

Effects of Self-regulated Learning Strategies on Learning of English Language by Students of Eighth Grade

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Abstract

This was proposed to investigate the effect of self-regulated learning strategies on 8th class students' achievement for learning English. This was experimental research. Intact group (8th class students) pretest and posttest of design was utilized voluntarily for data collection. The experimental group was taught with SRL strategies and control group was taught with traditional strategy. The pre and post-administration results of group with intervention and control groups were compared to determine the use of SRL strategies had statistically significant effect on students' achievement to learn English. Independent sample t-test and paired sample t-test and Repeated Measures Analysis were employed for data analysis. The findings of this study revealed that SRL strategies had significant effect on students' achievement scores. In conclusion, research was suggested to examine the effect of SRL strategies on students' achievement on larger experimental population of various grades.

Key Words

Self-Regulated Learning,
Pow+Tree Writing
Strategy

Introduction

Self-regulated learning theories emphasized two things. Firstly, how learners select, organize, or create beneficial learning environments for themselves. Secondly, how learners plan and control the form and quantity of their own instruction (Zimmerman, 2010). In addition, an important predictor that is recognized for student academic achievement was the Self-regulated learning (SLR) strategy. Moreover, SRL strategy is actually a learning process which provides opportunity to the students in order to plan, monitor, and assess their learning independently (Zumbrum, Tadlock, & Roberts, 2011). Similarly, self-regulated learning is also defined as a process of management that is very beneficial and useful for students because it enables the learners to achieve their aims and goals. In other words, self-regulated learning strategy is indication to increase the knowledge and it is also indispensable for academic development and for achieving desired learning goals (Farah, 2017).

Students gained confidence while they adapt SRL strategies reflectively within recursive cycles of task analysis, use of strategy, and monitoring (Shuy & Ovae, 2010). In the same way, Boer, Bergstra, and Kostons (2012); Pedrosa, Cravino, Morgado, and Barreira, (2017) indicated about students' achievement which can be enhanced by use of self-regulated learning interventions. Likewise, the study of Sardareh, Saad, and Boroomand, (2012) revealed a strong relationship between Irani school students' academic achievement and the use of SRL strategies. In addition, achievement of fifth-grade science students was increased by use of SRL strategy in Tehran. As a result, it is suggested that the teacher should be equipped with SRL techniques in their in-service teacher training (Fatemeh, Masoud, & Elaheh, 2018). In the same way, another study in Romania claimed that if self-regulatory skills are developed then science students (1st year) and teachers will both get benefit by having more creative and fruitful learning experiences (Cazen, 2013). Correspondingly, results of the research revealed that university students' achievement was also effected by metacognitive self-regulation, time and study environment management skills, in Turkey (Ozan, Gundogdu, Bay, & Celken, 2012)

In line with previous studies, a quarter of Australian school teachers face difficulties in classrooms when they practice SRL strategy due to lack of resources, shortage of time, and student's behavior problems such as readiness for learning. So, this indicates a dire need for

teachers training on SRL instruction in early middle and primary schools (Harding, Nibali, English, Griffin, Graham, Alom, & Zhang, 2018).

Furthermore, the research found that the fourth year (EFL) Irani students much equipped with self-regulatory learning strategies in writing as compared to third-year students (Abadikhah, Aliyan, & Talebi, 2018). Likewise, it was pointed out by Ergen and Kanadli, (2016) that self-regulated learning strategies had a positive effect on students' academic achievement in schools of Turkey. Moreover, it is suggested that teachers should get a practice of SRL strategy in pre-service and in-service training in order to increase their students' performance.

Furthermore, the results of Goy's (2017) study also support the point of view of previous researches regarding teacher training in order to use SRL strategies. So, this strategy can be helpful for Turkish learners to improve their writing skills in schools. Consistently, findings of the study observed that those learners who are self-regulated showed better and longer performance in essay writing as compared to those learners who are less effective in China (Jingyan & Min, 2017). Likewise, Students learned process of self-regulation which included plan, draft, revise and self-evaluation. In addition to specific writing strategies, students learned strategies for self-regulation (MacArthur, Philippakos, & Ianetta, 2015). Similarly, all those students' who received SRL instructions, their essays were of better quality and better in quantity (Carlino, Gozur, Jozwik, & Krissinger, 2017).

Two elements are a very important base for effective SRL which are study routine and early habit-forming experiences in homework. Next, teachers were identified as the most common source of SRL strategies with important formative experiences occurring during the first two years of high school in Queensland (Effeney, Carroll, & Bahr, 2013). In addition, findings of Somaye, Tarlan, and Moslm (2015) indicated about fruitful results of instructing self - regulation learning strategies because it is helpful in decreasing the test anxiety and beneficial in increasing the self-confidence (in subjects of math and biology) among high schools students of Iran. In the same way, it was observed in Iran that EFL undergraduate learners (experimental group) performed significantly better in reading tests as compared to control group in Iran (Nejabatı, 2015).

Self-regulated learners develop independent musicianship, enhance confidence and musical competence, and they also increase motivation to practice in Florida (Meider, 2018). In the same way, another insight is provided by Kim, and Nor, (2019); Eissa (2009) SRL approach can improve the story writing abilities of school students with Autism disorder if special education teachers get training to effectively implement the strategy (Saddler, 2014). Other findings of research recommended that teachers can support EFL university learners in order to develop self-regulated strategies to improve their English writing scores in Japan (Gilbert, 2018). In line with previous studies, Self-regulated strategy development writing intervention can be an effective intervention strategy to improve writing and reading comprehension skills in children with hearing loss (Rice, 2017). Consistent with previous results, collaborative teaching in a computer hands-on learning environment is proved very helpful for Irani students to go for higher writing self-regulation (Pahlavani & Maftoon, 2008).

Objective

The objective of the study was to:

- Investigate the effect of self-regulated learning strategies (SRLS) on students' achievement for learning English at the elementary level

Null Hypotheses

The study was conducted to address following hypotheses:

- Ho1 Self-regulated learning strategies have no noteworthy effect on participants' achievement for learning English in elementary schools.
- Ho1.1 The difference is not notable in the test scores before the intervention and test scores after intervention in experimental group where intervention was given regarding achievement.
- Ho1.2 The difference is not notable in the test scores at the start of the experiment and test scores at the end of experiment of control group regarding achievement.
- Ho1.3 The difference is no notable in the means scores of the test at the start of experiment of both groups (experimental and control group) as concerned with achievement.
- Ho1.4 There difference is no notable in the means scores of test scores at the end of the experiment of both groups (experimental and control group) regarding achievement.
- Ho1.5 The difference is not noteworthy in the means scores of achievement tests (time1 up to time 4) during intervention of experimental group.

Research Design

The research design was purely quantitative in this study. A quasi-experimental design that was named in research books as pre-test post-test control group design (Mills & Gay, 2019) was applied in this study. An experimental group (intervention group) and a control group are included in this design.

Population and Sample of the Study

Sixty-two students of eighth grade studying in a voluntarily selected government school of Lahore were the population of this study. These students were studying into two sections namely, section A and section B (31 each intact classes). These two sections were randomly assigned as an experimental group for intervention and the other group was considered as control group.

Achievement Test

The achievement was measured by using subjective type test. Subjective test was scored by using the rubrics adapted from Punjab Examination Commission (PEC).

Experimental Procedure

The experiment was carried out for a period of four months after getting permission from the school headmistress. Both sections were randomly assigned as experimental and control groups. The researcher himself taught the experimental group and researcher attended the 1st period in school. Treatment was started in second week of the Month. On the first day, achievement test of essay writing was given as a pre-test to the students. In the first week of introduction, consent was taken from participants and the experimental group was introduced SRL strategies. At the end of the experiment that lasted 16 weeks the post-test was administered to the participants in both groups to determine the change in achievement.

Data Collection

The researcher conducted pre-test before starting the phase of intervention. Further, four writing samples were collected from students for four months by the researcher and every writing sample was collected after four weeks. Finally, after giving the intervention, post-test was administered.

Data Analysis

Statistical techniques included in this section are: Independent sample t-test that was applied the collected data for comparison of the mean scores of two groups (experimental group in which intervention was given and a control group without intervention). Furthermore, Paired sample t-test was also applied to the data collected during this experiment for comparison of scores obtained in achievement test before giving intervention and achievement test after intervention given to the experimental group. In addition, researcher has also used repeated measure ANOVA to analyze the achievement progression of students over the period of time.

Table 1. Comparison of Experimental Group's Pre-Test Post-Test Achievement Scores by Paired Sample T-Test

Groups	N	Mean	SD	t-value	df	p-value
Pre-test(Exp.)	31	4.1	1.806			
Post-test(Exp.)	31	7.3	1.395	-11.81	30	.000*

* $p < 0.05$

It is observed from above table 1 that at the p-value ($p = .000 < 0.05$) notable difference was found among the mean scores of experimental (intervention) group's pre-test (Mean=4.06) and post-test (Mean=7.29). It indicated students taught through SRL strategies having higher score than students taught through traditional methods.

Table 2. Comparison of Control Group's Pre-Test Post-Test Achievement Scores by Paired Sample T-Test

Groups	N	Mean	SD	t-value	df	p-value
Pre-test(Cont.)	31	2.32	1.222			
Post-test (Cont.)	31	1.87	.806	1.650	30	.109

* $p < 0.05$

It is evident from table 2 that at the p-value ($p = .000 < 0.05$), no notable difference was found among the control group's mean scores of pre-test (Mean=2.32) and post-test (Mean=1.87). It indicated that students were not taught through SRL strategies having same scores in pre-test and post-test regarding achievement.

Table 3. Comparison of Experimental and Control Groups' Pre-Test Achievement Scores by Independent Sample T-Test

Groups	N	Mean	SD	t-value	df	p-value
Experimental	31	4.06	1.806			
Control	31	2.32	1.222	4.448	60	.000*

* $p < 0.05$

Above table 3 revealed that at the p-value ($p = .000 < 0.05$), notable difference among the mean scores of the control group's pre-test (Mean=2.32) and experimental group's pre-test (Mean=4.06) was found. It indicated that students of both groups were not taught through SRL strategies having different scores in pre-test regarding achievement

Table 4. Comparison of Experimental Control Groups' Post-Test Achievement Scores by Independent Sample T-Test

Groups	N	Mean	SD	t-value	Df	p-value
Experimental	31	7.29	1.395			
Control	31	1.87	1.806	18.728	60	.000*

* $p < 0.05$

Above table 4 showed that at the p-value ($p = .000 < 0.05$), a notable difference among the mean scores of control group (Mean=1.87) and experimental group (Mean=7.29) was found. It was concluded that students were taught through SRL strategies having higher scores in the post-test as compared to control group students who taught through traditional methods.

Table 5. One-Way Repeated Measure Anova of Achievement Scores of Experimental Group at Four Times

Groups	N	Mean	SD	Wilk's Lambda	F	Df	p-value	Eta squared
Time1(pre-test)	31	4.06	1.806					
Time2(after one month)	31	6.06	1.365	.160	49.08	3.28	.000*	.840
Time3(after two months)	31	6.32	1.661					
Time4(post-test)	31	7.29	1.395					

* $p < 0.05$

Table 5 revealed results that a one-way repeated measure ANOVA was administered to make the comparison on scores of the essay writing achievement time1 (pre-test), time 2 (after one month), time 3 (after two months) and time 4 (post-test). Mean and the standard deviation is showed in table 1.5. There is a notable effect for time, Wilk's Lambda = .160, $F(3, 28) = 49.08$, $P < .000$, multivariate partial eta squared=.840. This showed that there was a change occurred scores across four different time periods. Partial eta squared .840 showed that there is a very large effect size among pre-test (time 1), test after one month (time 2), test after two months (time 3) and post-test (time 4).

Table 6. Post Hoc Test Results: Showing Mean Difference among Four Times Achievement Scores of Experimental Group Students

Achievement scores	Mean of difference	p
Time 1(pre-test) vs time 2 (after one month)	-2.00	0.00*
Time 1(pre-test) vs time 3 (after two months)	-2.25	0.00*
Time 1(pre-test) vs time 4 (post-test)	-3.22	0.00*
Time 2 (after one month) vs Time 3 (after two months)	-0.25	1.00
Time 2 (after one month) vs Time 4 (post-test)	-1.22	0.00*
Time 3 (after two months) vs Time 4 (post-test)	-0.96	0.00*

**p<0.05*

Table 6 showed the mean difference of students at four times regarding achievement scores of essay writing. We have a statistically significant difference regarding Time 1 (pre-test) between the mean differences of time 2 (after one month). The significance level is high as $p < 0.05$. More, there is also a statistically significant difference between time 1 (pre-test) and time 3 (after two months) and level of significance is high as $p < 0.05$. Further, we have also a found significant difference between the mean difference of time 1 (pre-test) and time 4 (post-test) significance level is high as $p < 0.05$. Furthermore, Time 2 (after one month) and time 4 (post-test) have significant difference and significant difference is high as $p < 0.05$. In addition, significant difference was found between the mean difference of Time 3 (after two months) and time 4 (post-test)

Discussion

This study was proposed to know the effect of self-regulated learning strategies on students' achievement for learning English. The results of the current study demonstrated that self-regulated learning strategy is found to be very effective on achievement (essay writing) of eighth grade students, in accordance with the previous studies (MacArthur, Philippakos, & Ianetta, 2015; Carlino, Gozur, Jozwik, & Krissinger, 2017; Abadikhah, Aliyan, & Talebi, 2018).

Our study supports the above mentioned findings of researches in literature in which fourth, fifth and middle-grade students had learned to write essay independently by use of self-regulated strategy development (SRSD) instruction. Likewise, another Malaysian study proved that SRSD instruction of writing strategies improved ESL students' writing achievement (Mastan, Maarof & Embi, 2017). In addition, EFL students revealed that SRL approach had a positive effect on the Irani students' writing skills (in writing accuracy and cohesion) (Eivazi, & Khoshnevis, 2016). Another research observed in its findings that seven grade students wrote quality and quantity oriented essays after receiving instruction through self-regulated learning approach (Scrivani, 2017). Similarly, findings of Michaels' (2013) study showed that SRSD based writing instruction had positive impact on English writing skills of students in Kuala Lumpur.

One of the important results reported by this study is that change which occurred in scores across four different time periods of experimental group students. This supports the findings of many studies Graham, Harris, Moran & Saddler, (2004); Bassouny, Dadour, Henaway, & Salem, (2012); Hilden & Pressley, (2006) that SRL strategy had a positive effect on students' achievement and writing performance and change in results of student's performance was also maintained over time. In addition, results of another study also revealed through Repeated Measure ANOVA that learners improved their quality of essay writing over time in high school (Burke, Burke, & Chalk, 2005; Anabela, 2014). Consistently, findings of Cramer, Datchuk, Kostewicz, Kubina, & Mason, 2013; Flander, (2014) in Repeated Measure ANOVA showed that the experimental group made significant improvements in their essay writing rather than control group.

Recommendations

In this study, SRL strategies improved the eighth-grade students' achievement in essay writing so these strategies might be used to improve students' achievement in essay writing on larger sample of various classes such as primary, secondary and higher secondary. In present study, positive change was observed in students' achievement scores who were taught through SRL strategies across four different time periods, so it is suggested that longitudinal study can be administered to observe the positive changes for long time at multiple grades (primary, elementary, secondary and higher secondary) in school.

Refereences

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