THE RELATIONSHIP BETWEEN EFL LEARNERS’ LANGUAGE LEARNING STRATEGY USE, WILLINGNESS TO COMMUNICATE, AND L2 ACHIEVEMENT

Aycan DEMİR AYAZ

Abstract
This study aimed to explore the interactions between EFL learners’ language learning strategy use, willingness to communicate (WTC), and L2 achievement. To do so, a quantitative study was conducted with 79 tertiary level EFL learners. These participants were prep-class students from two different state universities, and they were having intensive language courses during that one-year education. Data was collected using a 70-item composite instrument. To measure language learning strategy use of the participants, Oxford's (1990) Strategy Inventory for Language Learners (SILL) was used, and L2 WTC levels of the learners were determined via McCroskey's (1992) WTC scale. L2 achievement scores were calculated using their first term quiz and midterm results. To analyze the available data, SPSS Statistics 22.0 software was used. The results indicated that metacognitive and social strategies are the most commonly favored strategy types by both genders. In addition, learners with higher WTC in L2 use language learning strategies more frequently, and affective and memory-related strategies are the best predictors of L2 WTC. Finally, findings displayed that although WTC and language learning strategies are two important constructs influencing each other, they do not lead to increased L2 achievement. To conclude, this study clearly showed that WTC levels of the learners can be increased by providing the learners with strategy training and guiding them to use more strategies, so that, they can feel comfortable to use L2 in communication. Especially, affective and memory-related strategies need to be emphasized because of their greater predictive ability on L2 WTC.

Keywords: Language learning strategies, willingness to communicate, L2 achievement, gender

1. Introduction
The relationship between language learning strategy use and various learner characteristics such as gender, learning style preferences, motivation, aptitude, anxiety, self-confidence, self-efficacy, and proficiency level has been explored in many studies (Green & Oxford, 1995; MacIntyre, 1994). Willingness to communicate (WTC) in L2 has also been subject to several studies revealing its association with different learner characteristics including perceived communication competence and anxiety (MacIntyre, 1994), shyness (Chu, 2008), L2 communication confidence and international posture (Yashima, 2002), personality, motivation, teachers’ role, and learning context (Cameron, 2013). However, the interaction between these language learning strategy use and L2...
WTC has been investigated in very few studies so far (Jamaleddin, 2015; MacIntyre & Noels, 1994; Mehrgan, 2013; Mirsane and Khabiri, 2016). Based on MacIntyre and Noels’s (1994) findings showing that strategy training helps learners cope with psychological barriers and comforts them to communicate in L2, the current study aims at exploring the relationship between tertiary level EFL learners’ language learning strategy use, WTC, and L2 achievement. Gender differences will also be handled. In doing so, providing theoretical information for L2 learning and pedagogical implications for language teachers are intended.

**Literature Review**

In this section, the studies on language learning strategies and willingness to communicate will be reviewed referring to the links between them and their relationship with L2 achievement.

**Language Learning Strategies**

A strategy can be defined as an action taken to reach a final goal (Scarcella & Oxford, 1992). Based on the same principle, language learning strategies are “specific actions, behaviors, steps, techniques (or thoughts) – such as seeking out conversation partners, or giving oneself encouragement to tackle a difficult language task – used by students to enhance their own learning” (Scarcella and Oxford, 1992, p. 63). According to Weinstein, Husman, and Dierking (2000), any feelings, ideas, beliefs or actions that lead to better understanding, internalizing, and using new knowledge and abilities are parts of language learning strategies. In that description, the authors emphasize three basic characteristics of strategies which are purposefulness, goal-directedness, and efforts in cognitive actions. While Oxford (2003) states that strategies are consciously controlled actions, Cohen (1998) advocates that there is not a consensus whether strategies are conscious or not.

The studies on L2 learning strategies started with the intention of defining what a “good language learner” is (Naiman, 1978; Rubin, 1975). The main purpose of these very early studies was identifying the good language learning strategies used by successful learners and teaching them to less successful ones to improve these learners as well. However, the idea of “good language learning strategies” did not avail, as it was not possible to define any strategy as magically good for everyone (Yamamori, Isoda, Hiromori, & Oxford, 2003). Then, a new line of research appeared focusing on the idea that the criteria should not be using good language learning strategies, but using strategies which match the requirements of the tasks (Chamot & O’Malley, 1994) and also the characteristics of the learners such as their learning style preferences (Ehrman, 1996).

Different researchers have offered various taxonomies of language learning strategies. While O’Malley and Chamot (1990) mentioned three categories which are metacognitive, cognitive, and social/affective; Oxford (1990) put forth six types of strategies which are metacognitive, cognitive, social, affective, memory-related, and compensatory strategies. In Oxford’s (1990) classification, metacognitive strategies are related with planning and managing the learning process. Cognitive strategies refer to the thinking processes throughout learning. While social strategies are strongly associated with learning by interacting with others; affective strategies are connected with emotional states of the learners regarding the learning process. Memory-related strategies, on the other hand, enable learners to link language items with the previously learned ones, and help to retrieve them when needed. Finally, compensatory strategies help learners to make up for their deficient knowledge by paraphrasing an unknown word, guessing meanings from context and so on.
Being the most widely-known taxonomy, Oxford’s (1990) categories and Strategy Inventory for Language Learning (SILL) developed by her have been used in many research studies. Deneme (2008), conducting SILL in Turkish EFL context, revealed that the learners preferred compensation and metacognitive strategies more frequently than memory-related, cognitive, affective, and social strategies. Wharton (2000) also used SILL in his study and concluded that Chinese learners studying French or Japanese preferred social strategies in the first place while they did not show any tendency for using affective strategies. According to the findings of Chu (2008), compensation strategies were the most commonly preferred ones among university students while social strategies were not much favored by them. While Green (1991) revealed metacognitive strategies as the most commonly preferred ones by the students of English at the University of Puerto Rico, Touba (1992) concluded that Egyptian university students utilized metacognitive and memory strategies.

A great amount of literature is available on the interplay between learning strategies and L2 achievement as well stating that higher levels of strategy use is positively related with higher L2 achievement (Anderson, 2005; Bruen, 2001; Tam, 2013; Wharton, 2000). Tam’s (2013) study on university level students in Hong Kong showed that L2 proficiency was positively correlated with the use of compensation, cognitive, and social strategies. Griffiths (2003) also found a positive relationship between proficiency level and strategy use in her study conducted in New Zealand. The findings indicated that advanced learners utilized strategies such as interacting with others, controlling their feelings, and monitoring their learning process quite often; however, their peers at elementary level reported using L2 learning strategies much less frequently. Gan, Humphreys and Hamp Lyons (2004) also asserted that since the less proficient learners had the misconception thatrote-memorization would serve their learning purposes; they were not able to see progress in their learning. Similarly, Yamamori et al. (2003) estimated that while high-achieving participants in their study used various strategies in distinctive patterns, low-achieving group preferred strategy use much less frequently and the ones they used were limited to dictionary use and repeated readings.

Studies conducted to see the gender effect on L2 strategy use offer quite different results. Many of them declare that female learners use learning strategies more often than males (e.g. Chavez, 2001; Wang, 2002, Tam, 2013). According to Tam (2013), females were more frequent-users of all types of learning strategies than males. However, various researchers (Oxford, 1996; Phakiti, 2003; Sheorey, 1999; Young & Oxford, 1997) have revealed contradicting findings. For example, Young and Oxford (1997) suggested no significant difference between the strategy uses of both genders; but they stated that differences might appear in use of different types of strategies. The findings by Oxford (1996) indicated that females used cognitive strategies more commonly than males while Sheorey (1999) estimated higher use of metacognitive strategies by females. According to Phakiti (2003), on the other hand, males reported using metacognitive strategies more frequently than females.

**Willingness to Communicate in L2**

The concept of willingness to communicate (WTC) was first mentioned by McCroskey and his colleagues (McCroskey & Baer, 1985; McCroskey & Richmond, 1987), who defined it as the inclination of individuals’ to initiate or attend a conversation voluntarily. Then, MacIntyre and Charos (1996) used the term for L2 communication for the first time while MacIntyre, Dörnyei, Clement, and Noels (1998) provided the most commonly known description for L2 WTC. MacIntyre et al. (1998, p. 547) stated that WTC refers to “a readiness to enter into discourse at a particular time with a specific person or persons, using an L2”.

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Initial models of WTC discussed two main variables predicting it, which were perceived communication competence and anxiety (MacIntyre, 1994). In the following years, MacIntyre et al. (1998) presented a “pyramid-shaped heuristic model” of WTC composed of six layers each representing interconnected variables influencing WTC (p. 546). While three layers show situational factors (e.g., Communication Behavior, Behavioral Intention, and Situated Antecedents) which are limited with the context, the other three display enduring factors (e.g. Motivational Propensities, Affective-Cognitive Context, and Social and Individual Context) which have long-term effects on L2 WTC (MacIntyre et al., 1998, p. 546). There are several other studies on the predicting factors of WTC. According to Chu (2008), shyness and anxiety influenced WTC negatively. Öz, Demirezen, and Pourfeiz (2015) reported self-perceived communicative competence as the best predictor of WTC, while Yashima (2002) indicated “L2 communication confidence and international posture” (p. 63) as the variables directly effecting it. In addition to these studies, Çetinkaya (2005) concluded in his research with Turkish college students that WTC was directly associated with the learners’ attitudes towards the international community and perceptions of linguistic self-confidence. Moreover, personality and motivation were influential factors on WTC through mediation of linguistic self-confidence. Furthermore, Mehrghan (2013) emphasized contextual factors such as the interlocutors attending the conversation, place of the communication and time, while Zarrinabadi (2014) highlighted teachers’ role on WTC. Finally, Dörnyei (2003) reported personality and L2 communicative competence as effective variables on L2 WTC, and Cameron (2013) disclosed anxiety, personality, motivation, teachers’ role, and learning context as significant variables predicting it. Gender was also revealed as a substantial individual difference factor influencing L2 WTC levels of the learners (MacIntyre, Baker, Clément, & Donovan, 2002). According to the findings of the study by MacIntyre et al. (2002), female learners appeared to outperform their male peers in terms of their WTC levels. However, the study conducted by Jamaleddin (2015) challenged their findings concluding that male learners were much more willing to communicate in L2 compared with females. It is quite explicit that there is no consensus regarding gender effect on L2 WTC, and therefore, this area needs more enlightening research.

Increasing L2 learners’ WTC has been asserted to result in multiple benefits for them. First, using L2 to communicate with a speaker from another country helps establishing international contact, and learning about social, cultural, and political features of the community (MacIntyre et al., 1998). MacIntyre and Doucette (2010) also state that being a fluent L2 speaker, which is one of the most crucial objectives of language learning, can only be achieved by practicing communication, and WTC is a prerequisite for that. Moreover, by introducing WTC to language teaching, teachers can help enhance learners’ autonomy and authentic language use (Kang, 2005). Final and the most significant benefit of WTC is that it has a very strong relationship with L2 achievement, which has been proved in various research studies (Baghaei, 2012; Kang, 2005; MacIntyre & Doucette, 2010; Mahmoodi & Moazam, 2014; Öz, Demirezen, & Pourfeiz, 2015). Mahmoodi and Moazam (2014) revealed a reciprocal relationship between L2 achievement and WTC stating that high levels of L2 WTC results in greater achievement level, the learners with high achievement levels get more willing to communicate in L2. Kang (2005) and Baghaei (2012) also supported their findings with very similar ones. In addition, Öz, Demirezen, and Pourfeiz (2015) suggested that high levels of WTC lead to improving L2 achievement besides providing an environment for successful communication. According to MacIntyre and Doucette (2010), second language learning can be enhanced by increased levels of WTC among the language learners, and therefore researchers need to focus on how to do that especially in EFL contexts (Mirsane & Khabiri, 2016).
The Relationship between Language Learning Strategy Use and WTC in L2

Being significant characteristics of L2 learners, language learning strategy use and WTC have been parts of many studies investigating their relationships with various other learner characteristics and with L2 achievement. However, the studies on the interplay between these two main variables of the current study are really insufficient and limited to only one or two types of strategies. Among these small number of studies, Mirsane and Khabiri (2016) advocate that strategy instruction can improve WTC of learners. After 16 sessions of strategy training in their study, they found out that the learners appeared to be more willing to use the strategies and to communicate. Mirsane and Khabiri (2016) explained these results referring to MacIntyre and Noels (1994) estimating that strategy training helps the learners cope with negative psychology and comforts them to communicate in L2. Mehrgan (2013), on the other hand, explored socio-affective strategy use of the learners who are already willing to communicate. He discovered that these learners highly benefit from socio-affective strategies; however, they prefer different ones based on their own characteristics. Jamaleddin (2015) also reached very similar findings on the relationship between WTC and socio-affective strategies. A strong and positive relationship between them appeared, though the results differed for social strategies based on gender; male learners were more inclined to use social strategies than females.

The current study arose from the desire to clarify the relationship between language learning strategy use (including metacognitive, cognitive, social, affective, memory-related, and compensation strategies), willingness to communicate in second language, and L2 achievement of tertiary level EFL learners. Based on very limited number of previous studies, it is highly plausible to assert that these factors are quite likely to affect each other. Although there are many studies conducted to explore the relationship between strategy use and L2 achievement, and WTC and L2 achievement separately, they have not been handled together in a comprehensive study. This study was initiated with these purposes in mind.

The research questions to be answered in this study are as follows:

1. Do male and female participants differ from each other in terms of their language learning strategy use preferences?
2. How do the participants with high, medium, and low WTC differ from each other in terms of their strategy use?
3. Among metacognitive, cognitive, social, affective, memory-related, and compensatory language learning strategies, what are the best predictors of WTC?
4. How do highly successful, moderately successful and unsuccessful learners differ in their WTC and use of learning strategies?

Methodology

In this section, settings and participants, instruments, data collection, and data analysis procedures will be described.

Settings and Participants

The settings for the current study are the Schools of Foreign Languages of two state universities. The aim of these schools is to teach English for general purposes and to assist the students develop four main skills (listening, speaking, reading, and writing) in a one-year intensive program. The participants study at Translation Studies, International Affairs, and English Language and Literature. The language curriculums applied are based on CLT that aims at preparing the students for the real world where they will need
to use the language to communicate and produce academic works. Therefore, all skills have great importance in these one-year programs.

The participants of this study, 79 in number, were chosen through convenience sampling. Their ages range between 17 and 27 (M = 19.29, SD = 1.923). While 48 (60.8%) participants are female learners, 31 (39.2%) of them are males. These participants are A2 and A2+ level prep-class students, and they have 24 hours of English per week taught as Main course by two or three different instructors.

**Instruments**

The present study employed a quantitative research design. The instrument administered includes two questionnaires composed of 70 items in total. The main variables in them are language learning strategies (including metacognitive, cognitive, social, affective, compensation, and memory-related strategies), and willingness to communicate. L2 achievement is also a significant variable in the study; however, it was evaluated using the composite score the participants have had through midterms and quizzes during the term.

**Strategy Inventory for Language Learners (SILL)**

The items for language learning strategies were adopted from Oxford’s (1990) Strategy Inventory for Language Learners (SILL). The survey has 50 items and it uses a 5-point Likert scale. The items between 1 and 9 measure memory-related strategies; the ones from 10 to 23 determine cognitive strategy use. The next six items between 24 and 29 are concerned with compensatory strategies; metacognitive strategies are measured through the items from 30 to 38; affective strategies are determined based on the next six items from 39 to 44; and finally, the ones between 45 and 50 are for social strategy use. The survey has previously been used in many studies (Ehrman & Oxford, 1990; Gan, Humphreys, & Hamp-Lyons, 2004; Ian & Oxford, 2003; Lafford, 2004; Oxford, Cho, Leung, & Kim, 2004; Wharton, 2000). Reliability scores of different forms of the SILL were reported to be between .93 and .98, based on whether the instrument was administered in the learners’ first or second language (Oxford & Burry, 1995). Cesur and Fer (2007) reported the reliability score of the Turkish version of the scale as .92 for the whole scale. It was between .59 and .84 for the six subscales of it. The Cronbach’s alpha score in the current study is .91 showing that the scale had very high reliability.

**Willingness to Communicate Scale**

Willingness to communicate of the participants in the current study was surveyed using McCroskey’s (1992) WTC scale. The scale has 20 items. In the original study (McCroskey, 1992), the participants were asked to provide answers out of 100; however, in the present study, 5-point Likert scale (1 referring to I never do this, and 5 being I always do this) was used to make it consistent with the SILL. The reliability coefficient score of the scale was found to be .92 by McCroskey (1992), and the Turkish version of the scale was reported to have .91 reliability coefficient score by Kanat-Muthuğlu (2016). Attested being highly reliable, the scale has been used in several studies (Çetinkaya, 2005; Kanat-Muthuğlu, 2016; Öz, Demirezen, & Pourfeiz, 2015; Yashima, 2002). For this particular study, Turkish version of the scale was adapted from Güler (2007). Reliability score of the scale in the present study was calculated as .95.

**Procedures for Data Collection**

The data were collected by three colleagues at the schools of study on behalf of the researcher in December, 2016. The instructors teaching these courses shared L2 achievement scores of the participants with the permission of the school administrations.
Data Analysis

To determine whether to use parametric or nonparametric tests in the study, tests of normality were administered. Since the very close investigation of the tests revealed normally distributed data, parametric tests were preferred (Pallant, 2010). Data was analyzed quantitatively, and inferential statistical procedures were applied. For the first research question, a multivariate analysis of variance (MANOVA) was conducted. A one-way analysis of variance (ANOVA) was administered for the second and fourth research questions. The third research question was analyzed using standard multiple regressions to reveal the predictors of L2 WTC.

Findings

The findings of the study will be presented in this section following the order of the research questions.

Research Question 1: Do male and female participants differ from each other in terms of their language learning strategy use preferences?

To determine the strategy preferences of male and female participants, descriptive statistics was performed. Table 1 below displays the gender distribution of six types of language learning strategies defined by Oxford (1990).

Table 1. Descriptive: learning strategies and gender distribution

<table>
<thead>
<tr>
<th>Strategies</th>
<th>Gender</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory related</td>
<td>female</td>
<td>3.01</td>
<td>.099</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>2.83</td>
<td>.107</td>
</tr>
<tr>
<td>Cognitive</td>
<td>female</td>
<td>3.08</td>
<td>.084</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>3.10</td>
<td>.110</td>
</tr>
<tr>
<td>Compensatory</td>
<td>female</td>
<td>2.97</td>
<td>.079</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>3.33</td>
<td>.104</td>
</tr>
<tr>
<td>Metacognitive</td>
<td>female</td>
<td>3.43</td>
<td>.116</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>3.62</td>
<td>.139</td>
</tr>
<tr>
<td>Affective</td>
<td>female</td>
<td>2.69</td>
<td>.100</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>3.07</td>
<td>.124</td>
</tr>
<tr>
<td>Social</td>
<td>female</td>
<td>3.22</td>
<td>.097</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>3.49</td>
<td>.109</td>
</tr>
</tbody>
</table>

*Mean score for language learning strategy use: M = 3.13, SD = .521
*Females: M = 3.07, SD = .522; Males: M = 3.24, SD = .511

According to the results of the descriptive statistics, the participants preferred using language learning strategies (M = 3.13, SD = .521) quite often. The analysis showed that both female (M = 3.42, SD = .116) and male learners (M = 3.62, SD = .139) appeared to use metacognitive learning strategies as their favorite one. However, male participants tended to use them more frequently than their female peers. Female learners reported using social strategies (M = 3.22, SD = .097) in the second place and cognitive strategy use (M = 3.08, SD = .084) followed it in the third order. Affective strategies (M = 2.69, SD = .100) were the least preferred ones by female participants. Similar to females, male participants also seemed to use social strategies (M = 3.49, SD = .109) as their second favorite one. They reported using compensatory learning strategies (M = 3.33, SD = .104) in the third place and cognitive learning strategies (M = 3.10, SD = .110) as the following...
one. Male participants showed the least tendency for memory related learning strategies use (M = 2.83, SD = .107).

A one-way between-groups multivariate analysis of variance (MANOVA) was also performed to investigate gender differences on language learning strategy use. Six dependent variables were used: memory related, cognitive, compensatory, metacognitive, affective, and social strategies. The independent variable was gender. Preliminary assumption were tested by checking for normality, linearity, univariate and multivariate outliers, homogeneity of variance, and multicollinearity, and no serious violations were revealed. There was a statistically significant difference between the genders on the combined dependent variables (Wilk’s Lambda = .748, F= 4.049, p = .001), partial eta squared = .252, indicating a small effect size. When the results were considered separately for the dependent variables, the only difference with a statistical significance, using a Bonferroni adjusted alpha level of .017, was compensatory language learning strategy use (female = 2.97; male = 3.33, F = 7.519; p = .008; partial eta squared = .089).

Research Question 2: How do the participants with high, medium, and low WTC differ from each other in terms of their strategy use?

A one-way analysis of variance (ANOVA) was performed to explore the differences between learning strategy use of the groups. The analysis indicated significant differences (F (2, 78) = 9.692, p = .000) with a large effect size of eta square = .203 (> .14) (Cohen, 1988).

<table>
<thead>
<tr>
<th>Strategies Between Groups</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Group differences (Bonferroni)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Low &lt; Medium, p &lt; .05</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>16.910</td>
<td>76</td>
<td>.223</td>
<td></td>
<td>Low &lt; High, p &lt; .05</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>21.223</td>
<td>78</td>
<td></td>
<td></td>
<td>Medium &lt; High, p &gt; .05</td>
</tr>
</tbody>
</table>

Post-hoc comparisons using the Bonferroni test displayed that the mean score for medium WTC group (M = 3.31, SD = .390) and high WTC group (M = 3.48, SD = .528) did not differ significantly (p > .05). However, the differences between low (M = 2.91, SD = .497) and medium group, and low and high group were at significant levels (p = .000). These can be viewed in Table 2.

Research question 3: Among metacognitive, cognitive, social, affective, memory-related, and compensatory language learning strategies, what are the best predictors of WTC?

To reveal the predictive power of different language learning strategy types on WTC levels of the participants, a standard multiple regression analysis was conducted. Preliminary analyses were done to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity.
Table 3: Correlations

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>WTC</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Memory related</td>
<td>.393</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Cognitive</td>
<td>.314</td>
<td>.742</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Compensatory</td>
<td>.207</td>
<td>.449</td>
<td>.513</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Metacognitive</td>
<td>.366</td>
<td>.709</td>
<td>.753</td>
<td>.440</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Affective</td>
<td>.513</td>
<td>.332</td>
<td>.432</td>
<td>.401</td>
<td>.527</td>
<td>1.000</td>
</tr>
<tr>
<td>7.</td>
<td>Social</td>
<td>.354</td>
<td>.375</td>
<td>.591</td>
<td>.488</td>
<td>.636</td>
<td>.551</td>
</tr>
</tbody>
</table>

First, the analysis of correlation between the dependent variable and independent variables indicated medium correlations between WTC levels of the participants and their memory related ($r = .393$), cognitive ($r = .314$), metacognitive ($r = .366$), and social ($r = .354$) strategy uses. The correlation between compensatory strategy use and WTC was small ($r = .207$) while affective strategy use of the participants was largely correlated with their WTC levels ($r = .513$). Since the independent variables were significantly correlated with the dependent variable, a standard multiple regression test revealed that the model explained 29.0% of the total variance (Adjusted $R^2 = .290$, $p = .000$).

Table 4: Standard multiple regression analysis

<table>
<thead>
<tr>
<th></th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
<th>Zero-order</th>
<th>Partial</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory related</td>
<td>.423</td>
<td>2.642</td>
<td>.010</td>
<td>.393</td>
<td>.297</td>
<td>.252</td>
</tr>
<tr>
<td>Cognitive</td>
<td>-.142</td>
<td>-.822</td>
<td>.414</td>
<td>.314</td>
<td>-.096</td>
<td>-.078</td>
</tr>
<tr>
<td>Compensatory</td>
<td>-.121</td>
<td>-1.020</td>
<td>.311</td>
<td>.207</td>
<td>-.119</td>
<td>-.097</td>
</tr>
<tr>
<td>Metacognitive</td>
<td>-.115</td>
<td>-.656</td>
<td>.514</td>
<td>.366</td>
<td>-.077</td>
<td>-.063</td>
</tr>
<tr>
<td>Affective</td>
<td>.454</td>
<td>3.776</td>
<td>.000</td>
<td>.513</td>
<td>.407</td>
<td>.360</td>
</tr>
<tr>
<td>Social</td>
<td>.162</td>
<td>1.134</td>
<td>.261</td>
<td>.354</td>
<td>.132</td>
<td>.108</td>
</tr>
</tbody>
</table>

Adjusted $R^2 = .290$ (metacognitive, cognitive, social, affective, memory-related, and compensatory language learning strategies)

A detailed investigation of the regression analysis showed that two of the language learning strategies, which are affective and memory related strategies, significantly predicted the WTC levels of the participants. The better predictor is affective strategy use ($\beta = .454$, $p = .000$) explaining 45.4% of the variance, and memory related strategy use ($\beta = .423$, $p = .010$) explained 42.3% of variance. Cognitive, compensatory, metacognitive, and social strategies did not have any significant predictive ability on the WTC levels of the participants ($p > .05$). Table 4 can be viewed for these results.
Research Question 4: How do highly successful, moderately successful and unsuccessful learners differ in their WTC and use of learning strategies?

Possible differences of WTC and language learning strategy use between highly successful, moderately successful, and unsuccessful learners were analyzed using a one-way analysis of variance (ANOVA).

Table 4. Descriptive: WTC and learning strategy use

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>low</td>
<td>19</td>
<td>2.39</td>
<td>1.18056</td>
</tr>
<tr>
<td>moderate</td>
<td>29</td>
<td>2.53</td>
<td>.94946</td>
</tr>
<tr>
<td>high</td>
<td>31</td>
<td>2.25</td>
<td>.93697</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>2.39</td>
<td>.99908</td>
</tr>
<tr>
<td>Strategies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>low</td>
<td>19</td>
<td>3.09</td>
<td>.63072</td>
</tr>
<tr>
<td>moderate</td>
<td>29</td>
<td>3.24</td>
<td>.45057</td>
</tr>
<tr>
<td>high</td>
<td>31</td>
<td>3.06</td>
<td>.51058</td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>3.13</td>
<td>.52162</td>
</tr>
</tbody>
</table>

The analysis indicated non-significant differences between the groups for WTC (F (2, 78) = .590, p > .05), and language learning strategy use (F (2, 78) = 1.025, p > .05). So, no relationship was revealed between WTC and strategy use, and L2 achievement. Table 5 below shows the results of these analyses.

Table 5. ANOVA for WTC and strategy use of low, moderate, and high success groups

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WTC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1.191</td>
<td>2</td>
<td>.596</td>
<td>.590</td>
<td>.557</td>
</tr>
<tr>
<td>Within Groups</td>
<td>76.666</td>
<td>76</td>
<td>1.009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>77.857</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>.557</td>
<td>2</td>
<td>.279</td>
<td>1.025</td>
<td>.364</td>
</tr>
<tr>
<td>Within Groups</td>
<td>20.665</td>
<td>76</td>
<td>.272</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21.223</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion

This study investigated the interactions between tertiary level EFL learners’ language learning strategy use, WTC, and L2 achievement by referring to gender differences, as well. Analysis of the first research question revealed remarkable findings favoring male participants in strategy use. These findings are parallel to Tercanlioğlu’s (2004) who suggested that except for affective strategies, male learners use language learning strategies more frequently than females in Turkish context. A closer investigation of the relationship between gender and strategy use proposed that both male and female EFL learners tended to use metacognitive strategies in the very first place, which is verified by some other studies conducted in Turkish context (Deneme, 2008; Tercanlioğlu, 2004). Deneme (2008) who investigated tertiary level EFL learners’ strategy use concluded that these learners were inclined to use metacognitive and compensatory strategies most. Tercanlioğlu (2004) also supported the present study with the same findings. Secondly, social strategies were in pursuit of metacognitive strategies regarding the sequence of use by males and females in the present study, and they were explored to be highly resorted ones by Wharton (2000), as well. Finally, affective strategies were reported to be the least preferred ones by females and memory-related strategies were the least favorite of males. These findings are in line with Wharton (2000) and Tercanlioğlu (2004) who proposed...
affective strategies as the least utilized ones and memory-related strategies also among the least preferred language learning strategies by EFL learners. Only in their use of compensatory strategies male and female participants significantly differed from each other. Contrary to Goh and Foong's (1997) research study, which presented that females learners used compensation strategies more frequently male participants, in the current one, males reported more use of these strategies.

The analysis of the relationship between WTC in L2 and language learning strategy use displayed that the learners' level of WTC and strategy use are significantly associated with each other. As Mircane and Khabiri (2016) aptly clarify it, higher amounts of strategy use result in higher levels of WTC, and therefore, they suggest providing strategy training for language learners. They support that proposition by referring to MacIntyre and Noels (1994) who clearly explained that more dependence on language learning strategies comfort L2 learners; thus, they can communicate more easily in L2 and are more willing to do that.

Investigating the predictors of L2 WTC among language learning strategies led to the conclusion that affective and memory related strategies have the best predicting ability on WTC. Since a highly positive emotional state leads to psychological comfort as well, they may be leading to high levels of L2 WTC in the end. As a direct language learning strategy (Oxford, 1990), memory-related strategies may potentially contribute to higher levels of WTC by providing practical and concrete clues of retrieving the necessary information when needed. Since the strategies such as keyword, acronym, or rhyming use are pretty catchy, they may possibly create a safe zone for L2 learners while communicating in L2, and thus may increase their WTC levels. Further research is needed to testify these speculations.

The final research question in the current study aimed to explore the potential differences between high, moderate, and low success groups’ L2 WTC and language learning strategy use. Contrary to many studies suggesting strong relationships between L2 achievement and strategy use, findings of the current one revealed no direct connections between them. Therefore, they signal the presence of other more substantial variables than strategy use and WTC affecting L2 achievement of that participant group. Culture of the country, social or educational context, or some other individual difference variables may possibly have more prominent influences on achievement levels of these learners. Certainly, there is a need for future research to falsify or verify those speculations.

Conclusion

The results emerged in this study displayed that male learners in Turkish educational context are more frequent users of language learning strategies, and metacognitive and social strategies are the most commonly preferred strategy types by both genders. In addition, learners with higher WTC in L2 use more language learning strategies, and affective and memory-related strategies are the best predictors of L2 WTC. Finally, language learning strategies and WTC in L2 are two important constructs affecting each other although they do not lead to increased L2 achievement.

To conclude, this study clearly showed that WTC levels of the learners can be increased by guiding them to use more strategies, so that, they can feel more comfortable to use L2
in communication. Especially, affective and memory-related strategies need to be emphasized because of their greater predictive ability on L2 WTC.

Implications of the Study
Based on the findings of this study, pedagogical implications will be suggested to provide new insights to language educators, curriculum and material developers, and researchers. The study revealed that language learning strategies enhance L2 WTC of the EFL learners due to their positive effects on comforting the learners. Accordingly, the literature presents numerous advantages of high L2 WTC levels (Kang, 2005; MacIntyre & Doucette, 2010; MacIntyre et al, 1998). For example, high levels of WTC can contribute to fluency of the learners as well as providing international contact to learn about different countries and cultures, to socialize, and finally to be a global citizen (Kang, 2005; MacIntyre & Doucette, 2010; MacIntyre et al, 1998). Hereby, it can be suggested that providing strategy training as parts of the language courses, and encouraging the learners’ to use them can help the learners while communicating in L2, and finally contribute to language learning. Regarding the format and process of that training, it should obviously include teaching how to choose the most appropriate strategies for the tasks at hand (Chamot & O’Malley, 1994), for the learning style preferences of the students (Ehrman, 1996), and for their experiences or background knowledge (Wenden, 1998). When and how to apply those strategies most effectively, and how to benefit from them during communication are also crucial points to be covered.

Limitations and Suggestions for Further Research
Considering the limitations of the present research, some suggestions will be covered for further research.

- This study was totally based on quantitative research design; however, supporting the quantitative data with qualitative ones would yield results that are more distinct.

- In addition, that study was limited with state university students. Including other groups such as primary, secondary, and high school learners as well as private institution contexts would give more reliable and generalizable results because of the latent effects of various factors including age, educational context, socio-economic status or developmental stages.

References


