Exploring the Role of Self-Regulatory Capacity in Vocabulary Learning of Iranian EFL Learners

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Abstract

As the role of vocabulary is very essential in language learners' ability to convey their intended messages, this study has tried to examine the use of self-regulated learning strategies in vocabulary learning of 100 EFL intermediate level learners studying in language institutes of Neyriz, Iran. Using survey method of research, data were collected by administration of 'Self-regulating Capacity in Vocabulary Learning' scale (SRCvoc). The obtained results revealed that the participants were moderate users of self-regulated strategies in their vocabulary learning and considering the subscales, environmental regulation obtained the highest mean, being the most influential one while the least influential subscale was emotional regulation. In addition, males had a higher mean score in use of self-regulatory strategies. The outcome of this study will hopefully lead to teachers' attempts in providing students with the required domain, instrumental support, and strategy knowledge to operate independently and have a better performance in their vocabulary learning.

Keywords: EFL learners, Gender, Self-regulation strategies, Vocabulary learning

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1. Introduction

Vocabulary is one aspect of language learning whose role has been downplayed in most language teaching approaches during the past decades, and was disregarded and treated as the "Cinderella of foreign language learning" (Beheydt, 1987, p. 55).

Indeed, the essential role of vocabulary acquisition as an important component of any language is undeniable (Amiryousefi & Vahid, 2010). "Words are the building blocks in a language"(Yu-Ling, 2005, p. 6), and they can facilitate learning of different aspects of a language. Empirical studies have indicated that proficient L2 learners in listening, speaking, reading, and writing have a good knowledge of vocabulary, though this relationship is not causal (Folse, 2004). In addition, vocabulary has a more crucial role in communication than other components of language. It is possible to get the message across through using an accumulation of vocabulary without paying any attention to grammar, while missing only one word can hamper communication (Scrivener, 1994).

Vocabulary is of paramount importance for both L2 learners and practitioners, as they are aware of the considerable challenges and obstacles they would face during the entire process of vocabulary learning (Meara, 1980) and the fact that these problems might create a barrier to successful language learning. English language learners usually encounter copious amounts of anxiety due to their not being able to get the message across while communicating, which is the outcome of not being equipped with enough vocabulary. Furthermore, unlike syntax, vocabulary does not present any rules and is considered as an open-ended system (Alqahtani, 2015).Therefore, in many studies the need for research on vocabulary and its positives effect on teaching and learning in L2 classroom has been constantly emphasized and teachers have always been on the lookout for finding ways to teach their students vocabulary more effectively and fruitfully. Some studies conducted in this area have suggested the use of strategic learning and vocabulary learning strategies (VLS) (Gu & Johnson, 1996; Pérez & Alvira, 2017).

Nevertheless, teaching these strategies to language learners cannot guarantee learning. In an effective learning process students plan and adjust their learning according to their own objectives. In other words, a self-regulated type of learning should be used which is guided by metacognition, strategic action (planning, monitoring and evaluating personal progress against a standard), and motivation to learn (Perry, Phillips, & Hutchinson, 2006). Self-regulated learning is defined as "an active, constructive process

whereby learners set goals for their learning and then try to monitor, regulate, and control their cognition, motivation, and behavior guided by their goals" (Pintrich, 2000, p. 453).

L2 learners use regulatory processes to some degree, but self-regulatory learning is distinguished by their awareness of strategic relations between regulatory processes or responses and learning outcomes, in other words their use of these strategies to achieve academic goals. As a result, in the field of L2 learning strategies and in educational and psychological research, self-regulated learning has become an important topic (Steffens, 2008).

Consequently, in the light of the above mentioned issues, this study was an attempt to examine the assessment of strategic learning based on the notion of self-regulation. More specifically, instead of concentrating on the outcomes of strategic learning, this study has tried to look into the importance of the learners' innate self-regulatory capacity in vocabulary learning among the Iranian EFL learners in order to provide some insights into vocabulary instruction in EFL language education.

2. Literature Review

Self-regulation is considered as an aptitude which is improvable and can be influenced by experience and instruction. The studies which have examined the relationship between the learners' self-regulatory behavior and their achievement in various domains of learning have found a positive relationship between these two constructs (Kitsantas, Steen, & Huie, 2009). In the same vein, it is believed that "learners' previous learning experience can have an effect on the developmental level of self-regulating capacity and the magnitude of self-regulating capacity will depend on the instigation of the initial appraisal of vocabulary learning experience, with its related motivational state" (Tseng & Schmitt, 2008, p. 362). In addition, researchers maintain that self-regulation capacity has a mediating role between initial motivation and strategy use and can directly affect the learners' strategy use.

Since the introduction and entrance of self-regulation construct in the domain of vocabulary learning (Tseng, Dörnyei & Schmitt, 2006), some researchers have started to examine the possible relevance of these two constructs to each other. For example, Sentürk (2016) investigated the relationship between 179 Turkish EFL learners' self-regulated learning components and vocabulary knowledge considering their proficiency level and

vocabulary size. The results indicated the presence of a strong positive correlation between high levels of self-regulation and high vocabulary size.

Furthermore, Zarei and Hatami (2012) investigated the relationship between 250 Iranian EFL college students' self-regulated learning competence and their vocabulary knowledge and reading comprehension. After administering the intended tests and questionnaire, they found mixed results in the relationships among the various self-regulated learning components, namely, planning, self-checking, effort and self-efficacy. In addition, they found no significant relationship between self-regulated components and the vocabulary knowledge of the participants.

In another study, Hardi (2014) investigated more than 400 Hungarian primary school learners' vocabulary learning strategies in the framework of self-regulation and in light of the findings proposed categories of young learners' self-regulated vocabulary learning behavior while identifying age-related differences in the use of such strategies. The necessary data were collected using interviews and questionnaires which were complemented by the results of classroom observations. In fact, the researcher wanted to tap into the learners' own perceptions of their learning processes. The results of the study showed that young learners make use of various vocabulary leaning strategies and are conscious of their endeavors while learning the words making appropriate and rather efficient use of self-motivational and self-regulatory strategies.

Nabavi Ekhlas and Shangarffam (2012) conducted a study based on the social cognitive theory to find out the relationship between the sub-factors of self-regulated strategies and four language skills and overall proficiency among 150 Iranian candidates of IELTS. The three sub-factors of self-regulation strategies included personal, behavioral, and environmental influence. The finding showed that behavioral self-regulated strategies positively correlated with the language skills that is if the Iranian L2 learners use self-regulation strategies appropriately, these strategies can guarantee their achievement in the process of language learning.

Reviewing the literature reveals that several studies have demonstrated males' and females' differences in use of self-regulated learning strategies in their learning. For example, Lee (2002) found three main gender difference issues in self-regulated learning strategies from literature: (1) the styles, purposes, and dynamics of social interactions, (2) motivational factors, (3) the styles and frequencies of expression, discussion, or feedback. Similarly, Young and McSporran (2001) found other gender differences such as, online

material usage rates, formative and summative assessment completion rates, communication skills, confidence levels, student motivation and learning strategies.

In a more recent study, Fatemipour and Najafgholikhan (2015) examined the impact of self-regulated strategy on vocabulary learning of Iranian EFL students as well as the role of gender in this regard. Sixty intermediate EFL learners were randomly assigned to a control and experimental group. The experimental group received additional training in use of self-regulated strategy in vocabulary learning. The outcomes indicated that self-regulated strategies could have a significant positive impact on the participants' vocabulary learning while no differences were observed among male and female learners.

Although the above-mentioned studies have shed some light on the less explored area of self-regulation, the need for further investigation in this field and more specifically the language learners' awareness of employing such strategies in their learning seems pretty evident. Moreover, different studies have presented inconsistent results in relation to the role of gender in self-regulated learning which requires further research. Consequently, in an attempt to partially fill the existing gap, the present study has tried to explore the role of self-regulated capacity in vocabulary learning of Iranian EFL learners to provide some insights into vocabulary instruction in language education through the following research questions:

1. To what extent do the Iranian L2 learners use self-regulated learning strategies in their vocabulary learning?
2. Which of the sub-scales of Self Regulating Capacity in Vocabulary Learning (SRSvoc) scale are the most and the least influential ones among the Iranian L2 learners?
3. Are there any differences between male and female learners in their use of self-regulated learning strategies?

3. Methodology
3.1. Design and Context of the Study

This study aimed at exploring the Iranian L2 learners' use of self-regulated learning strategies in their vocabulary learning through a survey method and was conducted in Neyriz. Survey design is considered as an established research design in applied linguistics. In survey research, data is collected from a sample of participants who are drawn from a population through the use of a questionnaire (Weisberg, Krosnick, &

Bowen, 1996). The results are typically quantitative which can be predictive, confirming, and explanatory.

3.2. Participants

For the present study, a sample of 100 intermediate EFL learners (i.e., 48 females and 52 males), from four different language institutes were selected. The institutes were chosen among the language institutes of Neyriz based on cluster sampling and all the learners in intact classes with the age range of 14 to 26 participated in the study.

3.3. Instrument

The instrument used in this study was a questionnaire called 'Self Regulating Capacity in Vocabulary Learning' scale (SRCvoc)' developed by Tseng, Dörnyei and Schmitt (2006). This instrument considers the learner trait of self-regulatory capacity and constitutes general declarations or conditional relations rather than descriptions of specific strategic behaviors. There are twenty items included in this questionnaire having the format of 6-point Likert scale ranging from 1 = "strongly disagree" to 6 = "strongly agree." This instrument is made up of five internal indicators:

1. Commitment control strategies, which help to preserve or increase the learners' original goal commitment (e.g. keeping in mind favorable expectations or positive incentives and rewards; focusing on what would happen if the original intention failed).

2. Metacognitive control strategies, which involve the monitoring and controlling of concentration, and the curtailing of any unnecessary procrastination (e.g. identifying recurring distractions and developing defensive routines; focusing on the first steps to take when getting down to an activity).

3. Satiation control strategies, which help to eliminate boredom and to add extra attraction or interest to the task (e.g. adding a twist to the task; using one's fantasy to liven up the task).

4. Emotion control strategies, which concern the management of disruptive emotional states or moods, and the generation of emotions that will be conducive to implementing one's intentions (e.g. self-encouragement; using relaxation and meditation techniques);

5. Environment control strategies, which help to eliminate negative environmental influences and to exploit positive environmental influences by making the environment an ally in the pursuit of a difficult goal (e.g. eliminating distractions; asking friends to help and not to allow one to do something).

This study has also established both reliability and validity for this instrument. The internal consistency measured through Cronbach's alpha was found to be 0.85. Furthermore, all the individual sub-scales had an alpha coefficient above 0.65.The validity of the questionnaire was examined through content validity through the development and use of a detailed item specification.

3.4. Data Collection Procedures

Having received permission from the directors of the language institutes, the participants were handed the questionnaire. At the beginning, they were informed of the purpose of the study, the format of the questionnaire and that there were no right or wrong answers. They were also assured that all their answers would remain strictly confidential. The data was gathered during two weeks. The participants received the English version of the questionnaire and were not pressured by time limits; however, all the questionnaires were answered within 20 minutes.

3.5. Data Analysis Procedures

In this research, the quantitative data was submitted to the Statistical Package for the Social Science (SPSS, Version 22). As the first step, descriptive statistics including Min, Max, Mean, and Standard Deviation were calculated. Descriptive statistics were more specifically used to determine the most and the least influential subscales of SRCvoc among the participants of the study. Furthermore, in order to examine the participants' use of self-regulatory strategies in their vocabulary learning, one sample *t*-test was used. Finally, to address any differences between males and females in this regard independent samples *t*-test was conducted.

4. Results

In the following section, the results of the study are presented in tables and the findings related to each research question are analyzed.

The first research question of the study dealt with the use of the self-regulated learning strategies in L2 learners' vocabulary learning. To address this question, one sample *t*-test was conducted to have a comparison of the average between the sample (observed average) and the population (expected average). As displayed in Table 1, the mean for the use of self-regulated learning strategies in L2 learners' vocabulary learning is compared to the Test-value 4 and Quartiles 3 (Q3).

Table 1.

One-sample T-test Regarding the Students' Use of Self-Regulated Strategies (Test-value 4)

	T	Df	Sig. (2-tailed)	Mean difference s	Test Value = 4 95% confidence interval of the differences	
					Low	Upper
Self-regulated strategies	.969	99	.335	.068	-.071	.208

The results show that *t*-value is .96 and the *p*-value from this statistic is .33 ($p > .05$) revealing the difference between the sample-estimated population mean and the comparison population mean of 4($M=4$) is not to be significantly different. Therefore, the mean of the investigated variable is less than 4 and the null hypothesis (H0) is retained. Consequently, the use of self-regulated learning strategies in L2 learners' vocabulary learning was compared with the Test-value 3 and Quartile 2 (Q2) as shown in Table 2.

Table 2.

One-sample T-test Regarding the Students' Use of Self-Regulated Strategies (Test-value 3)

	T	Df	Sig. (2-tailed)	Mean differences	Test Value = 3 95% confidence interval of the differences	
					Low	Upper
Self-regulated strategies	15.10	99	.000	1.06	.92	1.20

The outcomes show that the obtained mean is significantly different from the normal population mean, having a *t*-value of 15.10 and a *p*-value of .00 (*p*<.05). Such a *p*-value indicates that the average of the sample population is significantly different from the assumed mean of 3(*M*=3), with the 95% confidence interval estimate. Hence, there is a statistically significant difference between means and the null hypothesis (H0) is rejected.

As mentioned above, the Self-Regulation Capacity in Vocabulary Learning Scale (SRCvoc) is composed of five subscales (commitment, metacognitive, satiation, emotion, and environmental control) each tapping into the learners' self-regulatory process. The second research question intended to examine the most and the least influential subscales among the Iranian L2 learners.

Table 3.

Descriptive Statistics for Sub-Scales of SRCvoc Questionnaire

Group	N	Range	Min	Max	Mean	Std. Deviation	Skewness Statistics	Kurtosis Statistics
Commitment	100	4.75	1.25	6	4.19	1.04	-.658	.426
Metacognitive	100	4	1.75	5.75	4.13	1.02	-.444	-.408
Satiation	100	3.75	1.75	5.50	4.06	.778	-.696	-.055
Emotion	100	4.25	1.50	5.75	3.70	.870	-.082	-.178
Environmental	100	4.50	1.50	6	4.28	.97	-1.13	1.01
Valid N	100							

Table 3 presents the descriptive statistics pertaining to sub-scales of self-regulation scale. The outcomes indicate that environmental control strategies with the mean score of 4.28 and emotion control strategies with mean score of 3.70 have the highest and the lowest means, respectively.

The third question tried to examine the significant mean difference between male and female L2 learners in their use of self-regulated learning strategies in vocabulary learning.

Table 4.

Descriptive Statistics of Self-Regulated Learning Strategy in Males and Females

Gender	*N*	Min	Max	Mean	Std. Deviation	Skewness Statistics	Kurtosis
Male	52	2.50	5.20	4.28	.58	-.741	.319
Female	48	2.10	5.20	3.95	.83	-.54	-.59

As the Table shows, the mean score is 4.28 for males and 3.95 for females, respectively. These results show that male participants use self-regulatory strategies more than females. However, to see whether this difference is significant, an independent samples *t*-test was conducted.

Table 5.

Independent Samples T-test Comparing Males and Females

	Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	7.15	.009	2.06	98	.041	.287	.139	.11	.56	
Equal variances not assumed			2.03	84.53	.045	.287	.141	.007	.57	

Based on Table 5, the result of Levene's test is smaller than .05 indicating that the equal variance is not assumed. Therefore, the significant value (2-tailed) is considered as .045, having a value less than 0.05. This shows that there is a significant difference in the mean scores of male and female participants and it can be concluded that male students use self-regulatory strategies more than females in their vocabulary learning.

5. Discussion

The results of the current study investigating the role of self-regulated learning strategies in vocabulary learning with the significant mean of more than 3 and less than 4 indicated that the participants were average users of self-regulated strategies in their vocabulary learning. One of the influential factors in this regard can be the role of their teachers. The teachers' role in promoting students' self-regulated learning in the classroom could be illustrated in many aspects. Teachers may make students aware of potential strategies, attribute success to good strategies, and choose and monitor appropriate strategies, while providing students with instruction and intervention in managing and coordinating their plans which may lead to having positive effects and outcomes in their performance. Teachers can have an essential role in encouraging their students to take greater responsibility for their work. Besides, teachers' use of explicit instruction and modeling of the necessary skills and strategies may lead to students' development of self-regulating behaviors. Nowadays, most L2 teachers may provide opportunities for the students to practice both language skills and self-regulating behaviors. Students also may receive feedback (from both the teacher and the other students) in their learning goals, so it may reinforce them to become responsible for driving their own learning. In sum, "powerful and timely combination of deliberate acts of teaching, support materials, and structures, as well as the explicit feedback specific to learning goals" can promote students' command of language and provide "a collaborative and reflective environment and led to the students' development of self-regulating learning behaviors" (Sinclair, Rapson & Watson, 2004, p. 11).

Another influential factor in fostering students' self-regulated learning is the learning environment. Zimmerman's theoretical framework (2002) explicitly explains the role of context in students' self-regulated learning. It indicates that environmental factors have a bidirectional interaction with students' personal and behavioral characteristics. The interaction with context can lead to the cyclical development and adaptation of students' self-regulated learning. Therefore, context can be effectively used to foster students' self-regulated learning.

The obtained results of this study are consistent with a series of studies including Hardi (2014), Zarei and Hatami (2012), and Sentürk (2016) which have shown that self-regulated strategies have an influence over vocabulary learning. Hence, in a classroom

where self-regulated strategy instruction is applied, learners can be provided with the opportunity to develop the attributions for effort and the application of workable strategies and a great deal of involvement, which may in turn be beneficial in their academic outcome. This suggests that by employing a self-regulatory strategy model in teaching new vocabulary to the EFL learners, better results can be expected.

Considering the influence of the sub-scales of self-regulated learning strategies on vocabulary learning, it was shown that the participants were aware of the importance of a good learning environment and they were able to control environmental factors which influenced their vocabulary learning. Furthermore, the outcomes suggested that they could sort out the problems encountered in the environment and were able to arrange the problems in a way which would make learning more efficient. However, emotion control strategy gaining the lowest mean among all suggested the participants' inability to cope with the stress of learning vocabulary.

The reason behind the high levels of agreement over the use of environment control strategies might be the easier control over such strategies. It is probably easier for the language learners to provide themselves with a suitable environment for their own learning than other cover dimensions of strategies such as commitment, metacognitive, satiation, and emotion control.

As Tseng, Dornyei and Schmitt (2006, p.96) suggest, SRCvoc can be considered as an important diagnostic tool for identification and understanding of learners' capabilities and weaknesses in relation to "the five dimensions of self-regulation in the area of English vocabulary learning". However, because SRCvoc is an off-line self-report scale, it does not have the ability to determine all the aspects of self-regulatory deficiencies. This scale like many other quantitative questionnaires in educational psychology, can only act as "a starting point for developing appropriate remedies for any self-regulatory shortfalls and researchers need to apply other, more qualitative methodologies (such as stimulated recall and structured observation) to achieve a fuller understanding of the whole picture" (Ibid). Nonetheless, teachers can benefit from the outcomes of the present study to recognize their learners' shortcoming in VLS and help them to employ these strategies more efficiently. According to Travers and Sheckley (2000), the students' actual performance on classroom academic task can significantly improve after the training for these strategies, leading to their higher self-regulation.

The last research question was concerned with the role of gender and the use of self-regulated learning strategies. Many studies have addressed the importance of gender in self-regulated learning strategies. These studies typically favor female learners showing that females use SRL strategies more than males and they have a better control over the use of these strategies (Bozpolat, 2016). However, there are some studies like Hargittai and Shafer (2006) in which females have self-assessed their skills less than males. Such outcomes of self-judgmental studies might be related to the gender stereotypic conceptions which cause females to consider themselves as having fewer abilities than men do (Dweck, 2002). In contrast with the above mentioned studies, it was displayed in the present study that male learners had shown to have a better command over their use of SRL strategies in their vocabulary learning which might be explained through either their higher competency or stronger self-efficacy beliefs. Whatever the reason, there is still a need for further investigation in the Iranian context in this regard.

6. Conclusions

The current research sought to examine an approach to assess strategic learning, based on the notion of self-regulation drawn from the field of educational psychology. In this study, the importance of the learners' innate self-regulatory capacity in vocabulary learning for Iranian EFL learners was highlighted to provide some insights into vocabulary instruction in EFL language education and to this end SRCvoc questionnaire was distributed among the participants to measure language learners' self-regulation in vocabulary learning.

The results showed that the L2 participants had an average score in self-regulated strategy. Besides, SRCvoc can be served as a diagnostic measure to identify and understand learners' strengths and weaknesses in terms of the five dimensions of self-regulation in the area of English vocabulary learning. The main conclusion that can be drawn is that using the SRCvoc can be served as a starting point for developing appropriate remedies for any self-regulatory shortfalls in vocabulary learning as Randi and Corno (2000) conclude, "Self-regulation is both an aptitude for and a potential outcome of schooling" (p. 651).

Furthermore, this study may have implications for teachers, learners, and materials developers. A clear understanding of the nature of the relationship between vocabulary and self-regulation may change teachers' and students' views toward the importance of

teaching and learning self-regulation skills. Teachers may try to provide learners with domain, instrumental support and strategy knowledge they need to operate independently. Students can benefit from learning self-regulated skills by incorporating them in their learning process, which may help them become independent and responsible for their own learning.

As the self-regulated strategy is not currently used widely in EFL classes, it is recommended that teachers become familiar with the term and its positive outcomes. Experienced teachers can become familiar with SRS instruction through in-service training sessions in order to feel more open to adopting it in their classes. In addition, EFL institutions and academic centers focusing on EFL education can also incorporate SRSD instruction into their syllabus and create an opportunity for improvement of vocabulary learning and teaching for both learners and teachers. SRS instruction can also be presented and practiced at universities, especially for TEFL students who wish to become ELT teachers in future.

Finally, it is suggested that further research can be performed to investigate self-regulated strategy development in teaching other language skills like speaking, writing, and listening. Besides, discovering how to use self-regulated strategy as a framework to design effective education programs in an EFL context could be another area that can be investigated.

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