Journal of English Language Education,
Vol 2(1) 2019: 19-35

Edulangue

INVESTIGATING THE EFFECT OF SELF-REGULATED STRATEGY DEVELOPMENT ON TERTIARY EFL STUDENTS' WRITING SKILLS

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Abstract

This study aimed to investigate the relative effect of Self-Regulated Strategy Development (SRSD) teaching approach on tertiary EFL students' writing. During two months, sixty EFL University students enrolling in basic writing course took part in this project and were divided into experimental and control groups. Pre- and post-tests were carried out to garner the intended data pertinent to the students' writing scores. A mixed-design ANOVA was carried out to analyze the changes of writing scores of the respective groups since the assumption of homogeneity of regression slopes for the planned Analysis of Covariance was not met. The statistical evidence showed that there was a significant difference between the two groups in terms of writing scores at the significant value sig .00 < .05. The data also suggested that students who were taught using SRSD relatively outperformed their counterparts in the control group. The empirical evidence demonstrates that the use of SRSD as an instructional approach to some extent positively affects EFL students' writing skill.

Keywords: *Self-Regulation Strategy Development, writing strategy, writing skill*

.INTRODUCTION

Writing is an intricate process taking into account such cognitive processes as choosing lexical items, binding words together and a constant checking of the piece of writing. These highly complex processes may lead to the term cognitive overload

since simultaneously, one composing a piece of writing is faced with two situations: constructing viable text and learning from the writing as well (Braaksma, Rijlaarsdam, Van Den Bergh & Van Hout-Wolters, 2006). The case of cognitive overload is even probably worse in the context of EFL writing pedagogy as students learning to write are even constrained with coordinating language nonnative to them resulting in writings typically characterized by poor qualities. In the meantime, low acquisition of writing skills impedes opportunities for employment and post-secondary education (Harris, Graham, Friedlander & Laud, 2013). To date, researchers have made several attempts to overcome the cognitive overload and SRSD (Self-regulated Strategy Development) approach has been validated for years to improve students' writing. However, the applicability of the approach in EFL contexts has scarcely been empirically tested and established. Much of recent research on the impact of SRSD has advocated its merit on students with learning disabilities. Eissa (2009), for instance, reports strong effect size of SRSD on high school learning-disabled students in Egypt. In addition, one of the major tenets of SRSD is the self-regulation concept itself. Hue (2008) points out that self-regulation procedures are strongly linked to students' autonomy. The term autonomy is truly substantial nowadays since at university, students are mostly producing composition under teachers' guidance. In fact, once they graduate, they should rely on themselves (autonomy) when required for post-secondary education demanding skills of academic writing or even other fields of employment that requires loads of writing such as translation, prose writing and journalism.

SRSD as the name implies is an approach that enables students to plan and organize their writing by means of regulating their own process of writing. Harris, et al (2013) remark that SRSD is an approach that incorporates interactive and explicit learning as well as strategies for self-regulating writing process that entails goal setting, self-assessment, and other similar steps. The goal of this approach is mainly to foster self-efficacy and motivation. The two goals are strongly important in the acquisition of English writing

skill. Additionally, both motivation and self-efficacy are linked to the success of completing writing tasks. At individual level, learners are guided to regulate themselves therefore their beliefs on their capabilities in accomplishing a given task is also fostered. As Harris, et al (2013) suggest, to use the approach students' prior knowledge and vocabulary are required. Therefore, it might stem from constructivist view of learning in which students' prior knowledge is used to be linked to and develop new knowledge. SRSD also appears to offer potentials to overcome EFL students' hitches in writing. Our experience in the teaching of writing also indicates strong evidence of students' low writing quality often proved by incoherent, non-cohesive and lacking essential parts of successful writing. Therefore, this study aimed to investigate the relative effect of Self-Regulated Strategy Development (SRSD) teaching approach on tertiary EFL students' writing skill. We believe this study will inspire other researchers and teaching practitioners to adapt its findings into their research and teaching.

LITERATURE REVIEW

An Overview of SRSD

SRSD, standing for self-regulated strategy development, was originally initiated by Harris and Graham in their research works since 1982 in order to address struggling writers and disabled learners (Harris & Graham, 2009) and has been empirically tested over decades. Harris et al (2013) suggest that this approach integrates both the strategy for writing and the self- regulation strategies simultaneously. They also consider that this approach as the strongest to have been proved effective in writing instruction at any level of education. Accordingly, SRSD hypothetically offers promising influence on students' writing skill despite less research on it in the context of EFL. Roughly, SRSD can be split into two broad categories, first, strategy development. This aspect makes use of students' pre-skills in writing which seem to be often neglected (Harris, Graham, Mason, Saddler, 2002). The second one is self-regulated strategy or procedures which are presented to students in

the form of training. In other words, self-regulated procedures train students to be autonomous by making use of such self-regulation procedures as goal setting, self-monitoring, self-assessment, and the likes. This approach has also evolved over years as a result of its application across educational institutions and levels. Some characteristics of this approach are as argued by Harris et al (2002) first, it helps anticipate glitches or area where problematic instructions exist. Second, in its realization, self-regulated instruction encourages and demands the collaboration between students and teachers in a flexible manner. Another prominent characteristic is the individualized instruction in which the strategy focuses on each student or is students-centred. The next characteristic is that it is criterion-based rather than time-based in attaining the mastery of writing. Besides, it promotes both cognitive and metacognitive strategy to foster students' writing performance and offers effective process during text composition.

Self-Regulation Procedure

Self-regulation procedures are particularly important to teach to students. The aims and focus of self-regulatory activities are routes to motivate and guide students' learning. Although this term seems to be an individualized endeavour, it should be understood that the development of self-regulation strategies requires social assistance, that is the role of teacher to assist students not only in planning the procedures but also in implementing and maintaining the self-regulation procedures and the role of his peers to model the activities when necessary. Zimmerman, Bonner and Kovach (1996) suggest a cycle model for converting classroom activities into a process incorporating self-regulatory activities as follows. The process itself is cyclical in that it begins with goals setting and strategy planning and in the next stage is the execution of the planned strategies, and finally the monitoring and evaluation session where teachers and students reflects upon their self-regulated activities whether what they have completed meet the objectives or goal they set in the beginning. If not met, it is necessary to start over by improving the strategies planned.

Figure 1: Zimmerman, Bonner, and Kovach's Model of Self-Regulation Process (1996)

At the first stage of the cycle, as the students are exposed to a new lesson, they may be unfamiliar with the topics being learned, yet they may self-evaluate themselves by evaluating their own performance prior to the current situation. They should be aware of their own potentials and to what extent their current performance is. At this stage, feedback from teacher and peers is important to shape their belief on their current level of performance.

The next stage involves the analysis of learning task and setting goals as well as planning strategies to attain such goals. Additionally, this stage is under guidance of teacher yet in the end the role of the teacher is to fade along with the time spent for teaching. For instance, students who have no idea about how to

start writing might be instructed by the teacher to firstly create an outline or brainstorm ideas before start drafting. This activity means analysing the task and thinking about best strategy to write. Teacher might also encourage the students to write in an orderly manner, gradually, with scheduled writing on each part of their writing genres. The next step is implementing and monitoring the strategies meaning executing earlier discussed strategies and goals as well as teachers' and peers' feedback. Monitoring can be carried out through learning logs where students keep the records of what they have been doing to attain the goals they set. And the last step is monitoring the outcomes whether the strategies implemented at the previous stage are effective on their performance. If it is not effective, the goals set might be too complex to achieve therefore an adjustment is required to, for example, by lowering the complexities of the task or goals.

Key Stages in SRSD

Despite an updated version of the SRSD stages by Harris et al (2013), we feel in need of simplification for a clearer understanding. Note that, all these six steps are applicable yet some are not obligatory, some may not be necessary depending on the students' abilities.

a. Develop and Activate Background Knowledge

At this stage, the teaching will guide the students to identify and generate parts or generic structure of a writing. This is intended to develop pre-skill necessary for writing as a prompt that will later guide the students in the writing process. The lesson may begin with the nature, purposes and possible strategies of accomplishing writing task. Some researchers made use of mnemonic devices to realize this stage. Eissa (2009), for example, used DARE (develop topic sentence, add supporting detail, reject others' arguments, and end with a conclusion). Nonetheless, the stage is not only limited to this. As Harris et al (2013) stress out, the focus of this stage is not only on the writing, yet attention should also be paid to introducing and initiating self-regulated

strategies to the students. In other words, two aspects should be covered at this stage: the students' background knowledge and the knowledge of self-regulated strategies. The numbers of self-regulation strategies introduced and initiated are also relatively dependent on the students' need and capacity. Such self-regulated strategies as goal setting and self-monitoring strategies can be introduced at this stage.

b. Discuss It

At this stage, instructors and students discuss the students' current abilities regarding the writing itself f and regulated strategies whether they can help them become better writer. As Harris et al (2013) point out, the students' perception (belief, attitude) on themselves and their own writing ability should also be discussed. Here is the task of the teacher to lead a way to see whether students' knowledge and perception could either support of hinder their writing development by exhibiting the advantages of the two aspects discussed to their writing. Another part of this stage is exhibiting the advantages of the students' current knowledge and self-regulation strategies previously discussed for present and future opportunities. Finally, at this stage, the students' commitments in learning writing are also encouraged.

c. Model It

As the name implies, at this stage either teacher and student should interactively model writing and self-regulation strategies. Self-monitoring, self-evaluating, and other self-instructions procedure should be made clear to students through teacher modelling. Nonetheless, after modelling, teacher and students discuss the model and make changes when necessary.

d. Memorize It

Having the previous stages accomplished, the next stage will be memorizing both the writing and self-regulation strategies. Often, this is done by means of mnemonic, making acronyms of

the compiled strategies. The suggested activities are also asking the students to make visual aids or graphs in the forms of mind mapping of the strategies the just learned and tell them to the teachers and other students.

e. Support It

Teachers and students collaboratively work on writing. At this stage Harris et al (2013) suggest the guidance of teacher to each individual using prompts such as graphic organizers, charts, or self-instruction sheets to achieve the final goals. Teacher and students also set individual criterion of writing performance and decide which level the students have reached. Nonetheless, as the process goes, the guidance, collaboration, and visual aids or sheets are to fade encouraging students' individual capacities to compose individually relying on their mnemonics instead of those visual aids. Additionally, Hue (2008) suggests covert self -instructions and regulations during this stage.

f. Independent Performance

This stage is the total shift from guided writing and strategies to an independent writing. The teacher no longer collaborates with the students and they just monitor and support if only necessary. The previous mnemonics students have in mind is expected to fade and their performance is close to the goal set. Therefore, plans and maintenance for strategy generalization is discussed and applied (Harris, et al ,2013)

RESEARCH METHOD

Since randomly assigning the students into experimental and control group is nearly out of the question, the present research prefers the use of quasi experimental method with pretest posttest non-randomized design. The samples were selected without random assignment since the subjects available for the study were already split into two classes. These students at the time of the study were taking Writing Course focusing on sentence building. In

addition, the samples were taught using two different approaches; one of which had been conventionally used in the setting. These treatments were carried out in two months.

Figure 2: Diagram of Research Design of the Research

Group	Pretest	Independent Variable (s)	Posttest
EXP	O_1	X_1	O_2
CTR	O_1	X_2	O_2

Where,
X_1 = Self-Regulated Strategy Development
X_2 = Process-based Approach

To collect the data, pretest administered before treatment using SRSD was provided to the experimental group (EXP) whereas the control group (CTR) was taught using the process-based approach by which students were conventionally taught. The pretest and posttest were devised based on the several aspects of writing entailing spelling, grammar, mechanics, lexical choices as well as contents.

The pretest from both groups were used as covariates in ANCOVA. Nonetheless, ANCOVA requires at least two main assumptions to be met; the difference between the pretest scores between the groups should be insignificant and there should be homogeneity of regression slopes signaled by the interaction between group and the pretest. Therefore, in case there is an interaction between them, an analysis on gain scores or mixed design ANOVA will be used as suggested by Widhiarso (2011).

This study also seeks to prove research hypotheses as described below:

Ha: Students who are taught using SRSD will outperform those who are not in writing

H_0: Students who are taught using SRSD will not outperform those who are not in writing

FINDINGS AND DISCUSSION

Having all the procedures of data collection been carried out, the data summary of pretest and posttest can be seen below. Description that entails mean scores and standard deviation in each group is as follows.

Figure 3: Writing Pretest-posttest Scores Descriptive Statistics

	Writing Pretest		Writing Posttest	
Group	Mean	SD	Mean	SD
EXP	54.80	19.992	68.37	11.373
CTR	61.47	10.871	63.73	10.295
Total	58.13	16.305	66.05	11.006

From the above figure, the mean of control group pretest scores (61.47) is slightly higher than that of the experimental group (54.80) and the reverse occurs in the posttest where the mean score of the experimental group posttest (68.37) scores is higher. Therefore, the difference between pretest and posttest mean scores is quite evident. There is an increase of 13. 57 in the experimental group while the difference is 2.26 in the control group. We then used ANOVA to check whether the mean scores of pretests from both groups were equal or insignificantly different to ensure that these two groups started from the same level or basis. This can in turn be examined in the following figure for illustration.

Figure 4: Analysis of Variance on Pretest-posttest Scores

ANOVA

		df	F	Sig.
Pretest Scores	Between Groups	1	2.575	.114

	Within Groups	58		
	Total	59		
Posttest Scores	Between Groups	1	2.737	.103
	Within Groups	58		
	Total	59		

Figure 4 shows that there is no significant difference between mean scores of both groups (sig .114 > .05) thus both can be considered at the same level of ability and started from the equal basis. Therefore, in terms of writing performance in the pretest, both groups can be assumed to have similar ability. Unfortunately, insignificant mean difference is also found in the posttest scores in which the sig .103> .05 which obviously does not indicate the influence of teaching strategies under study. Consequently, we proceeded to the Analysis of Covariance. Nonetheless, this procedure can be carried out if one more assumption is met that is no interaction between group factor and the pretest (Widhiarso, 2010) or the so-called homogeneity of regression slopes (HOS) exists. The following figure examines the interaction between the two.

Figure 5 Checking the assumption of HOS

Tests of Between-Subjects Effects

Dependent Variable: Writing Posttest Scores

Source	df	F	Sig.
Corrected Model	3	59.787	.000
Intercept	1	60.528	.000
Group	1	33.854	.000
WritingPretest	1	161.681	.000
Group* WritingPretest	1	21.890	.000
Error	56		
Total	60		

Corrected Total	59

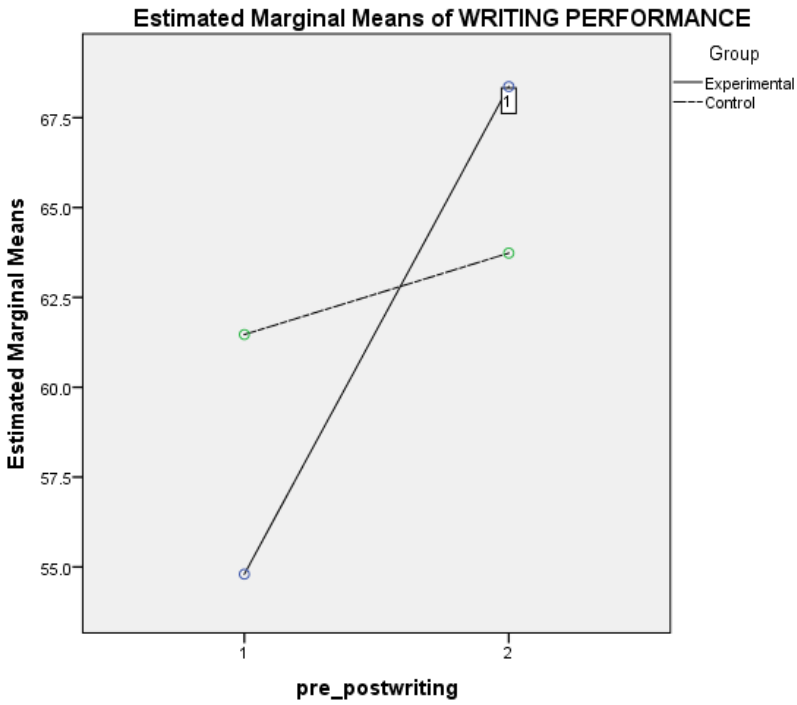
a. R Squared = .762 (Adjusted R Squared = .749)

In order to proceed to the selection of the statistic test, testing the prerequisites for Analysis of Covariance was necessary. As displayed from the figure above, with F=21.890 and $p<0.05$, it can be deduced that there was a significant interaction between the group category and the pretest. In other words, the ANCOVA assumption for homogeneity of regression slopes was violated, meaning that the regression slopes exhibited by the data were heterogenous. Therefore, two alternatives to ANCOVA can then be used: Analysis on gain scores or mixed-design ANOVA. (Widhiarso, 2011) recommends the mixed design instead of the gain scores analysis. Nonetheless in the analysis, we ignore the box plot result since the numbers of samples are equal for each group as well as overlook the Mauchly's test of sphericity since we only have two levels of repeated measures. In the analysis, the within group factor had two levels; the pretest and posttest on writing (time) and the between group factor is represented by the experimental and control group (treatment). In other words, the mixed ANOVA used 2x2 design in which repeated measures (pretest as well as postest) were analyzed with two independent group factors (control and experimental). We ran this procedure through repeated measures option in the general linear model (GLM) in SPSS.

The mixed ANOVA shows the sig. 0.00 is lower than the cut-off point 0.05 therefore implies significant difference between groups in terms of change of writing performance. The change in experimental group writing ability is significantly different from that of the control group although the effect size estimated by partial eta squared is just around 25 %, meaning that the magnitude of the effect is not really strong. Therefore, there is an interactional effect between the change of students' writings during the treatment with the groups. This is further confirmed by the plot below. Here in the plot, the two groups undergo similar tendency

of improvement. Nonetheless the slope in the experimental group is much greater that that of the control group. In other words, SRSD helps significantly escalate students' writing performance from pretest to posttest the way better than its process-based approach counterpart.

Figure 6: A Plot Describing the Change of Writing Performance between Groups



To sum up, students who were taught using SRSD outperformed those taught using process-based approach in terms of writing performance, meaning that Ha is accepted yet H0 is rejected. The result confirms and validates SRSD approach by Harris, et al (2013) as a strong proposal in the teaching of writing and is also in line with Eissa's (2009) findings.

Apart form the findings, our informal interviews with the students also revealed positive feedback. One of the most

compelling impressions the students showed was the more well-organized learning style they experienced which encouraged them to better self-regulate in different taught courses especially in the skill courses. More importantly, they showed a moved perception about writing from less appealing to more intriguing. Most of the students also felt the lessons were scaffolded to achieve their main objectives in the learning of writing which so far had been the most challenging task. For students who encountered problems with sentence elements, the teacher's role during SRSD-based teaching helped them a lot find their best way of overcoming the difficulties the faced.

During classroom sessions the students in experimental group had good time learning writing through self regulated strategy development by Harris et al (2013). In the beginning they were introduced to the topic of sentence writing. Afterwards, the teacher prompted their understanding on sentence by identifying its parts that included subject, verbs, and optional objects as well as complement. As predicted, most of the students were able to call out the main structure of a sentence. That was intended to activate their background knowledge. The structure of a sentence was then simplified into mnemonic device SVOC. At the next stage, the teacher discussed with the students about their own potential strategys, belief, and the problems that may hinder their progress in writing sentence. Specifically, the students' own potential writing strategy was encouraged by the teacher. One of the most important facets of self-regulation that was introduced to the students was setting learning goal; several students set their own writing goals such as being able to write at least ten sentences without mistakes or with minor mistakes. From this stage, it was also observed that several students mostly had problems with the grammar and the lexical choices of their writings. Nonetheless, the teacher did not provide prescribed ways of overcoming them. Rather, the teacher made use of the possible ways students already had in mind. Some students uncovered several possible own strategies they had, for instance, imitating well-written simple sentences in English, reading

a lot of sentences, and employing formulaic expresions that could be repeatedly used in writing.

Had the previous stages completed, the teacher modelled how to write a good sentence that involved the aspects of good writing. This involved the grammar, word choices, mechanics and the organization of their sentences. During this stage, the teacher also provided the students with information gap-filling activities to complete missing parts of sentences. Meanwhile, teacher also modelled how to self-regulate that entailed how to set one's own goal in a diary, monitor their progress and how to reflect on their own writings as well as what can be learned from the progress of writing they had made. There was interactive discussion with students abut whether what the teacher modelled could possibly be implemented by the students or they could adjust to the way they are comfortable with. To encourage the students to move to the next stage, the teacher asked them to memorize both the ways of writing strategies the teacher had modelled and the self-regulations strategies that they already arranged with the help of the teacher. To support the students, the teacher also presented visual aids by means of Powerpoint slides in which some pictures are displayed and the teacher brainstormed possible sentences that could be made from it. As this stage went, the support in the forms of visual aids also gradually faded guiding the students to the final stage of SRSD that is independent writing. During this stage, the students worked independently without strong monitoring from the teacher. They were rather led to check whether their progress had been close to the goal they had already set at the initial stage. Most the students revealed that the goals they set were realtively achieved. They were also guided and encouraged to carry out self-evaluation toward what they achieved.

IMPLICATIONS AND CONCLUSION

As can be drawn from the findings, it is obvious that SRSD is a strong proposal towards better writing quality. It was proved to be relatively better than other teaching approaches to writing, to the existing and widely used process-based-approach at the

research setting. From the teacher's real time observation, students also responded positively toward teacher's attempt of training them for self-regulating. Most students seemed to well cooperate and engaged with the teacher's instructions and explanations.

For future researcher, this approach might be examined further in terms of other language skills or students' cognition such as self-confidence, self-efficacy and be expanded to involve more subjects.

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