Examining the Extent of Self-Regulatory Strategy Use and Writing Competence of Iranian EFL Learners

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ABSTRACT

In recent years, many L2 writing scholars have extensively explored the writers' composing processes and the particular strategies they use for this purpose. In the same regard, the present study intended to examine the relationship between self-regulatory strategy use and writing competence of Iranian EFL learners. A total of 125 BA level students of English Language and Literature and English Language Teaching from three State Universities in Iran participated in the study and the necessary data were collected by administering an argumentative essay prompt, as a measure of the students' writing competence, and a self-regulatory strategy use in writing. The results of correlation and multiple regression analyses indicated that there was a low level of relationship between these two constructs and none of the sub-scales in self-regulatory scale could best predict students' writing competence, respectively. The self-regulatory strategy uses of more-and less-skilled student writers were also compared, but the results of independent samples t-test indicated that there was no significant difference between these learners in this regard. On the whole, the findings of present study revealed that Iranian EFL learners did not have an adequate command of writing strategies and were not able to use these mental resources while composing their texts, which is mostly the result of conducting writing classes in traditional modes and focusing upon product-oriented approaches. Therefore, due to the significance of strategy use in learning, EFL teachers must engage in effective efforts to develop their students' self-regulated strategies with strategy training embedded in their writing courses..

Keywords: Self-regulatory strategy use; Writing competence; Iranian EFL learners; More- and less-skilled student writers.

1. Introduction

Writing is considered as the most complex language skill and requires the learners to convert their ideas and meanings into actual words and present them in a form of an organized text. Factors that are generally believed to influence learning to write include "the complexity of writing; challenges in developing effective writing instruction given the complexity of learning to write; teacher preparation for teaching writing; and instructional models in use in today's educational settings" (Harris & Graham, 2016, p. 2). In recent years, many L2 writing scholars have extensively explored the writers' composing processes and the particular strategies they use for this purpose. These researchers have investigated the writing strategies of learners in different learning contexts and the relationship between their writing strategy use and their writing competence (Abdollahzadeh, 2010;

Bosher, 1998; Casanave, 2002; Cumming, 1989; Leki, 1995; Raimes, 1987; Roca de Larios, Manchón, Murphy, & Marín, 2008; Sasaki, 2000, 2002, 2004, 2007; Samanian & Roohani, 2018; Villamil & de Guerrero, 1996; Wong, 2005; Zamel, 1982, 1983). This body of research has indicated that the effective use of writing strategies can enhance the quality of learners' performance and possibly can result in better writing competence. It has been found that a good strategy user is a student who identifies the most suitable strategies to use for a particular task and purpose, knows how to apply those strategies more effectively, and recognizes the time and place to use them (Weinstein, Husman, & Dierking, 2000). The strategy type which is currently being emphasized in educational and L2 research is self-regulatory strategy.

Self-regulation refers to the learners' management and organization of their learning process and "includes learners' control over their thoughts (e.g. their competency beliefs), emotions (e.g. anxiety experienced while learning) and behaviors (e.g. how they handle a learning task), and the learning environment" (Zimmerman, 1998, as cited in Kormos, 2012, p. 395). More succinctly, self-regulation is a multidimensional construct that includes cognitive, metacognitive, behavioral, motivational and environmental processes and actions that learners employ to enhance the quantity and quality of their learning. In the same regard, when motivation is viewed as a dynamic and continuously changing construct affected by a variety of internal and external factors, "it becomes clear that the internal monitoring, filtering, and processing mechanisms that learners employ in this dynamic process will have an important role in shaping the motivational outcome" (Dörnyei, 2005, p. 90).

Educational psychology has also emphasized the role of learners' self-regulatory behaviors and their proactive actions and involvement in controlling and coordinating the various aspects of their learning. Self-regulation is also related to the notion of learning strategies which are defined as "special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information" (O'Malley & Chamot, 1990, p. 1). However, some scholars have questioned the validity of such conclusions and have pointed to the fact that the research conducted under the umbrella term of language learning strategies suffers from a number of problems which stem from either fuzziness of definitions of the terms used (e.g., diverse conceptualizations of 'learning strategies') or inherent psychometric characteristics of the assessment instruments (i.e., how to operationalize and measure the constructs) which are applied to collect the necessary data (e.g., Dörnyei & Skehan, 2003; Ellis, 2008). As a result, in spite of having a positive attitude towards the term 'strategic learning', the term learning strategy is frowned upon and rarely appears in the current research publications. Accordingly, Tseng et al. (2006) have outlined and elaborated upon a new approach in conceptualizing and assessing strategic learning which emphasizes "the importance of the learners' innate self-regulatory capacity that fuels their efforts to search for and then apply personalized strategic learning mechanisms" (p. 79). In fact, because of lack of theoretical clarification about the concept and nature of language learning strategies, research on self-regulation capacity for learning has gained importance (Dörnyei, 2005). Without a doubt, the instances of successful self-regulation by modifying the thoughts and behaviors can improve learners' subjective well-being (Ilkowska & Engle, 2010; Jensen-Campbell, Waldrip, & Campbell, 2007). Studies in EFL contexts have also identified self-regulation as a useful strategy for acquiring foreign language and becoming proficient in using it (Graham & Harris, 1994; Magno, 2009; Zimmerman & Risembery, 1997). Accordingly, the present study attempted to investigate the current status and possible use of these strategies among a group of Iranian EFL learners in the context of writing. More specifically, it intends to answer the following research questions:

1. Is there any relationship between self-regulatory strategy use and the writing competence of EFL learners?

2. Strategies on which aspects of self-regulation can best predict EFL learners' writing competence?

3. Is there any significant difference between the more- and less-skilled student writers in their self-regulatory strategy use?

2. Literature Review

2.1. Theoretical Framework

The main justification for conducting research on self-regulated learning has been shedding lights on the learners' personal initiatives, resourcefulness, persistence and sense of responsibility and the main concern is how and why the learners select and use particular strategies (Zimmerman & Schunk, 2001). Self-regulation refers to learners' self-generated ideas and actions which are systematically directed towards achieving educational goals and require learners' active participation in the learning process (Zimmerman & Bandura, 1994). Pintrich (2004, as cited in Wang, Schwab, Fenn, & Chang, 2013, p. 174) proposed four important assumptions for self-regulated learning strategies:

> (a) learners are actively constructing meaning, setting goals, and choosing strategies;
> (b) learners have the potential to control the direction of their learning; (c) the strategies are goal-oriented rather than random; and (d) the strategies mediate the relationship between personal and contextual characteristics and achievement or performance.

As it is shown, this concept is broader in nature and encompasses learning strategies and other related micro-processes such as goal setting, strategic planning, self-motivational beliefs (self-efficacy), evaluation and self-reflection, receiving and processing feedback, and establishing a congenial environment that are essential for the learning process (see e.g., Harris, Friedlander, Sadler, Frizzelle, & Graham, 2005; Wolters, 2011; Zimmerman, 2008). Teachers must also apply effective instructional strategies such as direct instruction and modeling, guided and independent practice, social support and feedback, and reflective practice for encouraging self-regulation in the classrooms (Zumbrunn, Tadlock & Roberts, 2011).

Self-regulation theorists consider learning as a cyclical activity that occurs in three major phases: *the forethought phase*, *the performance control phase* and *the self-reflection phase* (Zimmerman & Campillo, 2003). The forethought phase includes the processes and beliefs that are used before the engagement in actual learning activities on the assumption that most human behaviors are purposeful and regulated by the anticipation of possible outcomes. This phase is mostly characterized by goal setting and strategic planning. The performance phase refers to the processes and activities employed during the behavioral implementation of the tasks. This phase involves individuals' deliberate attention to their behavior (i.e., self-control) and consideration of their progress and conditions that surround performance (i.e., self-observation). Finally, self-reflection involves the evaluative processes that occur after any learning attempt to see whether the learners have achieved the intended goals or not. Mango (2009, 2010) suggested a new model of academic self-regulated learning which composed of seven factors: memory strategy, goal setting, self-evaluation, seeking assistance, environmental structuring, learning responsibility and organizing.

2.2. Self-regulation and writing

Since composing process is generally self-planned and self-sustained, self-regulation is critical for writing success (Zimmerman & Riesemberg, 1997). In addition, "writing is commonly viewed as a recursive process in which writers monitor the success of activities conducted and continuously modify what they are doing, based on the outcome of this process" (de Milliano, van Gelderen, & Sleegers, 2012, p. 305). Self-regulation of writing refers to self-initiated thoughts, feelings, and actions that writers use to improve their writing (Schunk & Zimmerman, 1997). The writing models of Hayes and Flower (1980) and Bereiter and Scardamalia (1987) emphasize the cognitive and self-regulatory aspects of composing and maintain that "skilled writing is a goal-directed activity and that writing processes such as planning, sentence generation, and revising must be orchestrated so that the writer can switch attention between these functions and a host of mechanical, substantive, and environmental concerns" (Graham & Harris, 2000, p. 3). Consequently, self-regulatory skills are required not only for generating productive ideas and writing strategies but also for managing the writers' affective states like controlling their anxieties and emotions that can accompany writing

(Bruning, et al., 2013).

As for explicating the roles and potentials of self-regulation capacity in the writing process, the model of self-regulated learning behavior developed by Zimmerman (2000) can be used. This model consists of forethought, performance and self-reflection phases which can correspond to the planning, execution and monitoring stages of writing in the model of individual differences in writing proposed by Kellogg (1996). In the planning phase of writing, leaners must identify the goals they want to achieve by writing the text by considering the task requirements, collect the required background information for the content of their texts and use efficient planning strategies to create a strong foundation for their work (Manchón & Roca de Larios, 2011). In the execution phase, the students start committing their ideas to paper and must employ effective self-regulatory strategies to control their mental resources (e.g., efficient allocation of attention to different aspects of writing), effort, environment and feelings of anxiety and boredom to overcome the problems encountered during the writing process and successfully complete the writing tasks at hand (Kormos, 2012). Finally, in the monitoring phase, the students must engage in evaluating their writing processes and outcomes in terms of the adequacy and appropriateness of different aspects of writing like content, organization, coherence, etc. and do the necessary revisions to enhance the accuracy, fluency and face validity of their written outputs.

Graham and Harris (2000) also identified a number of self-regulation strategies that writers use during the composition process to monitor their performance with regard to environmental, behavioral, and personal processes: goal-setting, planning, record keeping, organizing, self-monitoring, self-evaluating, revising, self-verbalizing, rehearsing, environmental structuring, time planning, self-consequating, seeking social assistance and self-selecting models. Consequently, self-regulation can be involved in all stages of writing process from start to finish and the studies have reported substantial gains in writing achievement and motivation as a result of self-regulatory instruction (i.e., self-regulatory strategy development (SRSD)) in writing courses (Graham & Harris, 2005; Hidi & Boscolo, 2006; MacArthur & Philippakos, 2013; Magno, 2009; Sadler, 2006; Santangelo, Harris & Graham, 2008; Zimmerman & Bandura, 1994; Zumbrunn, 2009).

As for some of recent experimental studies which have explored the role of self-regulatory strategy instruction in writing, a reference can be made to the following. In one of these studies, Bakry and Alsamadani (2014) investigated the effect of SRDS on persuasive essay writing among a group of students who studied Arabic as a foreign language. The results of the study indicated that SRDS was effective in writing persuasive essays for the students of Arabic, in general. Also, the most predictable skills to be improved were: paragraph writing, creating ideas, organization, clarity of position, and sentence structure and vocabulary. Yet in another study, Graham, Harris, and Adkin (2015), investigated the practice of 11 second grade teachers who attempted to implement SRSD in story writing. They conducted SRSD-based instruction with small groups of students at-risk of failure in writing in their classrooms. The researchers intended to analyze the following outcomes as a result of the instruction received: inclusion of genre elements and story quality, generalization to personal narrative, and teacher perceptions of intrinsic motivation and effort for writing. They came across significant effects inclusion of genre elements and story quality at both posttest and maintenance stages. Finally, Samanian and Roohani (2018) investigated the effectiveness of using self-regulated strategy development (SRSD) instruction in improving Iranian EFL learners' descriptive writing and reflective thinking skills and compared the effectiveness of such instruction with nonstrategic-based (i.e., traditional) instruction. The findings of the study revealed that self-regulatory instruction was effective in improving the completeness, length, and overall quality of the EFL learners' descriptive writing performance.

3. Method

3.1. Participants and setting

The participants of the study were 125 BA level students of English Language and Literature and English Language Teaching from three State universities in Iran. They were in the third year and have passed all basic courses with regard to their language proficiency. They had also passed two

four-credit grammar courses, an advanced writing course and an essay writing course and were quite familiar with the rules and conventions of writing in English. All of them were native speakers of Persian (though a few of them had Turkish language and their mother tongue) and from both genders. Their language proficiency level range from upper intermediate to advanced. In fact, since this research endeavor had been part of a larger research project which has investigated the role of a set of cognitive and affective factors in Iranian EFL learners' writing competence, more than 250 students had participated in the actual study, but due to the objectives of the main research project and based on the results of Oxford Placement Test, only the upper-intimidate and advanced level participants (i.e., junior and senior students) had been selected as the main participants.

3.2. Instruments

The first instrument intended to measure the students' level of writing competence. In fact, the participants of the study were required to write a three-paragraph essay (including a general introduction paragraph, one detailed body paragraph and a general conclusion paragraph) on a general argumentative topic selected from IELTS writing module Task 2. They were informed that their texts will be analytically scored and they must put great care in creating a unified and well-supported text.

The second instrument was the self-regulation scale contextualized in writing developed and validated by Kanlapan and Velasco (2009). This scale is based on Zimmerman's (2002) three-stage model of self-regulation (including forethought, performance and reflection phases) targeting students' processes and strategies on the following eight dimensions: (1) setting specific proximal goals for oneself, (2) adopting powerful strategies for attaining the goals, (3) monitoring one's performance selectively for signs of progress, (4) restructuring one's physical and social context to make it compatible with one's goals, (5) managing one's time use efficiently, (6) self-evaluating one's method, (7) attributing causation to results, and (8) adapting future methods. Totally, it contained 115 questions and the estimated reliability index for this instruments after administering it in the present context was .65 Cronbach's alpha.

3.3. Procedure

In order to collect the required data, the researcher, after contacting the instructors and explaining the research objective and procedures, attended 5 classroom sessions and administered the writing prompt and self-regulation scale. The essays written by the students were assessed by using Palus's (1999) essay scoring rubric which provided analytic scores on different aspects of the students' performance such as content and organization, support and development, cohesion and coherence, structure, vocabulary and mechanics writing. It is worth-mentioning that before running the main statistical analyses, Inter-rater reliability (IRR) was used to assess the consistency between the ratings assigned by the two raters and the degree of the agreement between the two raters who made the independent ratings for the writing task was quantified, which showed a comparatively high level of inter-rater reliability for the writing scores (i.e., r=.76). In addition, the score on this task was used as a measure of the students' writing competence and based on this score they were divided into two groups of more- and less-skilled student writers. As for analyzing the data, statistical procedures such as correlation, multiple regression and independent samples t-test were used.

4. Results and Discussion

The first research question intended to examine the relationship between extent of self-regulatory strategy use by Iranian EFL learners and their writing competence. The results of Pearson Correlation Coefficient presented in Table 1 indicated that there is a statistically significant relationship between these two constructs; however, the level of this relationship is very low (*r=.146; p=014<05*). This finding supports the studies in literature which have found a significant positive relationship between self-regulated learning strategies and learners' achievement (e.g., Hong, Pang & Rowell, 2009; Magno, 2011). However, this relationship was very low which might

be indicative of the fact that Iranian EFL learners are not effectively taught self-regulation strategy and therefore they are not able to make effective use of them. In addition, the adoption of writing strategies and their appropriate use can be influenced by a variety of other factors such as the participants' aptitude, anxiety, world knowledge, educational and cultural experience, or even age (Abadollahzadeh, 2010; Magogwe & Oliver, 2007). In case of the present study, the participants' various educational background, learning experiences and different levels of writing abilities might have played a role as well.

Table 1.*Descriptive Statistics and Results of Pearson Correlation Coefficient for Students' Self-Regulation Strategy Use and Writing Competence*

Variables	N	Mean	SD	r	Sig. (two-tailed)
Writing competence	125	36.02	6.19	. 146	.014
Self-regulatory strategy use	125	3.72	40.06		

The second research question intended to see which sub-scale in self-regulatory strategy use could highly explain and predict the writing competence of the learners. The results of descriptive statistics presented in Table 2 show that *setting specific proximal goals for oneself* (SG) has the highest mean score (*M=51, SD=6.68*) among the other subscales and *attributing causation to results* (As) has the lowest mean score (*M=33.28, SD=5.50*) and therefore can be considered as the classes of strategies which were used to the highest and lowest extents, respectively.

Table 2. Descriptive Statistics for Writing and Self-Regulation Subscales

Variable	Mean	Standard Deviation	N
Writing Competence	36.02	6.19	125
ST	51.00	6.68	125
PS	48.19	7.02	125
SM	50.47	7.08	125
RC	47.45	7.59	125
TM	43.62	8.78	125
EM	48.81	6.89	125
AC	33.28	5.50	125
FM	49.63	7.89	125

Furthermore, in order to know how independent variables, that is the subscales in the self-regulation strategy use scale, contributed to the prediction of writing, and to compare the contribution of the variables, a set of values under Standardized Coefficients are reported (see Table 3). As it is seen in Table 3, none of the variables could strongly predict the writing competence of the learners. However, in spite of not showing a significant result, restructuring one's physical and social context to make it compatible with one's goals (*B=-.100, Beta=-.123. t=-1.164, p>.05*) has a better predicting power compared to the rest of the subscales, which confirm the students' attempts in their regulation of context and preparation of their minds for writing which as the most complex language skill poses a challenge for the students in successfully completing the tasks and meeting the requirement of the writing prompt. This finding supports the importance of metacognitive strategies and their highest frequency of usage by learners (Gu and Johnson, 1996; Magogwe and Oliver, 2007). In fact, it is believed that regulation of cognition and knowledge of cognition can help enhance their skills in terms of the contextual, stylistic, and language and expression structures of writing (Magogwe, 2013).

Table 3. *Coefficients of Multiple Regressions*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	95% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero Order	Partial	Part
(Constant)	43.871	5.666		7.743	.000	32.650	55.093			
SG	.000	.138	.000	-.004	.997	-.273	.272	-.091	.000	.000
PS	.060	.104	.067	.572	.568	-.146	.265	-.038	.053	.052
SM	-.102	.130	-.116	-.785	.434	-.358	.155	-.151	-.073	-.071
RC	-.100	.086	-.123	-1.164	.247	-.271	.070	-.177	-.107	-.105
TM	-.030	.083	-.042	-.355	.723	-.195	.136	-.105	-.033	-.032
EM	.064	.123	.072	.524	.601	-.179	.308	-.044	.049	.047
AC	.073	.142	.065	.517	.606	-.207	.354	-.060	.048	-.084
FM	-.102	.110	-.130	-.933	.353	-.319	.115	-.127	-.086	-.086

a. Dependent Variable: Writing Competence

Finally, as was stated, the participants of the study, based on their performance in the essay writing task, were classified in the two groups of more and less skilled student writers and in order to see whether there is any statistically significant difference between these two groups in terms of self-regulatory strategy use, an independent samples *t*-test was run. The results of this analysis presented in Table 4 indicated that there were no statistically significant differences between the two groups in this regard ($t=.120, df=123, p=.063>.05$). Although it was expected that more advanced students would use more writing strategies, this lack of significant difference confirms the complexity of writing and implies that the perceived frequency of use of writing strategies may not be a reliable distinguishing feature between lower and higher level participants. but the appropriate use of strategies at the right time and in the best sequence is more important (Abdollahzadeh, 2010).

Table 4. *Descriptive Statistics and Results of Independent Samples t-test for Self-Regulation Strategy Use of More- and Less-skilled Student Writers*

Group	N	Mean	SD	t	df	Sig. (two-tailed)
More-skilled	31	3.76	37.60	.120	123	.063
Less-skilled	94	3.59	44.90			

On the whole, the findings of present study revealed that Iranian EFL learners do not have an adequate command of writing strategies and are not able to use these mental resources while composing their texts, which is mostly the result of conducting writing classes in traditional modes and focusing upon product-oriented approaches. Therefore, further attempts need to be made to teach writing based on the principles of SRSD instruction which mainly includes the following stages: a) explicit modeling and learning of genre knowledge (i.e., text features) and strategies for composing various texts, (b) development of declarative and informed knowledge needed to use these strategies, and (c) guided practice and scaffolding in using these strategies and thus explicit development of self-regulation strategies for monitoring and managing the writing process, writing strategies, and writing behavior (see e.g., Harris, Graham, & Santangelo, 2013).

5. Conclusion

The present study was conducted to see the extent of self-regulatory strategy use in the context of academic writing among Iranian EFL learners. The results of the analyses conducted indicated that the extent of use of self-regulatory strategy use by learners is very limited and they are not capable of using these resources while writing in academic contexts. In fact, since Iranian students are learning English as a foreign language, and most of the instructions conducted in the classrooms are rather traditional and teacher-centered instead of an individualized and differentiated learning approach, expecting to find positive correlations between the learners' self-regulatory behavior, which is a highly self-initiated process, and their achievements in various domains of learning can be considered as an idealized objective. In fact, since these learners are highly dependent on

teachers' guidance and hence are less self-directed in their learning process, some mediational strategies, modellings and supportive feedback must be performed and offered by the competent EFL instructors to inform the learners of the nature and applications of such generative activities and initiatives in their learning process. Therefore, "scaffolds, which support and guide learner's self-regulatory process, are necessary" (Lee, Lim, & Grabowski, 2010, p. 632) in empowering the learners and enhancing the quality of their learning. Since the instructional practices conducted by writing teachers and their perceptions about writing differ across various educational contexts (Graham & Rijlaarsdam, 2016), further studies must be conducted to investigate the role of contextual factors (e.g., classroom level predictors of self-regulation strategy use such as classroom organization and level of instructional support), writing instruction variables (e.g., the effects of self-regulatory based writing instruction) and even individual difference variables (like the effects of educational background, language proficiency level, gender, etc.) on the use of different types of self-regulated strategies by the student writers, which would make us gain a better picture of the multidimensional nature of writing and, thus, devise instructional plans and materials to enhance the quality of students' writing. The main limitation of the present study is that the students' perceptions of their practices were solely explored through a questionnaire which is not capable of eliciting more in-depth experiences about their writing strategy use; consequently, other more direct and situated forms of elicitation (e.g. think-aloud, immediate recall, or stimulated recall protocols) can be used to provide more valid findings.

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