The Effect of Self-regulated Strategy Instruction on Iranian EFL Learners' Writing Ability

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Abstract
This study explored the effect of teaching Self-Regulated Strategy on the writing accuracy and cohesion of Iranian EFL learners. In so doing, this study followed the SRS instruction model, using a transition word chart, examples, and a graphic organizer. To achieve the objectives, 50 intermediate Iranian EFL learners participated in this study. The design was experimental which used a proficiency, pretest-posttest and random sampling. The analyses of writing tests in the control and experimental groups revealed that SRS instruction had a positive impact on the participants’ writing ability. The effect of SRS instruction was significant on the participants’ writing accuracy and cohesion. The findings draw language instructors’ attention to the meta-cognitive dimension of writing and importance of teaching self-regulatory strategies as a way for achieving autonomy in writing.

Keywords: accuracy, cohesion, strategy instruction, self-regulated strategy, writing
Introduction

Writing is one powerful form of communication; it develops critical thinking and facilitates learning (Zimmerman & Reisemberg, 1997, as cited in Santangelo, Harris, & Graham, 2008). Language learners’ success often depends on their ability to express knowledge through writing (Mason, Benedek-Wood, & Valasa, 2009). But even experienced writers sometimes have difficulty in effective planning, composing, evaluating, and revising their writing (Santangelo et al., 2008). While writing a text, language learners are required to plan, organize their ideas, write and review materials simultaneously. Planning, organizing ideas and writing at once involve cognitive processes. Thus, L2 learners often need to learn writing strategies and instruction that will prime them with the necessary support to better develop their writing; strategy instruction “should be facilitated in a way that encourages and directs students to effectively express knowledge or opinions” (Mason et al., 2009, p. 305).

Self-Regulated Strategy Development (SRSD) is an approach to writing which can help language learners develop strategies of planning, drafting, and revising text (Santangelo et al., 2008). The strategies in SRSD focus mainly on planning, drafting, revising, editing, or some combination of the processes (Harris, Graham, & Mason, 2003).

According to Graham and Harris (2005), SRSD approach has six main stages: develop prior knowledge with learners about the writing genre and about good strategies; discuss learners’ current strategies and abilities; model effective writing strategies and composing process; help learners memorize strategies and self-instructions; support what learners have learned through collaboration and revision, and establish independent performance.

There is still a question that why some students are successful in writing foreign languages while some not or why some learners are interested in writing than others. Psychologists described the nature of how to write to account for the variances in learner’s language attainment. It is clear that writing is the most complex language skill. Few people write spontaneously and few feel comfortable with a formal writing task (Lavelle, 2006). It represents a challenging task for both native and nonnative speakers (Kroll, 1990). While many studies have explored various aspects of teachers ‘perception about teaching writing’ (Muncie, 2000), no one has considered the
effect of self-regulated strategy teaching on Iranian writing performance in terms of accuracy and cohesion.

SRSD is an approach to address writing problems of learners with regard to different processes involved in composition, stages such as planning, editing, and managing the writing process (Mason, Harris & Graham, 2002).

In one study, Souvignier and Mokhlesgerami (2006) investigated the effects of self-regulated learning on reading comprehension ability. The study had an experimental design with three groups of students. There were 20 treatment sessions. The experimental groups received instruction based on the principles of motivational aspects of self-regulation, cognitive self-regulated and reading strategies. The findings of the study revealed that students in the intervention group who received instruction through the program outperformed the control group students.

De La Paz (1999) investigated the effects of SRSD on the learners' writing expository essays with and without behavioral disabilities. Twenty-two learners participated and received direct instruction with two important self-regulatory strategies of: PLAN (Pay attention to the prompt, List main ideas, Add supporting ideas, and Number your ideas) + WRITE (Work from your plan to develop your text, Remember your goals, Include transition words for each paragraph, Try to use different kinds of sentences, and Exciting, interesting, 1000,000 words) strategy. Results revealed that most of the students developed sequential, multi-paragraph essays, and students were involved in planning and pre-writing strategies. Also, results showed an improvement in the quality of written compositions.

De La Paz and Graham (2002) examined the effects of strategy instruction on writing performance of middle school students. They focused on quality of writing, writing evaluation norms, and the use of interesting vocabulary, transition words, and various sentence types. The experimental group received instruction on the PLAN and WRITE writing strategies. Statistical data analyses were conducted to examine the relationship between the two instructional conditions and planning, vocabulary, essay length, and overall quality. Findings showed that students in the experimental group wrote longer essays with more mature vocabulary. The essays were qualitatively better than essays constructed by students in the control group. The writers suggested that
PLAN and WRITE strategies helped students analyze various writing tasks and develop and organize the content of their own writing.

Saddler, Moran, Graham, and Harris (2004) studied the effect of SRSD instruction on the writing ability. Target genres were personal narrative and story writing. Three male and three female students participated in the study. The students were taught how to plan and write a story on the basis of the SRSD strategy during the treatment. The students were able to write both stories and personal narratives. The essays were assessed for number of paragraphs (length), number of story components, and the overall writing quality. Results indicated that students’ written stories were more mature, longer, and qualitatively improved.

Saddler (2006) also investigated another study. He added less proficient writers to the design and procedure. The findings indicated that students wrote longer, improved, and more complete stories. Moreover, learners spend more time planning their compositions. Therefore, explicit teaching of self-regulatory writing strategies is an effective instructional activity to be included in both first and foreign/second language teaching, and learning.

Several studies exist which investigate relationships among different features of the text. Various researchers have examined the relationship between cohesion and coherence, the two discourse features of writing and the effect of these two features on writing quality. Tierney and Mosenthal (1983), requested college teachers to score student essays with respect to general coherence and then carried out cohesive analysis of the essays. The results indicate that there is no relationship between cohesion and coherence. McCulley (1985) investigated relationships among cohesion, coherence, and writing quality of student persuasive essays. He reported somewhat different findings that one cohesion category—the lexical cohesive features of synonym, hyponym, and collocation—was significantly related to coherence and writing quality ratings. He also found that coherence correlated significantly with writing quality judgments. The evidence in his study, therefore, suggests that not all of cohesive categories are significant features in determining either coherence or writing quality but coherence is a valid construct of writing quality judgment. Spiegel and Fitzgerald (1990) supported what McCulley found in that there was some limited evidence of a relationship between
cohesion and coherence but that there was a strong positive correlation between
the ratings of coherence and holistic quality of writing.

They, however, found no significant relationship between cohesion and
In investigating children’s expository texts, they found that the ratings of
writing quality correlated significantly with texts using more cohesive devices.
From their findings, cohesive harmony played a significant role in a text being
judged well-written. Other notable findings regarding the relationship between
discourse organization and holistic quality of writing include the results from
Chiang (1999) and Sweedler-Brown (1993), they reported inconsistent
findings. Witte and Faigley (1981) found that the writers of high-rated essays
employed more cohesive ties than those of low-rated essays. Their findings
were supported by a later study conducted by Chiang (1999). In investigating
the importance of grammatical and textual features in the evaluation of French
as second language writing, he found a strong correlation between discourse
features, particularly those for cohesion, and holistic ratings.

In contrast to the findings of the preceding studies, Johnson (1987) reported
no differences in the number of cohesive ties between good and weak
compositions written by Malaysian ESL learners. Furthermore, Sweedler-
Brown (1993), in a comparison of the influences of rhetorical and sentence-
level features on holistic scores, reported that analytic scores on rhetorical
features of organization and paragraph development showed no correlation
with the essays’ holistic scores.

Kroll (1990) investigated the relationship between grammatical accuracy
and discourse organization. She reported that there was not relationship
between syntactic accuracy and discourse fluency of freshman composition
students from various language backgrounds. Findings suggested that students
could produce well-written essays in bad English and poor essays in good
English.

The current study aims to investigate following research questions:
1. Does self-regulated strategy instruction significantly affect Iranian EFL
learners’ accuracy in writing?
2. Does self-regulated strategy instruction significantly affect Iranian EFL
learners’ cohesion in writing?
Method

The design was experimental, with two groups; a control group and an experimental group. The sampling was random. The experimental group got treatment. Both groups got pre-test and post-test of writing.

Participants

The participants of the present study included male and female intermediate students of English studying in Nasr Institute. One hundred fifty learners took Oxford Placement Test to choose only intermediate level learners. Based on Oxford Placement Test, 50 students were selected as the sample of the study. They were divided into one control and one experimental group. The students’ ages ranged from 16 to 22 and English was their foreign language. The students’ marks on proficiency exam played an important role in the selection processes of this research. It was assumed that at intermediate level, students are independent enough to be aware of their responsibility for their own writing progress. It was also presumed that students had developed strategies for independent learning, which was an essential requirement for their progression.

Instrumentation

There were two instruments for data collection. The first one was Oxford Proficiency Test (OPT). OPT includes 200 items, measuring listening as well as grammar, vocabulary and reading skills. The second one was writing pretest and posttest. The writing in pre-test and post-test include two simple topics, not requiring any special knowledge. The topics were:

Pretest: Describe your house. Say where it is, what it looks like, and what your favorite room is.

Posttest: Write a paragraph describing the university campus. You can write about the buildings and what do you do on campus. Do you like the campus? Why? Why not?

Procedure

To begin the study, first, the OPT was administered to 150 students and 50 intermediate learners were chosen as the sample of the study. To ensure the homogeneity and comparability of the participants in two groups, the Independent-samples T-test was run on the OPT scores of 50 participants in both groups. Then the participants in both groups were asked to take a timed writing which was used as pretest.
The control group received traditional writing instruction (i.e., non-self-regulatory strategy-based instruction) while the experimental group received SRSD instruction. Instructions in both groups were given in 10 weeks, once a week, by the teacher. The control and experimental groups received the instruction about the mechanics of writing, spelling, grammar and the characteristics of writing, such as, structural features of persuasive writings. The participants in the control group were asked to write which were corrected by the teacher. Then, they received feedback from teachers on features such as the organization of paragraphs in their writings, sentence grammar, word spelling, and punctuation, so the writing course was more product-oriented whereas the course in the experimental group was more process-oriented.

Following Santangelo et al. (2008), the SRSD instruction of the study included six stages; Develop Background Knowledge, Discuss Strategy, Model It, Memorize It, Support It, and Independent Performance.

They allow the students to learn a writing strategy. The general planning strategy includes three steps, represented by the mnemonic POW: Pick my ideas, Organize my notes, and Write and say more. The participants in the experimental group were taught to use POW to write, they also were taught a genre-specific strategy.

As a means of helping the participants to carry out the second step of POW (organizing notes), they were also taught a genre-specific strategy that prompted them to generate ideas for each of the basic parts of a writing. This strategy, represented by the mnemonic TREE, reminded the students to do the following: Tell what they believe (state their Topic Sentence), Provide three or more reasons (Why do they believe this?), End it (wrap it up right), and Examine (look closely at all parts of their writing).

During Developing Background Knowledge stage, POW was only reviewed, and the instruction focused on the characteristics and parts of writing (i.e., TREE). During the second stage of instruction, Discuss It, the students were first assessed to determine whether they remembered what POW and the essay part reminder mnemonic stood for. They practiced looking for different parts in writing as the instructor read out writing loud, but this time they used a graphic organizer wherein they made notes for each part of the writing. At this point, self-monitoring and graphing were introduced. Then the instructor
introduced the idea of goal setting, indicating that students’ goal in writing was to include all parts, as well as to ensure that each was well done. During the third stage of instruction, Model It, they were shown how to apply POW and the essay part reminder; the use of self-instructions (self-talk) was introduced, too. In the fourth stage of instruction, Memorize It, they memorized the steps, the mnemonic, and their self-statements. The next stage, Support It, started with a collaborative writing experience. The instructor and students set a goal to include all elements in their writing and started planning and writing together using POW, the essay part reminder, the graphic organizer, and their self-instructions. This time, however, they directed the process, and the instructor provided support when needed. They were asked to read their writing to each other and discuss how the strategies help them write better. Collaboration included instructor or peer support in carrying out the strategies. Students moved into the final stage, in which each student could use POW and the part reminder to write without using any of the prompts or receiving help from the instructor or peers.

After conducting the instructions, both the experimental and control groups participated in the posttest taking a timed writing. In order to measure the quality of the participants’ writing performance in the pretest and posttest, an analytic scoring rubric developed by Hyland (2003) was used.

**Results**

To examine the hypotheses of the study and in order to select the most appropriate statistical analysis to compare the performance of groups on writing test, it was necessary to make sure whether these scores met the assumption of using parametric test (Hotelling’s T2) used in this study. As the pretest stage, all of the assumptions were checked. First, Violation of Multicollinearity was checked. Violation of Multicollinearity means that the dependent variables have high correlation with each other, above .8. Table 1 shows the result.
Table 1

<table>
<thead>
<tr>
<th></th>
<th>Accuracy</th>
<th>Cohesion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pearson Correlation</strong></td>
<td>1</td>
<td>.607**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Cohesion</strong></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Pearson Correlation</strong></td>
<td>.607**</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

As Table 1 indicates, two dependent variables moderately correlated and we did not violate this assumption. Another assumption to check was multivariate normality. So the researcher obtained Mahalanobis distance. Table 2 shows the result.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>S. D</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mahal. Distance</td>
<td>.004</td>
<td>9.841</td>
<td>1.960</td>
<td>1.965</td>
<td>50</td>
</tr>
<tr>
<td>Cook's Distance</td>
<td>.000</td>
<td>.253</td>
<td>.017</td>
<td>.039</td>
<td>50</td>
</tr>
<tr>
<td>Centered Leverage Value</td>
<td>.000</td>
<td>.201</td>
<td>.040</td>
<td>.040</td>
<td>50</td>
</tr>
</tbody>
</table>

Table 2 shows that the maximum value for Mahal distance was 9.84 which according to a table given in Pallant (2013), was much smaller than the maximum critical value i.e., 13.82. The next assumption to be checked was matrix of scatterplot to examine the linearity. Figure 1 shows the result.
The next assumption to be checked before running Hotelling’s T2 was homogeneity of variance-covariance matrices. Table 2 indicates the result.

Table 3

<table>
<thead>
<tr>
<th>Box’s M</th>
<th>13.336</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>4.245</td>
</tr>
<tr>
<td>df1</td>
<td>3</td>
</tr>
<tr>
<td>df2</td>
<td>414720.000</td>
</tr>
<tr>
<td>Sig.</td>
<td>.005</td>
</tr>
</tbody>
</table>

As the Box test of Equality of Covariance Matrices indicates, the assumption of homogeneity of variance-covariance was successfully met because our sig. value was larger than .001. The next box to look at was Levene's Test of Equality of Error Variances. As result (Table 4) indicates none of variables recorded significant (e.g., the sig values is larger than .05) so, we did not violated the assumption of equality of variance for variables.
Table 4
Levene’s Test of Equality of Error Variance for Posttest

<table>
<thead>
<tr>
<th></th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>3.381</td>
<td>1</td>
<td>48</td>
<td>.072</td>
</tr>
<tr>
<td>Cohesion</td>
<td>5.989</td>
<td>1</td>
<td>48</td>
<td>.068</td>
</tr>
</tbody>
</table>

Since all assumptions were met, the Hotelling’s T2 was used to see if there was any difference between groups in posttest stage. Descriptive statistics presented in Table 5.

Table 5
Descriptive Statistics for Writing Posttest of the Two Group

<table>
<thead>
<tr>
<th>Test</th>
<th>Group</th>
<th>Mean</th>
<th>S. D</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>self.regulated</td>
<td>72.7600</td>
<td>8.17150</td>
<td>25</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>61.7200</td>
<td>4.68615</td>
<td>25</td>
</tr>
<tr>
<td>Cohesion</td>
<td>self.regulated</td>
<td>3.1864</td>
<td>.61324</td>
<td>25</td>
</tr>
<tr>
<td>control</td>
<td></td>
<td>2.0840</td>
<td>.38489</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 5 shows the mean of accuracy and cohesion scores in the experimental group in the posttest stage, respectively. To see if there was any significant difference between groups, the value of Wilks’ Lambda was checked which indicated significant difference, Table 4.14 shows the result.

Table 6
Multivariate Tests for Score on Writing Posttest

<table>
<thead>
<tr>
<th>Group</th>
<th>Value</th>
<th>F</th>
<th>Hypothesis df</th>
<th>Error df</th>
<th>Sig.</th>
<th>Partial Eta Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillai's Trace</td>
<td>.608</td>
<td>36.524b</td>
<td>2.000</td>
<td>47.000</td>
<td>.000</td>
<td>.608</td>
</tr>
<tr>
<td>Wilks' Lambda</td>
<td>.392</td>
<td>36.524b</td>
<td>2.000</td>
<td>47.000</td>
<td>.000</td>
<td>.608</td>
</tr>
<tr>
<td>Hotelling's Trace</td>
<td>1.554</td>
<td>36.524b</td>
<td>2.000</td>
<td>47.000</td>
<td>.000</td>
<td>.608</td>
</tr>
</tbody>
</table>
As Table 6 indicates, the sig. value of Wilks’ Lambda was .000 which was less than .05. So, we can conclude that there was a statistically significant difference between two groups. Table 7 indicates further information on dependent variables. Since we are looking at a number of separate analyses here, we should set a higher alpha level. The most common way of doing this is to apply what is known as Bonferroni adjustment. This involves dividing original alpha level of .05 by the number of analyses. In this study there were two dependent variables to investigate; therefore, the researcher divided .05 by 2. The new alpha level was .025.

Table 7
One-Way MANOVA for Score on Writing Posttest

<table>
<thead>
<tr>
<th>Source</th>
<th>Dependent Variable</th>
<th>SS</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>Accuracy</td>
<td>1523.520</td>
<td>1</td>
<td>1523.520</td>
<td>34.339</td>
<td>.000</td>
<td>.417</td>
</tr>
<tr>
<td></td>
<td>Cohesion</td>
<td>15.191</td>
<td>1</td>
<td>15.191</td>
<td>57.959</td>
<td>.000</td>
<td>.547</td>
</tr>
<tr>
<td>Error</td>
<td>Accuracy</td>
<td>2129.600</td>
<td>48</td>
<td>44.367</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cohesion</td>
<td>12.581</td>
<td>48</td>
<td>.262</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Accuracy</td>
<td>229714.000</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cohesion</td>
<td>374.986</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As Table 7 shows, the sig value for both dependent variables were less than .025 (p= .00). It means that there were statistically significant differences between two groups in both variables (accuracy and cohesion). Thus both null hypotheses of this study were rejected. In addition, Table 7 indicates the effect size. The effect size for accuracy was .41, and .54 for cohesion respectively, which can be considered large compared to Cohen’s criterion.
Discussion

According to the p-value (p = 0.00 < .05) we conclude that there is a significant difference between result of accuracy for two groups and H0 indicating that “self-regulated strategy instruction does not significantly affect Iranian EFL learners’ accuracy in writing.” is rejected. In other words, the self-regulated strategy instruction was affective concerning the learners’ accuracy in the writing. The L2 participants’ accuracy, of course, was not perfect or flawless, yet significant, as indicated by the increased scores. That means that writing instructions can significantly improve the structure. Regarding the writing cohesion, as the p-value is 0.00 and less than .025 our alpha level in this study; therefore, there is a significant difference between result of writing cohesion of two groups. Thus, the H0 indicating that “self-regulated strategy instruction does not significantly affect Iranian EFL learners’ cohesion in writing.” is rejected too.

The above-mentioned results obtained in this study showed that SRSD, in which the L2 students learned to regulate their strategy uses, the writing task, and their behavior while writing, proved to be more effective. It can be argued that the better improvement of the writing scores can be due to their improvement in strategic behavior, knowledge, and maintenance during the writing process and managing the tasks associated with SRSD.

Hayes and Flower (1980, as cited in Rogers, 2010) have confirmed, planning, one of the cognitive processes is an essential writing ability (i.e., set goals and strategies to meet goals). García and Fidalgo (2006) also state that writing includes elements that are used recursively. Coordinating the processes such as planning, drafting and revising needs attention control and self-regulation and results in an effective text.

The previous research showed that most of the problems with the writing in English identified to be grammar related. Obviously, the grammatical accuracy exerts an important role on the final written product however, when the process of writing is concerned and especially the free flow of thoughts, the focus on grammatical correctness is commonly viewed as an impeding factor (Gordon, 1980, as cited in Griffiths, 2008). According to Gordon’s study, good language learners conducted their grammar checks in the revision stage (1980). The question arises then why students were so much concerned with the grammatical accuracy of their writing. Historically, the grammar orientation in the L2 writing is associated with the product approach, which was introduced in the 1960s by the structural linguists and then became popularized by the behaviorist learning theories (Hyland, 2003). As Hyland argues; writing is an
extension of grammar - a means of reinforcing language patterns through habit formation and testing learners’ ability to produce well-formed sentences.

The purpose of this research was to investigate the effect of self-regulatory strategies instruction on Iranian EFL learners’ writing accuracy and cohesion. This topic has been selected because L2 writing in Iranian context is commonly viewed as the product of learning and not much attention is devoted to the components of the writing process. English writing tasks are usually assigned to students as homework and they are not practiced in the language classroom.

Result of this study emphasized on the fact that regardless of testing innate ability of students teaching self-regulated strategies can be beneficial for learners’ writing. Students writing contained better quality after SRSD instruction. Although, it is possible that extended or additional instructional sessions could have helped the writers become even more proficient. All in all, the results showed that the experimental group which was taught by self-regulated strategy outperformed the control group which was taught by a traditional strategy.

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**Biodata**

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