in TEFL were selected. For collecting data, Foreign Language Classroom Anxiety Scale (Horwitz, Horwitz, & Cope, 1986) and Motivated Strategies for Learning Questionnaire (Pintrich & De Groot, 1990) were used. To analyze the data, Kendall correlation was run. The results revealed that there is a negative relationship between FLCA (communication apprehension, test anxiety, and fear of negative evaluation) and SRLSs (cognitive strategy use and self-regulation).

Keywords: foreign language anxiety, self-regulated learning strategies

1. Introduction
Foreign language learning can be influenced by some factors. One of these factors is foreign language anxiety. Horwitz, Horwitz, and Cope (1986) defined foreign language anxiety as “a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process” (p. 128). Later, Maclntyre and Gardner (1994) defined language anxiety as “the feeling of tension and apprehension specifically associated with second language contexts, including speaking, listening, and learning” (p. 284). According to Horwitz et al. (1986), FLCA is of three categories: communication apprehension, test anxiety, and fear of negative evaluation. They considered communication apprehension as “a type of shyness characterized by fear of or anxiety about communicating with people” (p. 127).

Hill and Wigfield (1984) considered test anxiety as one of the most essential features of negative motivation which has direct debilitating effects on school performance. According to Liebert and Morris (1967), test anxiety has two components: worry or lack of confidence and emotionality. They referred to worry as “any cognitive expression of concern about one’s own performance” and emotionality as “autonomic reactions which tend to occur under examination stress” (p. 975). Moreover, Akram Rana and Mahmood (2010) investigated the relationship between learners’ achievement and both affective and cognitive factors of test anxiety, and concluded that cognitive factor (worry) plays a crucial role in generating anxiety rather than affective factor (emotionality). Furthermore, Salehi and Marefat (2014) showed that language anxiety and test anxiety play a debilitative role in language learning. Also, they claimed that language anxiety and test anxiety are interrelated and suggested that the reduction of one type of anxiety will automatically result in the reduction of another type in some way. Similarly, Tsai (2013) stated that foreign language classroom anxiety and test anxiety are positively correlated regardless of gender and language proficiency level. In addition, Tóth (2011) stated that FLCA is not limited to the beginning stages of foreign language learning and learners at different levels of L2 proficiency may experience it. Finally, fear of negative evaluation is defined as “apprehension about others’ evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively” (Watson & Friend, 1969, as cited in Horwitz et al., 1986, p. 128).

Foreign language anxiety has been variously categorized: facilitating vs. debilitating anxiety and state vs. trait anxiety. According to Scovel (1978), facilitating anxiety “motivates the learner to “fight” the new learning task; it gears the learner emotionally for approach behavior”. In contrast, debilitating anxiety “motivates the learner to
“flee” the new learning task; it stimulates the individual emotionally to adopt avoidance behavior” (p. 139). State anxiety “refers to an unpleasant emotional condition or temporary state, while trait anxiety refers to a stable propensity to be anxious” (Young, 1991, p. 435).

Among the factors that can affect foreign language learning are language learning strategies specially SRLSs. According to Zimmerman (1990), SRLSs are “actions and processes directed at acquisition of information or skills that involve agency, purpose, and instrumentality perceptions by learners” (p. 5). In addition, Dembo, Junge, and Lynch (2006) claimed that self-regulated learners are able to control the factors or conditions that affect their learning. Moreover, Eccles and Wigfield (2002) stated that self-regulated learners engage in self-observation, self-judgment, and self-reactions. Furthermore, Perry and Drummond (2003) classified self-regulated learners into metacognitive, motivated, and strategic learners.

2. Review of the Related Literature

Marwan (2007) pointed out that there are four strategies (preparation, relaxation, positive thinking, and peer seeking) which learners apply in order to overcome their foreign language anxiety. He added that the only strategy which is not used by learners is resignation strategy.

Ghonsooly and Barghchi (2011) claimed that non-anxious readers make better use of lower-level processing strategies than anxious readers. Moreover, Lien (2011) revealed that learners with low anxiety employ general reading strategies (e.g., guessing) whereas learners with high anxiety utilize basic support mechanisms (e.g., translation) to understand texts. Similarly, Ghonsooly and Loghmani (2012) found that the most commonly used reading strategies by less anxious readers are global and problem-solving strategies whereas the most frequently used reading strategies by more anxious readers are support strategies. Likewise, Song (2010) proposed that learners with high levels of reading anxiety apply more local strategies while learners with low levels of reading anxiety use more global strategies and background knowledge strategies. However, Zarei (2014) stated that learners with various degrees of reading anxiety do not differ in their choice of reading strategies.

Al-Asmari (2013) revealed that learners with low writing anxiety utilize more writing strategies compared to learners with high writing anxiety. Furthermore, Machida and Dalsky (2014) showed that concept mapping technique helps learners with low writing anxiety more than their counterparts with high writing anxiety in the quality of their writing. Moreover, Mohseniasl (2014) indicated that explicit instruction of writing strategy has a positive effect on the writing performance of learners who experience high level of writing apprehension. In addition, Parilasanti, Suarnajaya, and Marjohan (2014) claimed that RAFT strategy has more positive effect on high anxious learners’ writing competency than conventional strategy.

Maeng (2007) pointed out that less anxious learners tend to employ more listening strategies. Furthermore, Mohammadi Golchi (2012) indicated that there is a negative correlation between IELTS learners’ listening anxiety and listening strategy use. She claimed that low anxious learners apply more metacognitive strategies than do high anxious learners; however, both high and low anxious learners do not differ in their employment of cognitive and social/affective strategies. In addition, Xu (2013) showed that learners’ utilization of listening strategies is negatively correlated with listening anxiety. Also, cognitive strategy was found to have strong correlations with listening anxiety. Moreover, Han (2014) found that listening anxiety and metacognitive strategy use are negatively correlated. Similarly, Movahed (2014) stated that the instruction of metacognitive strategies would lead to learners’ foreign language listening anxiety reduction. Likewise, Yang (2012) asserted that listening anxiety is negatively correlated with compensation, memory, and metacognitive listening strategies. Regarding test anxiety as a subcategory of FLCA, Ghasemi, Mohammadkhani, and Hosseini (2014) revealed that learners with higher levels of listening test anxiety utilize less listening strategies. In contrast, Ranjbar, Kargar, and Behjat (2014) claimed that listening strategies instruction does not have significant effect on learners’ foreign language listening anxiety.

Li (2010) found that among seven subcategories of speaking strategies (nonverbal, reduction, fluency, negotiation for meaning, affective, accuracy, and social), only reduction strategy has a positive correlation with speaking anxiety.

Noormohamadi (2009) revealed that high anxious learners mostly use metacognitive and memory strategies while less anxious learners mostly employ metacognitive and social strategies. In addition, Liu (2013) pointed out that metacognitive strategies are the most frequently used strategies by the learners with low anxiety. Furthermore, Ghorban Mohammadi, Biria, Koosha, and Shahsavari (2013) showed that there is a little correlation between social and compensation strategies and FLCA. In their research, the highest correlation was found between cognitive strategies and the lowest correlation between affective strategies and FLCA. Also, they found that there is no significant relationship between affective, memory, and metacognitive strategies and
Moreover, Liu and Chen (2014) indicated that social strategies have the strongest negative relationship with language anxiety, followed by metacognitive and cognitive strategies.

3. Method

3.1 Participants

The participants of this study were 100 BA students of Islamic Azad University, South Tehran Branch, majoring in TEFL. Their age ranged from 20 to 30.

3.2 Instrumentation

The Foreign Language Classroom Anxiety Scale (FLCAS), adapted from Horwitz et al. (1986) was used to measure participants’ foreign language anxiety. It is a 5-point Likert scale (ranging from strongly agree to strongly disagree) and comprises 33 items. Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich and De Groot (1990) is composed of two sections: Motivational Beliefs and Self-Regulated Learning Strategies. For this study, only the Self-Regulated Learning Strategies section was used to assess the participants’ use of self-regulated learning strategies. This section itself consists of two parts: Cognitive Strategy Use and Self-Regulation. Cognitive Strategy Use scale includes 13 items relating to the use of rehearsal strategies, elaboration strategies such as summarizing and paraphrasing, and organizational strategies. Self-Regulation scale contains 9 items concerning the use of metacognitive (planning, skimming, and comprehension monitoring) and effort management strategies.

3.3 Procedure

3.3.1 Instruments Validation

3.3.1.1 Reliability Indices

The Cronbach’s alpha reliability indices (Table 1) for the three components of anxiety and two subcategories of strategy ranged from a low of .81 for self-regulation up to a high of .92 for cognitive strategy use. The total anxiety and strategy had reliability indices of .95 and .93.

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Apprehension</td>
<td>.852</td>
</tr>
<tr>
<td>Test Anxiety</td>
<td>.891</td>
</tr>
<tr>
<td>Fear of Negative Evaluation</td>
<td>.898</td>
</tr>
<tr>
<td>Total Anxiety</td>
<td>.955</td>
</tr>
<tr>
<td>Cognitive Strategy Use</td>
<td>.923</td>
</tr>
<tr>
<td>Self-Regulation</td>
<td>.819</td>
</tr>
<tr>
<td>Total Strategy</td>
<td>.932</td>
</tr>
</tbody>
</table>

3.3.1.2 Construct Validity

A factor analysis through varimax rotation was carried out to underlying construct of the components of anxiety and learning strategy. The assumptions of sampling adequacy and lack of multicollinearity were met. As displayed in Table 2, the KMO index of .699 was higher than the criterion of .60. Thus, it can be concluded that the present sample size was adequate for the factor analysis.

<table>
<thead>
<tr>
<th>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</th>
<th>.699</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx. Chi-Square</td>
<td>712.175</td>
</tr>
<tr>
<td>Bartlett’s Test of Sphericity</td>
<td>10</td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
</tr>
</tbody>
</table>
The significant Bartlett’s test \( (\chi^2 = 712.17, \ p = .000) \) indicated that the assumption of Sphericity was met. That is to say, the correlation matrix used to extract the factor was an appropriate one that is, there were not too high nor too low correlations among all variable. The SPSS extracted one factor which accounted for 81.15 percent of variance.

Table 3. Total variance explained

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>4.405</td>
<td>88.108</td>
</tr>
<tr>
<td>2</td>
<td>.279</td>
<td>5.577</td>
</tr>
<tr>
<td>3</td>
<td>.152</td>
<td>3.040</td>
</tr>
<tr>
<td>4</td>
<td>.140</td>
<td>2.798</td>
</tr>
<tr>
<td>5</td>
<td>.024</td>
<td>.477</td>
</tr>
</tbody>
</table>

And finally as displayed in Table 4, all of the tests loaded under the only extracted factor, although cognitive strategy use and self-regulation had negative loadings. That is to say, the construct validity of the components of anxiety and learning strategy were bipolar that is, they all loaded under the same factor but at two opposite directions (Diagram 1).

Table 4. Component matrix

<table>
<thead>
<tr>
<th>Component</th>
<th>Test Anxiety</th>
<th>Cognitive Strategy Use</th>
<th>Communication Apprehension</th>
<th>Fear of Negative Evaluation</th>
<th>Self-Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.959</td>
<td>-.944</td>
<td>.943</td>
<td>.943</td>
<td>-.903</td>
</tr>
</tbody>
</table>

Diagram 1. Bipolar construct of anxiety and learning strategy
4. Results

4.1 Data Analysis

4.1.1 Testing Assumptions

This study explores the relationships between foreign language classroom anxiety and self-regulatory strategies. The data were analyzed using Kendall correlation because the data did not enjoy a normal distribution. As displayed in Table 5, the ratios of kurtosis over their respective standard errors were higher than +/- 1.96, except for self-regulation. This single exception does not change anything because correlation needs at least two variables.

Table 5. Testing normality assumption

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Std. Error</td>
<td>Ratio</td>
</tr>
<tr>
<td>Communication Apprehension</td>
<td>100</td>
<td>-.026</td>
<td>.241</td>
</tr>
<tr>
<td>Test Anxiety</td>
<td>100</td>
<td>-.090</td>
<td>.241</td>
</tr>
<tr>
<td>Fear of Negative Evaluation</td>
<td>100</td>
<td>-.024</td>
<td>.241</td>
</tr>
<tr>
<td>Cognitive Strategy Use</td>
<td>100</td>
<td>-.112</td>
<td>.241</td>
</tr>
<tr>
<td>Self-Regulation</td>
<td>100</td>
<td>.156</td>
<td>.241</td>
</tr>
</tbody>
</table>

4.1.2 Statistical Analyses

Research Question

Is there any relationship between foreign language classroom anxiety and self-regulated learning strategies?

Although this study included one single research question, it targeted the relationships between three components of FLCA with cognitive strategy use and self-regulation that is, there will be six separate Kendall correlations. That is why the major research question was broken down into six minor ones in order to better cover the objectives of this study.

First Minor Research Question

Is there any relationship between communication apprehension and cognitive strategy use?

The results of Kendall correlation (r (98) = -.75, p = .000, representing a large effect size) (Table 6) indicated that there was a significant and negative relationship between communication apprehension and cognitive strategy use. Thus, the first minor research question was rejected.

Table 6. Kendall correlation; communication apprehension with cognitive strategy use

<table>
<thead>
<tr>
<th></th>
<th>Cognitive Strategy Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall Correlation</td>
<td>- .752**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Scatter Plot 1 displays three aspects of the relationship between communication apprehension and cognitive strategy use. First, the relationship between the two variables is negative. The spread of dots from upper right to lower left corner showed that the relationship between the two variables was negative. Second, their relationship was linear. The spread of dots clustered around the diagonal; and finally, the two variables enjoyed homoscedasticity (homogeneity of variances). The spread of dots did not show a funnel shape that is, narrow at one end and wide at the other end.
Second Minor Research Question

Is there any relationship between communication apprehension and self-regulation?

The results of Kendall correlation \( r(98) = -.68, p = .000 \), representing a large effect size (Table 7) indicated that there was a significant and negative relationship between communication apprehension and self-regulation. Thus, the second minor research question was rejected.

Table 7. Kendall correlation; communication apprehension with self-regulation

<table>
<thead>
<tr>
<th>Communication Apprehension</th>
<th>Self-Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall Correlation</td>
<td>-0.682**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

As displayed through Scatter Plot 2, the relationship between the communication apprehension and self-regulation enjoyed both linearity and homoscedasticity assumptions. Since majority of the dots fell on the diagonal, it can be claimed that the relationship between the two variables was linear. The spread of dots also showed a uniform pattern with an almost equal width across the diagonal, indicating that homoscedasticity assumption was met.
Third Minor Research Question

Is there any relationship between test anxiety and cognitive strategy use?

The results of Kendall correlation \( r (98) = -.78, p = .000 \), representing a large effect size) (Table 8) indicated that there was a significant and negative relationship between test anxiety and cognitive strategy use. Thus, the third minor research question was rejected.

Table 8. Kendall correlation; test anxiety with cognitive strategy use

<table>
<thead>
<tr>
<th>Test Anxiety</th>
<th>Cognitive Strategy Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall Correlation</td>
<td>-.781**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

As displayed in Scatter Plot 3, the relationship between the two variables is negative. That is to say, the spread of dots from upper right to lower left corner showed that the relationship between the two variables was negative. Their relationship was linear. The spread of dots clustered around the diagonal; and finally, the two variables enjoyed homoscedasticity (homogeneity of variances). The spread of dots did not show a funnel shape that is, narrow at one end and wide at the other end.
Fourth Minor Research Question
Is there any relationship between test anxiety and self-regulation?
The results of Kendall correlation \((r (98) = -0.69, p = 0.000, \text{ representing a large effect size})\) (Table 9) indicated that there was a significant and negative relationship between test anxiety and self-regulation. Thus, the fourth minor research question was rejected.

Table 9. Kendall correlation; test anxiety with self-regulation

<table>
<thead>
<tr>
<th></th>
<th>Self-Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall Correlation</td>
<td>-.690**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

As displayed through Scatter Plot 4, the relationship between the test anxiety and self-regulation enjoyed both linearity and homoscedasticity assumptions. Since majority of the dots fell on the diagonal, it can be claimed that the relationship between the two variables was linear. The spread of dots also showed a uniform pattern with an almost equal width across the diagonal, indicating that homoscedasticity assumption was met.
Fifth Minor Research Question

Is there any relationship between fear of negative evaluation and cognitive strategy use?

The results of Kendall correlation (r (98) = -.71, p = .000, representing a large effect size) (Table 10) indicated that there was a significant and negative relationship between fear of negative evaluation and cognitive strategy use. Thus, the fifth minor research question was rejected.

Table 10. Kendall correlation; fear of negative evaluation with cognitive strategy use

<table>
<thead>
<tr>
<th>Fear of Negative Evaluation</th>
<th>Cognitive Strategy Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall Correlation</td>
<td>-.781**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>100</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

As displayed in Scatter Plot 5, the relationship between the two variables was negative. That is to say, the spread of dots from upper right to lower left corner showed that the relationship between the two variables was negative. Their relationship was linear. The spread of dots clustered around the diagonal; and finally, the two variables enjoyed homoscedasticity (homogeneity of variances). The spread of dots did not show a funnel shape that is, narrow at one end and wide at the other end.
Sixth Minor Research Question
Is there any relationship between fear of negative evaluation and self-regulation?
The results of Kendall correlation ($r (98) = -.63$, $p = .000$, representing a large effect size) (Table 11) indicated that there was a significant and negative relationship between fear of negative evaluation and self-regulation. Thus, the sixth minor research question was rejected.

Table 11. Kendall correlation; fear of negative evaluation with self-regulation

<table>
<thead>
<tr>
<th></th>
<th>Self-Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall Correlation</td>
<td>-.638**</td>
</tr>
<tr>
<td>Fear of Negative Evaluation</td>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

As displayed through Scatter Plot 6, the relationship between the fear of negative evaluation and self-regulation enjoyed both linearity and homoscedasticity assumptions. Since majority of the dots fell on the diagonal, it can be claimed that the relationship between the two variables was linear. The spread of dots also showed a uniform pattern with an almost equal width across the diagonal, indicating that homoscedasticity assumption was met.
5. Discussion

The findings corroborate previous studies that found there is a negative relationship between levels of language anxiety and strategy use (Ghorban Mohammadi, Biria, Koosha, & Shahsavari, 2013; Noormohamadi, 2009; Shabani, 2015).

Concerning test anxiety as a type of FLCA, Bembunuty, McKeachie, Karabenick, and Lin (1998) pointed out the effect of test anxiety on rehearsal, organization, and help-seeking strategies. In addition, Ahmad, Hussain, and Azeem (2012) showed that there is a negative correlation between test anxiety and self-efficacy for self-regulation. Thus, the findings of the current study are consistent with the findings of these two researches.

Regarding the close relationship between metacognition and self-regulation (Dinsmore, Alexander, & Loughlin, 2008; Lee, 2009), the findings are in line with those of Dobson (2012) suggesting that metacognition may help students learn how to cope with anxiety and use self-regulation of emotions against academic anxiety.

Motivation is a key element of self-regulation (SR). To make it simpler, Zimmerman (2000) pointed out that self-regulatory skills would be of little value if a person would be unable to motivate themselves to utilize them. In this regard, the findings are in accordance with those of Liu and Chen (2015) revealing that there is a significant negative relationship between FLCA and motivation.

Phan (2010) suggested that critical thinking (CT) is a “cognitive strategy of SR” and both CT and SR “operate in a cyclic pattern” (p. 289). Moreover, Kuiper (2002) noted that CT and SRLSs are closely connected to each other and as Ghanizadeh and Mirzaee (2012) showed, “the promotion of EFL learners’ CT will have a positive influence on their SR” (p. 462). Consequently, the findings of the present study support previous research by Fahim and Niforooshan (2014) indicating that FLCA has a negative correlation with CT.

6. Conclusion

The aim of the present study was to investigate the relationship between FLCA and SRLSs. The findings revealed that there is a negative relationship between these two variables. Lack of positive link between the target variables may be attributed to the complexity and specificity of human affective side compared to his cognitive features. Variables like motivation, anxiety, attitude, and so forth may be subject to certain factors and circumstances to be affected. The findings, in addition to giving us insight on the nature of a variable like anxiety, may justify the necessity of further studies. Although some researchers indicated that there is a positive correlation between FLCA and oral English test achievement (Lian & Budin, 2014), FLCA is negatively correlated with reading (Wu, 2011), writing (Tallon, 2014), listening (Serraj & Noordin, 2013), and speaking (Tóth, 2012) skills. Therefore, teachers should familiarize the students with SRLSs and accentuate their positive effects on language skills and notify that by employing SRLSs they can not only enhance their learning but also reduce their level of language anxiety.
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