The Eurasia Proceedings of
Educational & Social Sciences (EPESS)
ISSN: 2587-1730

The Eurasia Proceedings of Educational & Social Sciences (EPESS), 2017

Volume 7, Pages 38-43

ICRES 2017: International Conference on Research in Education and Science

THE INVESTIGATION OF THE RELATIONSHIP BETWEEN SELF-REGULATION AND LANGUAGE LEARNING STRATEGIES

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Abstract: A body of research has shown that self-regulation and language learning strategies are important variables influencing learning. The aim of the study is to analyze the relationship between students' self-regulations and their language learning strategies. For research purposes, the changes in self-regulations and language learning strategies according to achievement and grade levels, together with the more or less frequently used language learning strategies are investigated. The participants comprise 860 higher education students attending various departments in a state university in Turkey. The Scale on Self-Regulation in Learning (SSRL) and Strategy Inventory for Language Learning (SILL) were used to gather data. Descriptive statistics, one-way MANOVA and ANOVA, and correlation statistics were used during data analyses. The findings show medium positive correlations between the two main constructs, changes in both student self-regulations and their language learning strategies when students' achievements and grade levels are considered and reveal some facts about the frequently used or neglected strategies in language learning. Conclusions are drawn and suggestions for further practice and research are made in the end accordingly.

***Keywords*:** Self-regulation, language learning strategies, achievement, grade level, higher education

Introduction

Since the mid-1970s, there has been substantial growth in the literature on language learning strategies and self-regulated learning. Oxford (1990) defines learning strategies as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferrable to new situations" (p. 8). Self-regulation is one of the key concepts in Bandura's *Social Learning Theory* and is described by Zimmerman (2000: 14) as "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals".

So far, comparatively few studies have examined self-regulation in language learning settings. For example, Kim et al. (2015) investigated English language learners' self-efficacy profiles and their relationship with self-regulated learning strategies. In another research, Ekhlasa and Shangarffam (2013) examined the relationship determinant factors of self-regulation strategies have with main four language skills and overall proficiency. Despite the growing interest in language learning strategies and self-regulated learning, there has been no detailed investigation of the interplay between these two constructs.

In this respect, the main purpose of the present study is to investigate the relationship between the self-regulation levels students have and the language learning strategies they use during learning. The research questions addressed in this paper include:

1. Are the self-regulation levels students have and the language learning strategies they use related?
2. Do students' self-regulations and their language learning strategies change through grades?
3. Are there differences between high and low achievers in terms of their self-regulations and language learning strategies?
4. What language learning strategies are employed more or less frequently by students having high or low self-regulation and achievement levels?

- Selection and peer-review under responsibility of the Organizing Committee of the conference

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Studies on Self-regulation and Language Learning Strategies

Recently, a considerable literature has grown up around the theme of language learning strategies. There is a growing number of publications focusing on the likely relationship between language learning strategies and several factors or outcomes such as achievement, proficiency level, nationality; motivation, beliefs about language learning, learning style, vocabulary size, goal orientations and cultural background etc. (Bremner, 1999; Chang & Liu, 2013; Chen, 2009; Diseth, 2011; Goh & Foong, 1997; Grainger, 2012; Griffiths, 2003; Kim et al., 2015; Magogwe & Oliver, 2007; Nacera, 2010; Phan, 2009; Shmais, 2003; Wong & Nunan, 2011; Yalçın, 2003; Zare-ee, 2010).

Taking the proficiency levels of students, some research found positive correlations between level of proficiency and language learning strategy use (Karahan, 1991; Lai, 2009; Liu, 2004), while some others reported no relationships (Çavuşoğlu, 1992; Tüz, 1995). Studies focusing on relationships between language learning strategies and achievement also had inconsistent results. Again, while some authors reported significant relationships between students' achievement levels and their language learning strategy use (Alamdari, 2010; Aydemir, 2007; Cesur, 201; Sucu, 2009), the others observed insignificant or no relationship at all (Yalçın, 2003).

The recent study of Al-Natour (2012) reported that fourth year (senior) students used language learning strategies significantly higher than the students in other levels. Similarly, Wu (2008) found that higher proficiency EFL students used learning strategies more often than lower proficiency EFL students, especially those cognitive, metacognitive and social strategies. On the other hand, in a Turkish context with 140 undergraduate students from a state university (Yılmaz, 2010) the students were found high strategy users and the language learning strategies were widely used among more proficient learners than less proficient learners. In another study (Al-Buainain, 2010), the results suggested that there was a positive relationship between language learning strategy use and learning level (years of studying English). Similarly, in a recent study that investigated language learning strategy used by Saudi EFL students (N=134) at Aljouf University, Alhaysony (2017) found no significant difference in relation to duration of studying English, although students with long duration reported using language learning strategies most frequently.

Studies on self-regulation have generally investigated the relationship self-regulation might have with different factors and/or examined the influence of self-regulation on some other dependent variables such as academic achievement. However, the results were mixed, inconsistent and inconclusive. For example, in some studies the effects of self-regulation on academic achievement were positive (Cekolin, 2001; Douglas, 2006; Erdogan, 2011; Staudt, 1995), whereas in some other research self-regulation didn't have any significant influence (Heo, 1998; Lewis, 2006). Moreover, some evidence suggested that development of self-regulation took some time. In their longitudinal study with higher education students, Van der Hurk et al (1999) found that students' self-regulation or self-regulatory learning skills developed significantly only in the third and fourth grades. Erdogan (2011) added further evidence on the gradual development of self-regulated learning and identified that senior students' self-regulated learning levels were significantly higher than those attending their initial years in tertiary education.

Methods

Participants and Sampling

In this descriptive study, the participants were higher education students studying at various departments in a state university in Turkey. By using cluster and convenience sampling together, research instruments were given to a total of 860 students (1st grade=237, 2nd=194, 3rd grade=213, 4th grade=216) who were taking English as a foreign language courses through all grades (from freshmen to seniors).

Instruments

The study was conducted in the form of a survey, with data being gathered via "Scale on Self-Regulation in Learning-SSRL" and "Strategy Inventory for Language Learning-SILL". The 67-item SSRL (Erdogan & Senemoglu, 2016) has two subscales as self-regulated learning skills/strategies (45 items) and motivational factors (22 items). The SILL (Oxford, 1990) consists of 50 items under two main constructs of direct (29 items) and indirect (21 items) learning strategies, with three categories under each subscale. In the present study, the alpha coefficients were computed as .91 for both SSRL and SILL. The sub-categories and factors of each scale and their equivalent Alpha coefficients found for the present sample are shown in Table 1.

Table 1. The sub-categories and factors of SSRL and SILL

Scale on Self-Regulation in Learning (SSRL) (α=.91)		**Strategy Inventory for Language Learning (SILL)** (α=.91)	
Self-regulated Learning Skills	**Motivational Factors**	**Direct Strategies**	**Indirect Strategies**
Arrangement of study time Planning Environmental structuring Organization and transforming Seeking appropriate information Seeking easily accessible information Rehearsing and memorizing Self-monitoring Seeking peer, teacher or adult assistance Self-evaluation Self-consequences after success Self-consequences after failure (α=.89)	Self-efficacy Goal-orientations Task value Attributions for failure Anxiety (α=.81)	Memory strategies Cognitive strategies Compensation strategies (α=.85)	Metacognitive strategies Affective Strategies Social strategies (α=.85)

Procedures and Data Analysis

Both instruments were given separately to the same students with one week interval between the two administrations. Grant of application was received from the Board of Ethics. Help was given by the faculty during scale applications, administrations of which took 20-25 minutes each. The data were analyzed with SPSS Version 20. Descriptive statistics, one-way MANOVA and ANOVA, and correlation statistics were used for analysis purposes.

Results And Findings

Findings and related comments for each research question are given separately below.

Research Question 1: Are the self-regulation levels students have and the language learning strategies they use related?

Based on data obtained from SSRL and SILL scores, there is a positive medium correlation (.53) between the two inventories as a whole. Similar positive significant correlations are also true for the subscales. The correlations between the entire inventory and subscales of both SSRL and SILL range from .54 to .11, where the strongest correlation seems to exist between SSRL Skills and SILL Entire and the lowest correlation is between SSRL Motivational Factors and SILL Affective Strategies. These results might indicate that language learning strategies and self-regulation, measured with self-report inventories, are intertwined. Nevertheless, these correlations tell us nothing about the direction of causality. Hence, we cannot suggest that frequency of language learning strategies is attributable to specific aspects of self-regulation. These are simple correlations.

Research Question 2: Do students' self-regulations and their language learning strategies change through grades?

Considering the self-regulation levels and language learning strategies of students, there was statistically significant difference between grade levels on the combined dependent variables ($p< 0.05$). Hence, it can be asserted that both SSRL and SILL mean scores increased through grade levels. However, it is important to consider that while there was a steady increase in SSRL Entire and subscale mean scores through grades, no significant changes were observed from freshmen to seniors in SILL Direct Strategies of Memory, Cognitive and Compensation.

Research Question 3: Are there differences between high and low achievers in terms of their self-regulations and language learning strategies?

In order to find the answer to this question, students were ranked according to their achievement grades in English as a Foreign Language course. Later the top and the bottom quartiles (n=215) were selected and labeled as high and low achievers.

Considering the self-regulation levels of students, there was a significant difference between high and low achievers. When the results for the entire inventory and subscales of SILL were considered separately, there were significant differences (p<0.01) in entire inventory and subscale mean scores of SILL; except for SILL Affective Strategies and SILL Social Strategies (p>0.05).

Research Question 4: What language learning strategies are employed more or less frequently by students having high or low self-regulation and achievement levels?

In order to investigate students' use of SILL strategies based on their levels of self-regulation and achievement levels, mean scores of the individual SILL categories were calculated. For this purpose, the top and the bottom quartiles (n=215) were selected and labeled as high and low both in self-regulation and achievement.

According to Oxford (1990, p. 300), mean scores between 1.0 and 2.4 are defined as "low" strategy use, 2.5 and 3.4 as "medium" strategy use, and 3.5 and 5.0 as "high" strategy use. The analysis of mean scores of each SILL strategy revealed that students in the high level self-regulation group used the entire strategies more frequently than the students in the low level self-regulation group. The high level self-regulation group students were "high" users of memory, cognitive, compensation and metacognitive strategies and "medium" users of affective and social strategies; whereas the low level self-regulation group students were "medium" users of all SILL strategies. When the achievement levels of students were considered, the high achievers seemed to use the entire SILL categories more frequently than the low achievers except for the affective strategies. Again the high achievers were "high" users of compensation and metacognitive strategies and "medium" users of the remaining SILL strategies; whereas the low achievers were "medium" users of the entire SILL categories.

Conclusion

The results of the present study confirmed the existence of an intimate relationship between students' levels of self-regulation and their language learning strategy use. According to grade levels; while students' SRL increased significantly, the only significant increase found in language learning strategies were in indirect strategies (metacognitive, affective and social). Between high and low achievers; there was a significant difference in self-regulated learning, while the same difference was also observed in language learning strategies, except for affective and social strategies. The present study also confirmed that students with high self-regulated learning were high level strategy users and they significantly differed from students with low self-regulated learning. Additionally, high achievers were medium level strategy users and they differed significantly from low achievers, except for affective and social strategies.

Recommendations

It is important to note that the participating students didn't have any overt language strategy use instruction. The existing literature on strategy instruction (Cohen & Weaver, 1998; Dreyer & Nel, 2003) confirms the positive and significant effects of such training not only on frequency of learning strategy use, but also on other learning outcomes such as achievement. So, it is believed that repetition of this study with groups having explicit language strategy use instruction would reveal different results.

The follow-up of this study would be to individualize classroom instruction based on students' levels of language learning strategy use and self-regulation and see the results of the intervention. Another subsequent study would be to analyze the relationship between students' self-regulated learning levels and the learning strategies they employ in other disciplines such as math, science, literature, history and do comparative analyses between the findings.

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