

## **Investigating the Reliability and Factor Structure of the Self-Regulating Capacity in Vocabulary Learning (SRCvoc) in Iranian EFL Context**

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### **Abstract**

The present study aimed to investigate the reliability and factor structure of the self-regulating capacity in vocabulary learning strategies scale (SRCvoc) in the Iranian EFL context. To this end, the original (SRCvoc) questionnaire (Tseng, Dornyei, & Schmitt, 2006) was translated into Persian, using a translation/back-translation procedure. Then, the Persian version of the SRCVOC was piloted to 43 high school students and showed acceptable internal consistency reliability ( $\alpha = .81$ ). In the main phase of the study, a sample of 1167 high school students (grades 9-12) from fifteen high schools in three Iranian cities completed the Persian SRCvoc. Based on the results, the Persian version of the scale demonstrated acceptable internal consistency reliability ( $\alpha = 0.81$ ). The factor structure of the translated version of the measure was investigated through a series of factor analyses. The results showed that the translated SVLSQ is composed of one dimension with five subcomponents, with a different factor structure as compared to the original questionnaire. The findings of the study suggest that the Persian version of the SVLSQ is a reliable and valid instrument for measuring self-regulatory vocabulary learning strategies in Iran.

**Keywords:** self-regulation, self-regulating capacity in vocabulary learning, exploratory factor analysis, reliability, validity

### **Introduction**

Over the past decades, second language vocabulary learning attracted the attention of researchers (e.g., Nation, 2001; Richards & Renandya, 2002). Moreover, research in vocabulary learning strategies gained momentum since most second language learners have to learn vocabulary independently and outside the classroom in most cases (Mizumoto, 2013). As a result of this realization, vocabulary learning strategies have been extensively studied (e.g., Berns, 2010; Schmitt, 2000, Tseng & Schmitt, 2008). However, despite a bulk of empirical studies into second language vocabulary learning, the term learning strategy has been conceptualized in different ways (see Dornyei, 2005; Tseng, Dornyei, & Schmitt, 2006). To fill the gap, Tseng et al. (2006) tried to conceptualize strategic vocabulary learning based on the theories of self-regulation by targeting “the core learner difference that distinguishes self-regulated learners from their peers who do not engage in strategic learning” (p.80). To that end, they developed a scale that “operationalizes the newly-conceived system of self-regulatory capacity” (Tseng, et al., p.80). While prior research has supported the construct validity of the self-regulating capacity in vocabulary learning strategies scale in Taiwan (Tseng et al., 2006), Japan (Mizumoto & Takeuchi, 2012) and Turkey (Yesilbursa & Bilican, 2012), no study has been conducted into the reliability and factor structure of the scale in Iran. In order to fill this gap, this study attempted to examine the reliability and investigate the factor structure of the instrument in the Iranian EFL context.

The concept of academic self-regulation emerged more than two decades ago to answer the question of how students become masters of their own learning processes (Zimmerman, 2008). Since then, self-regulation has become one of the most important notions in educational psychology (Zeidner, Boekaerts, & Pintrich, 2000). As a result, several models of self-regulated learning (SRL) have been proposed from different theoretical perspectives. From among them, four models have been considered as the most important ones: adaptable learning model (Boekaerts & Niemivirta, 2000), general framework for SRL (Pintrich, 2004), four-stage model of SRL (Winne & Hadwin, 1998), and cyclic model of self-regulation (Zimmerman & Campillo, 2003). Although these models involve slightly different constructs and processes, they all share a basic assumption. The common assumption is that “learners are considered as active participants in their learning potentially

monitoring, controlling and evaluating certain aspects of their cognition, behavior, affects and environment for the attainment of their goals” (Hirata, 2010, p. 33).

In line with educational psychology, the field of second language learning has shifted away from a focus on the teacher, underpinning the role of the learners and their language learning processes (Dörnyei, 2005). Most recently, “the concept of language-learning strategies has expanded into a more extensive notion of self-regulated learning, partly in response to a wave of criticism directed at the paucity of rigid theoretical underpinnings” (Mizumoto, 2013, p.16). Parallel to this, the focus of language learning research has similarly shifted away from investigating the product of language learning to its processes (Dörnyei & Skehan, 2003).

In the case of learning the second language vocabulary, it is believed that students need to be educated with vocabulary learning strategies (Schmitt, 2000) since most learners do not take an organized approach to their vocabulary learning (Moir & Nation, 2002). In the same vein, Tseng et al. (2006) developed the SRCvoc and validated it in Taiwan. Two kinds of item analysis were conducted: extreme group method and corrected item-total correlation. The results of item analyses showed that four items did not perform well, and thus they were deleted, leaving 41 items for the subsequent reliability analysis. The results of reliability analysis showed that the mean Cronbach alpha coefficient was 0.78, and all of the subscales of the SRCvoc showed alpha coefficient above 0.70. The results of the main phase of their study showed that the reliability indices were only marginally lower than those in the pilot sample, with a mean scale coefficient of 0.77. In the third phase, Tseng, et al (2006) administered the revised version of the instrument to 172 senior high school students from two public schools to check the construct validity of their measure. They used confirmatory factor analysis (CFA) to explore the construct validity of the instrument. The fitness indexes showed that “the SRCvoc is a meaningful and valid measure and can serve as a basis for exploring the theoretical nature of self-regulation” (p.94). For claiming the unidimensionality of the instrument, Tseng et al. (2006) used exploratory factor analysis. The results showed that the SRCvoc just measures one single trait.

Mizumoto and Takeuchi (2012) adapted and validated the SRCvoc (Tseng et al., 2006) in a Japanese EFL setting. They used both EFA and CFA to check the factor structure and construct validity of the scale. To this end, they translated the SRCvoc items into Japanese, and then back-translated it into English. They administered the Japanese version of the SRCvoc to 443 EFL learners who were majoring in humanities or engineering at four different universities in western Japan, with the age range of 18-22 ( $n_{\text{males}} = 208$ ,  $n_{\text{females}} = 235$ ). The results of the pilot study showed that two items did not function well. Thus, they were deleted and 18 items were selected to replicate Tseng et al.'s (2006) model. The results of the exploratory factor analysis revealed that factor structure of the scale was different from those in the original study. As a result, 12 items were discarded. The remaining items were administered to 914 EFL learners at five universities in Japan, within the age range of 18-22 ( $n_{\text{males}} = 425$ ,  $n_{\text{females}} = 489$ ). The construct validity of the questionnaire was investigated using confirmatory factor analysis (CFA). Although the reliability coefficients were rather low as compared with those in the original questionnaire, the results of CFA were all acceptable. They found that the replication of Tseng et al.'s (2006) model in their study would be unjustifiable, so they used an exploratory factor analysis (EFA) using maximum likelihood with promax rotation to reexamine the factor structures of the SRCvoc. Although factor structures were different from those suggested in Tseng et al. (2006), this study demonstrated that SRCvoc could be a valid and reliable measure of the volitional aspect of self-regulating capacity in vocabulary learning in a Japanese EFL environment.

In addition, the SRCvoc was validated in Turkey by Yesilbursa and Bilican (2013). The results of this study suggested that the Turkish version of the SRCvoc was a reliable and valid instrument in the Turkish EFL context. They found that the Turkish version of the instrument had high internal consistency reliability ( $\alpha = .89$ ) in line with the original version in the context of Taiwan. Yesilbursa and Bilican used confirmatory factor analysis for investigating the construct validity of Turkish version. They ran confirmatory factor analysis and found that items 12 and 15 of emotion control had weak consistency, so they deleted those two items from emotion control. They pointed out that the SRCvoc "may be sensitive to cultural differences, and hence further studies need to be conducted in different cultural contexts with participants of different ages to shed more light on the concept" (p.885).

Among the studies conducted in the EFL context in Iran, second language vocabulary learning strategies have been extensively investigated. Zarei and Hatami (2012) investigated the relationship between self-regulated learning competence and vocabulary knowledge in 250 Iranian EFL university students. They used a 60-item vocabulary and reading comprehension test, and the Persian version of self-regulation trait questionnaire (O'Neil & Herl, 1998). They found that self-regulation had no significant relationship with students' vocabulary knowledge.

Mohammadi (2013) investigated the relationship between vocabulary learning strategies and the self-regulation capacity in vocabulary learning as two contributors to the achievement of students. Three instruments were used in his study, the SRCvoc scale (Tseng et al., 2006), the vocabulary learning strategy (VLS) questionnaire (Gu & Johnson, 1996, as cited in Mohammadi, 2013), and the perceptual learning style preference questionnaire (PLSPQ) (Reid, 1987, as cited in Mohammadi, 2013). 220 EFL learners from different English language institutes in Mashhad participated in the study. The correlation analysis revealed that there was a significant relationship between SRCvoc and VLS categories, also the results of the independent-samples t-test for high and low self-regulated learners of different learning styles showed that high self-regulated learners used all of the vocabulary learning strategy components more than the learners with low self-regulating capacities.

Amirian, Mallahi, and Zaghi (2015) investigated the relationship between Iranian EFL students' self-regulation capacity for vocabulary learning and their vocabulary size. Ninety undergraduate students majoring in English language and literature at the proficiency level of intermediate to advanced, at Hakim Sabzevari University in Iran participated in the study. They used the self-regulation capacity in vocabulary learning scale (Tseng et al., 2006), and the bilingual vocabulary size test developed and validated by Karami (2012). The results of the data analysis indicated no significant relationship between the two variables measured by the aforementioned instruments. Moreover, among the five subscales of self-regulation capacity none had a significant contribution to their vocabulary size. However, the metacognitive regulation had a better predicting power compared to the rest of the subscales. In addition, based on the analysis of variance (ANOVA), they found that the first year students had a

higher mean score in their self-regulation capacity because of the strategies they had learnt.

As evident in the review of the literature, the research in second language vocabulary learning strategies in Iran has mainly focused on the strategies of vocabulary learning, and the concept of self-regulatory vocabulary learning strategies has not been paid due attention. Moreover, the researchers have used the original version of the self-regulating capacity in vocabulary learning strategies scale (SRCvoc) while the reliability and factor structure of the SRCvoc have not yet been examined in the Iranian EFL context. Therefore, the study sought to address the following questions:

RQ1: Is the Persian version of self-regulating capacity in vocabulary learning strategies scale (SRCvoc) a reliable instrument in the Iranian EFL context?

RQ2: Does the Persian version of the SRCvoc have the same factor structure in the Iranian EFL context as compared to the original SRCvoc?

## Method

### Participants

43 female high school students in a high school in Kashan, Iran, participated in the piloting phase of the study. The sample included sophomores, juniors and seniors. In order to increase the generalizability of the findings, the sample was chosen to be heterogeneous in terms of age, sex and educational backgrounds. The participants of the main study were 1167 Iranian high school students ( $n_{\text{male}} = 651$ ,  $n_{\text{female}} = 516$ ). The sample included students from ninth. grade to twelfth. grade ( $n_{9\text{graders}} = 402$ ,  $n_{10\text{graders}} = 260$ ,  $n_{11\text{graders}} = 233$ ,  $n_{12\text{graders}} = 270$ ). They were from fifteen public schools in three Iranian cities. Their ages ranged from 14 and 20 ( $M=16.13$ ,  $SD = 1.26$ ).

### Instrumentation

The instrument used in this study was the Persian version of self-regulatory vocabulary learning strategies scale (SVLS) developed by Tseng et al. (2006). The scale is a twenty-item questionnaire with five subscales. The subscales of the instrument are as follows: commitment control (items 4, 7, 10, 13), metacognitive control (items 5, 9, 11, 16), satiation control (items 1, 8, 18, 19), emotion control (items 2, 6, 12, & 15), and environment control (items 3, 14, 17, 20). All the items were based on six-point Likert scale, ranging from

“strongly disagree” to “strongly agree”. The respondents were required to mark their answers by ticking the appropriate box for the option that best expressed their personal vocabulary learning experience (Tseng et al., 2006).

### **Procedure**

This study followed four procedural steps: (a) translation and adaptation of the SVLS scale; (b) piloting the translated version of the questionnaire and designing the final version based on the pilot results; and (c) administering the instrument to a large sample of Iranian high school students; and (d) statistical data analysis.

- a) In order to translate the questionnaire into Persian, three steps were taken:
  - *Initial translation*: The English-Persian translation was performed by the researchers.
  - *Back translation*: The initial translation was translated back to English by a Persian-to-English translation expert.
  - *Revision and adaptation*: After back translation another expert made the necessary adjustments to prepare final Persian questionnaire.
- b) After translating the questionnaire to Persian, it was distributed to 43 female high school students. The data gathered through this piloting phase showed that the scale had an acceptable internal consistency reliability ( $\alpha = .81$ ). The results of the pilot study showed that item 12 within the emotion control subscale had low item-total value ( $r_{pbi} < .3$ ), suggesting low correlation with the rest of items; therefore, it was discarded. The revised version was utilized in the main phase of the study.
- c) For the purpose of the main phase of the study, the researchers were present at each research site to explain the purpose of the study and to make it clear that the results would not have any effect on the students' courses grades and their personal data would remain confidential. Afterwards, the participants were asked to complete the questionnaire in about 20 minutes. The survey took place in February 2016. Due to the regulations of the ministry of Education in Islamic republic of Iran, the female researcher was not allowed to be present at a research site

where male learners were present. Therefore, five male English teachers were asked to administer the questionnaire to the male respondents. Among these teachers four of them accepted the researcher's request. They administered the instrument in ten schools in three cities in Iran (i.e., Qom, Qanavat, and Kashan).

- d) The collected data in the pilot and main phases of the study were fed into SPSS 22.00. To examine the internal consistency reliability of the scale, the Cronbach alpha coefficients of both sets were calculated. Then, an exploratory factor analysis was conducted to investigate the factor structure of the SRCvoc.

## Results

### Reliability Analysis

The Persian version of the SRCvoc showed acceptable internal consistency reliability ( $\alpha = .81$ ). Moreover, the reliability of each subscale of the questionnaire was examined, using Cronbach's alpha. The items that reflected the commitment control subscale were items 4 ( $r_{pbi}=.38$ ), 7( $r_{pbi}=.44$ ), 10( $r_{pbi}=.4$ ), 13( $r_{pbi}=.49$ ). The commitment control subscale showed acceptable internal consistency reliability ( $\alpha = 0.65$ ).

Moreover, items 5 ( $r_{pbi}=.37$ ), 9 ( $r_{pbi}=.46$ ), 11 ( $r_{pbi}=.44$ ), 16 ( $r_{pbi}=.48$ ) represented the metacognitive control subscale. The reliability of this subscale, examined through Cronbach's alpha, was about 0.66. Additionally, the items that reflected the satiation control scale were items 1 ( $r_{pbi}=-.01$ ), 8 ( $r_{pbi}=.09$ ), 18 ( $r_{pbi}=.13$ ) and 19 ( $r_{pbi}=.07$ ). The subscale showed unacceptable internal consistency reliability ( $\alpha = 0.42$ ). Moreover, Item 1 displayed negative corrected item-total correlation value ( $r_{pbi} = -.01$ ), suggesting low correlation with the rest of items. Hence, the item was discarded, but items 8, 18, and 19 showed higher inter-item correlation coefficients (0.41, 0.51, .60, respectively). The reliability of the subscale also turned out to be acceptable ( $\alpha =.69$ ).

Items 2 ( $r_{pbi}=.51$ ), 6 ( $r_{pbi}=.5$ ), and 15 ( $r_{pbi}=.52$ ) of the questionnaire related to the emotion control subscale. Cronbach's alpha was used to examine the internal consistency of the subscale ( $\alpha = 0.69$ ). During piloting, it was found that item 12 of the emotion control subscale had low item-total correlation value ( $r_{pbi}=.01$ ), suggesting low correlation with the rest of items; therefore, it was discarded. The items that reflected the environment control scale were



items 3 ( $r_{pbi} = .36$ ), 14 ( $r_{pbi} = .43$ ), 17 ( $r_{pbi} = .48$ ) and 20 ( $r_{pbi} = .45$ ). The reliability of this scale was examined using Cronbach's alpha (0.65).

### Exploratory factor analysis of subscales

The main data set was subjected to exploratory factor analysis (EFA) using principle axis factoring. The results of KMO and Bartlett's test for the five subscales of the translated questionnaire are as follows (Tables 1 & 2) :

Table 1  
*KMO and Bartlett's Test for the subscales*

	Environment control	Commitment control	Metacognitive control	Satiation control	Emotion control
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.66	.71	.70	.63	.69
Bartlett's Test of Sphericity					
Approx. Chi-Square	659.01	569.01	634.63	678.50	676.48
df	6	6	6	6	6
Sig	.000	.000	.000	.000	.000
Determinant	.55	.6	.57	.55	.6

Table 2  
*Communalities*

	Initial	Extraction
Environment control		
item3	.15	.19
item14	.20	.28
item17	.28	.45
item20	.26	.38
Commitment control		
item10	.17	.27
item13	.25	.45
item4	.15	.23
item7	.20	.33
Metacognitive control		
item5	.15	.22
item9	.22	.35

item11	.22	.33
item16	.26	.43
Satiation control		
item8	.18	.23
item18	.32	.43
item19	.37	.70
Emotion control		
item2	.27	.42
item6	.26	.39
item15	.29	.50

The minimum value of the KMO index for an acceptable factor analysis is .6. For the data at hand, the values were well beyond the value for acceptability, thus the sample size was adequate for factor analysis (Pallant, 2013). Moreover, the results of the Barlett's test of sphericity showed the appropriateness of EFA ( $p < .05$ ). As shown in Table 2, the variables with high communality share more in common with the rest of the variables. There are not any particularly high values except item 19 of satiation control factor and item 15 of emotion control which their communalities were 0.70 and 0.50, respectively. Table 3 shows total variances explained by each significant factor with eigenvalues larger than 1.

Table 3  
*Total Variance Explained*

Subscale	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Environment	1.96	49.15	49.15	1.31	32.91	32.91
Commitment	1.96	49.07	49.07	1.30	32.60	32.60
Metacognitive	2.00	49.98	49.98	1.35	33.75	33.75
Satiation	1.90	47.50	47.50	1.40	35.06	35.06
Emotion	1.98	49.61	49.61	1.40	35.06	35.06

As shown in Table 3, all factors have eigenvalues larger than 1, which is a common criterion for a factor to be acceptable.

For the purpose of running the ultimate exploratory factor analysis into the questionnaire data, factor scores were calculated for each subscale (Table 4).

Table 4  
*Factor Score Covariance Matrix*

Factor	Score
Environment control	.676
Commitment control	.670
Metacognitive control	.679
Satiation control	.778
Emotion control	.714

Extraction Method: Principal Axis Factoring.  
Rotation Method: Varimax with Kaiser Normalization.  
Factor Scores Method: Regression.

These factors (Table 4) scores were used to investigate the main research question of the study.

#### **Exploratory factor analysis into factor scores**

For the purpose of investigating the factor structure of the construct of the SRCvoc, the factor score of each of the five subscales of the questionnaire was calculated. Then, factor analysis was run into the five factor scores (Tables 5 & 6).

Table 5  
*KMO and Bartlett's Test for the factor scores*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.843
Bartlett's Test of Sphericity		
	Approx. Chi-Square	2.07
	df	10
	Sig.	.000

Table 6  
*Communalities for Factor scores*

	Initial	Extraction
fac1	1.000	.62
fac2	1.000	.70
fac3	1.000	.57
fac4	1.000	.58
fac5	1.000	.52

Extraction Method: Principal Component Analysis.

The results of KMO test in Table 5 showed the adequacy of sampling as the value was well above the cutoff score for acceptability, and Bartlett's test of sphericity was significant ( $p < .05$ ) for the appropriateness of the factor analysis. As shown in table 6, all the communalities in extraction column are greater than 0.4. It means that the results are acceptable because the larger the communalities, the more reliable the results. Table 7 shows the number of components with eigenvalues larger than 1.

Table 7  
*Total Variance Explained*

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.013	60.258	60.258	3.013	60.258	60.258
2	.628	12.562	72.820			
3	.533	10.666	83.486			
4	.474	9.484	92.970			
5	.352	7.030	100.000			

Extraction Method: Principal Component Analysis.

The result of the principle component analysis for the five factor scores was a one factor solution, with the eigenvalue accounting for 60.25 % of the total variance (Table 7). Table 8 indicates factor scores loadings.

Table 8  
*Component Matrix<sup>a</sup>*

Factors	Environment control	Commitment control	Metacognitive control	Satiation control	Emotion control
Component 1	.79	.84	.75	.76	.72

Extraction Method: Principal component Analysis

a. 1 components extracted

As Table 8 displays, factor scores loaded heavily under one component.

## Discussion

As an approximate replication of Tseng et al.'s (2006) study, this study provided evidence for the reliability and factor structure of the SRCvoc in the Iranian EFL context. In line with the findings of Mizumoto and Takeuchi's (2012), the reliability coefficients of the subscales of this instrument were lower than those reported in Tseng et al. (2006). Moreover, two of 20 items, which had a corrected item-total correlation coefficient lower than .30 did not meet the criterion for acceptable items (i.e., items 1 and 12).

Moreover, the findings of this study regarding the factor structure of the SRCvoc were almost consistent with those of Mizumoto and Takeuchi (2012) and Yesilbursa and Bilican (2013). In other words, the factor structure of the Persian SRCvoc was the same as that of Tseng et al.'s (2006) study. The results of EFA into factor scores of each subscale revealed that one factor explained 62 percent of the variance (see Table 7). This is very close to the percentage reported by Tseng et al. (2006) (i.e., 69 percent). In line with Tseng et al. (2006), the eigenvalue associated with this factor was also very large, as compared to the next marginal ones (see Table 7). Taken together, these provide confirmation for the unidimensionality of the subscales. Also, the factor loadings presented in Table 2 and 8 showed a consistently high pattern. It should also be noted that one of the loadings associated with environment control was slightly lower than the rest (see Table 2). Tseng et al.'s (2006) as well as Yesilbursa and Bilican (2013) both reported this very issue with this subscale. It may be justified on the ground that environment control is subject to cultural differences.

The findings of this study suggest that the SRCvoc is a well-functioning scale that may help Iranian teachers with recognizing students' individual differences in terms of self-regulatory vocabulary learning strategies. Moreover, EFL teachers may teach some of these strategies to students for their strategic investment. Some studies in educational psychology have reported the feasibility and usefulness of teaching self-regulation in vocabulary learning (e.g., Tseng & Schmitt, 2008). Furthermore, the findings of this study may add to the body of the related literature, and the Persian version of the instrument may be used by both researchers and teachers for prognostic and research purposes.

A possible future trend in investigating the psychometric properties of the SRCvoc may consider the construct validity of the subscales, using confirmatory factor analysis. Future research can also test the reliability and validity of the scale in other large samples with more consistent demographics. Moreover, it would be interesting to further research the relationship of the Persian SRCvoc questionnaire with other scales.

The last but not the least, the concept of self-regulated vocabulary learning should be investigated more deeply because the volitional model of self-regulating capacity in vocabulary learning is part of a complex model of self-regulated learning (Zimmerman & Schunk, 2001). Thus, researchers should analyze which model or framework of self-regulated learning most fits second language vocabulary learning.

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## Appendix A

## The Persian Version of the SRCvoc

پرسشنامه راهبردهای خودنظم دهی یادگیری لغت					
دانش آموز گرامی،					
پرسشنامه ی حاضر نوعی پرسشنامه ی راهبرد سنجی است و تنها جهت یک تحقیق آماری حضورتان تقدیم می گردد. در این پرسش نامه پاسخ صحیح یا غلط وجود ندارد، بلکه پاسخ شما به هر موقعیت می بایست نشان دهنده اولین عکس العمل شما در برابر آن موقعیت باشد. خواهشمند است جهت ارزیابی دقیق نتایج تحقیق، به سوالات صادقانه پاسخ دهید. اطلاعات این پرسشنامه محرمانه می ماند و از نتایج فقط در راستای کار پژوهشی استفاده خواهد شد. با تشکر					
جنس: زن <input type="checkbox"/> مرد <input type="checkbox"/>					
وضعیت تأهل: مجرد <input type="checkbox"/> متأهل <input type="checkbox"/>					
دوره ی تحصیلی: روزانه <input type="checkbox"/> شبانه <input type="checkbox"/> سن: _____ مقطع تحصیلی: _____ رشته ی تحصیلی: _____					
کاملاً مخالفم	مخالقم	تا حدی مخالفم	تا حدی موافقم	موافقم	کاملاً موافقم
					۱- وقتی در یادگیری لغت دچار استرس می شوم، می دانم چطور آن را کاهش دهم.
					۲- وقتی در حین مطالعه ی لغت محیط یادگیری نامناسب می شود، تلاش می کنم مشکل را رفع کنم.
					۳- هنگام یادگیری لغت، از راه کار های خاصی برای رسیدن به اهداف یادگیری خود استفاده می کنم.
					۴- هنگام یادگیری لغت، از راه کار های خاصی برای حفظ تمرکز خود استفاده می کنم.
					۵- من از روش هایی که برای کاهش استرس یادگیری لغت استفاده می کنم، احساس رضایت می کنم.
					۶- هنگام یادگیری لغت، معتقدم که می توانم سریع تر از آنچه انتظار می رود به اهدافم برسم.
					۷- در طول فرایند یادگیری لغت، من از روش هایی که برای رفع خستگی خود بکار می برم راضی هستم.
					۸- در زمان یادگیری لغت، گمان می کنم راه کار های من برای حفظ تمرکز موثر هستند.
					۹- هنگام یادگیری لغت، آن قدر پافشاری می کنم تا به اهدافی برسم که برای خود تعیین کرده ام.
					۱۰- وقتی زمان یادگیری لغت فرا می رسد، من از راه کار های خاص خود برای جلوگیری از تأخیر در آن استفاده می کنم.
					۱۱- من اعتقاد دارم که می توانم بر تمام سختی های موجود در راه دستیابی به اهداف یادگیری لغت، غلبه کنم.
					۱۲- هنگام یادگیری لغت، می دانم چطور محیط اطراف را برای یادگیری بهتر فراهم کنم.
					۱۳- زمانی که در یادگیری لغت دچار استرس می شوم، فوراً بر آن غلبه می کنم.
					۱۴- وقتی زمان یادگیری لغت فرا می رسد، فکر می کنم که روش های من برای جلوگیری از تأخیر در آن، موثر هستند.
					۱۵- در زمان یادگیری لغت، می دانم که محیط یادگیری مهم است.
					۱۶- در طول فرایند یادگیری لغت، مطمئن هستم که می توانم بر هر نوع احساس بی حوصلگی غلبه کنم.
					۱۷- وقتی در هنگام یادگیری لغت کسل می شوم، می دانم که چطور با مهار روحیه ام، فرایند یادگیری را با نشاط کنم.
					۱۸- هنگام مطالعه ی لغت، به دنبال مکان مناسبی برای یادگیری هستم.

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«نشریه پژوهش‌های آموزشی و کاربردی زبان انگلیسی»

سال ۱۰، شماره ۲۰، بهار و تابستان ۹۶

## بررسی پایایی و ساختار عاملی مقیاس فارسی ظرفیت خودتنظیمی در یادگیری لغت در محیط انگلیسی به عنوان زبان خارجه در ایران

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### چکیده

مطالعه حاضر با هدف بررسی پایایی و ساختار عاملی مقیاس فارسی ظرفیت خودتنظیمی در یادگیری واژگان در محیط زبان انگلیسی به عنوان زبان خارجه در ایران انجام شد. برای این منظور، ابتدا پرسشنامه اصلی با استفاده از روش ترجمه/پس ترجمه به زبان فارسی ترجمه و نسخه فارسی در بین ۴۳ دانش آموز دبیرستانی پایلوت گردید، و مشخص شد که ابزار مورد مطالعه پایایی درونی قابل قبول دارد (۰.۸۱=آلفا). در مرحله اصلی این مطالعه، یک نمونه متشکل از ۱۱۶۷ دانش آموز (پایه های نهم تا دوازدهم دبیرستان) در پانزده مدارس در سه شهرستان ایران به مقیاس فارسی پاسخ دادند. بر اساس نتایج، نسخه فارسی این مقیاس پایایی درونی قابل قبول داشت (۰.۸۱=آلفا). همچنین، ساختار عاملی نسخه فارسی با استفاده از تحلیل عاملی مورد بررسی قرار گرفت. نتایج نشان داد که مقیاس ترجمه شده از یک بعد با پنج زیر بعد تشکیل شده است که با ساختار عاملی پرسشنامه اصلی تفاوت دارد. یافته های این مطالعه نشان می دهد که نسخه فارسی مقیاس ظرفیت خودتنظیمی در راهبردهای یادگیری واژگان ابزاری با پایایی و روایی لازم برای اندازه گیری راهبرد های خودتنظیمی در یادگیری لغت در ایران است.

**کلید واژه:** خودتنظیمی، ظرفیت خودتنظیمی در یادگیری واژگان، تحلیل عاملی اکتشافی، پایایی، روایی