Exploring Students' online Self-Regulated Learning on writing skill at Pesantren Education

Imam Nur Aziz

Universitas Kiai Abdullah Faqih Gresik

imamnuraziz@gmail.com

Abstract

This study focuses on using an online SRL strategy to improve the writing skills of pesantren students. SRL strategy is used for learners to set a goal, plan, and integrate their learning independently. Data are collected from 131 university students of pesantren for 16 (sixteen) weeks. Two groups: experimental and control are the same duration, but only the experimental group receives the intervention. All groups get pre-and posttest writing as well as the SRL questionnaire. The findings demonstrate that when learners use SRL in writing skills on metacognitive, social behavior, and motivational control tactics, they are more engaged and driven. Furthermore, the SRL method can raise the level of linguistics.

Keywords: Self-regulated Learning, Pesantren Education, Online Learning, Academic Writing.

I. INTRODUCTION

Pesantren is a traditional religious education institution where all students live and study together in a dormitory under the guidance of a Kiai(Dhofier, 1980). Thus, Pesantren (Islamic boarding schools) only use face-to-face learning methods in classrooms and dormitories (Aziz, 2020). In the current pandemic era, every campus and educational institution uses new technology as a tool of teaching and learning (Twigg, 2003); it also happens in pesantren education. However, many public and Pesantren educational institutions are still stuck with the old procedures, where they only move offline learning to online (*Education 4.0: Trend Pembelejaran Dan Tantangannya*, 2021). Because it is reluctant to change from traditional pedagogical to online learning (Twigg, 2003), this situation forces them to switch to online learning.

Online learning has become a focus of research in education in recent years (Aziz, 2019). The term was first used in 1995 with the WEB system (Singh & Thurman, 2019) and developed (Bates, 2014) with Learning Management System (LMS) by uploading text and pdf online. After that, many online learning terms are used by educational institutions, such as e-learning, online education, mixed education, and online courses (Singh & Thurman, 2019). So that the online learning system is to distribute teaching materials via the internet (Mukhtar et al., 2020), or it can be said with web-based learning (Wirani & Manurung, 2020). Thus the explosion of information will continue to grow, demanding teachers and learners to be skilled and active in online learning.

Web-based learning requires students to become self-regulated learners. They must control, regulate learning activities, and monitor the results of their learning development independently (Kuo et al., 2021) to achieve learning objectives. Although self-regulated learners emphasize the learners' control and autonomy over the construction of their skills, interactive processes and the influence of others and the environment can influence the self-regulation process (Zimmerman, 1989). SRL is a reciprocal process between environmental factors, students' operations, and social cognition (Locke, 1987; Zimmerman, 1989). In addition,

academic factors such as learning objectives are no less important than social factors (Yu et al., 2020) because educational aspects directly affect the progress of independent learning. Consistent with this opinion, the presence of peers affects their online learning activities because they are motivated to participate in online learning to communicate with other individuals (Lin et al., 2016).

The notion of self-regulated learning (SRL) is based on self-efficacy and social cognition theory (Nilson, 2013). SRL understands learners' cognitive, motivational, and emotional aspects (Goudas et al., 2017; Panadero, 2017). Furthermore, it is for academic learning originating in educational psychology (Zimmerman et al., 1996; Zimmerman & Schunk, 2001, 2011b). SRL places a premium on self-generated learning objectives, self-adjusted learning activities, and self-evaluated learning outcomes (Dabbagh & Kitsantas, 2012; Zimmerman & Schunk, 2011b). These characteristics provide conditions that learners can learn wherever and whenever they want because they must be motivated and

become self-regulated learners (Sha et al., 2012). However, since it is contextually bound, the SRL process is dynamic (Duncan & McKeachie, 2005); when many new friends join online learning, their engagement rises, and vice versa.

SRL is essential in lifelong learning (Xiao & Yang, 2019) because it can build learner knowledge by managing the learning process and evaluating their learning outcomes. It describes learning that can learn with the goals they make even though many circumstances are detrimental to them (Zimmerman & Schunk, 2011a). Zimmerman writes about The economic, cultural, and linguistic challenges that Asian immigrants in the United States confronted with language barriers while achieving academic success (Zimmerman, 1998). Linguists have debated SRL as a wider self-construction than language acquisition strategies (Cohen, 2014; Dörnyei, 2014; Oxford, 2016). So that students can describe SRL as guiding their learning by setting goals, planning their learning so that goals are achieved, monitoring learning independently, finding and Using learning techniques independently to

solve issues in learning, and assessing learning outcomes independently. In addition, SRL also involves several processes, including independence (Benson, 2013; Cotterall, 2008; Hyland, 2015), learning strategies (Cohen, 2014; Griffiths, 2013; Oxford, 2016), metacognition (Anderson, 2008; Santelmann et al., 2018; Vandergrift & Goh, 2012), motivation (Dornyei, 2006; Dörnyei, 2014), and self-management (Rubin, 2001, 2005). Thus, SRL is the main competency in language learning, and teachers can encourage learners to acquire self-regulation abilities.

Research on SRL possesses proven its role in educational research (Zimmerman, 2013). Language teachers have recognized that Self-regulation is fundamental to foreign language acquisition to improve their language skills independently, oriented toward continuous education (Csizér & Tankó, 2017; Oxford & Schramm, 2007; Zhang et al., 2019). Other experts explain that effective self-regulated learning is a significant factor in improving foreign language learning in enhancing language learning objectives (Han & Hiver, 2018). As (Gu, 2010), in his

research explains that the ability of SRL plays a part in controlling the language instruction process. Although the study did not reveal clear instructions about SRL strategies, it can help language learners to develop independently, especially in writing material.

SRL-based Contextual learning techniques of writing are one of the essential roles for learners to regulate (Harris et al., 2011; MacArthur et al., 2015), and can complete their writing assignments independently toward learning objectives (Sophie & Jun, 2019; L. S. Teng & Zhang, 2018a). (Harris et al., 2011) explains that understanding and applying SRL strategies in learning to write will help students develop themselves as good writers. Self-Regulated Learning Strategy Development (SRSD) is often used in sociocognitive and SRL theories (Callan et al., 2021; Harris & Graham, 1996; Losinski et al., 2021; Peltier et al., 2021; Salas et al., 2020; Sophie & Jun, 2019). (Sophie & Jun, 2019) explains that SNSD consists of 6 (six) stages; development, activating background knowledge, discussing, modeling, memorizing, and supporting students to work

independently. Thus, the STAD model can help students improve cognitive abilities, develop learning independence, and improve students writing skills.

The ability to write is one of the subdomains of the language field where a learner must be able to involve the interaction between himself as a writer and a reader (Hyland, 2004; Paltridge, 2014). Writing is also a complex recursive process because a learner must be able to collect ideas, elaborate, compose, revise, edit a piece of writing, evaluate, and also control the purpose of their writing (L. S. Teng & Zhang, 2018a). The researcher has revealed that the success of writing objectives is dependent on the use of SRL methods that actively mobilize, guide, and maintain the learner's efforts in learning (Han & Hiver, 2018; L. S. Teng & Zhang, 2018b). SRL -based learning has been used in learning to write so that students can complete writing assignments by gathering lots of ideas and reflecting on themselves (Graham & Harris, 2014). (Harris et al., 2011) also explains that understanding and applying SRL strategies can develop students' competence in writing so that they can develop as good writers.

This research attempts to apply an online self-regulated learning strategy in learning academic writing for students who live at Pesantren. Several theoretical findings have revealed that SRL strategies can contribute to making good writers. Researchers believe that the SRL strategy plays an essential role in students being able to organize themselves when writing an article. In addition, the researcher also believes that these empirical findings can contribute to improving effective writing learning for foreign learners.

II. METHODS

RESEARCH DESIGN

The researcher uses a quasi-experimental design with an experiment and a control group to determine the online SRL strategy. It can increase students' academic writing abilities, regardless of whether there is a difference between students with high SRL levels and students with low SRL levels. Researchers intervened for 16 (sixteen) weeks by using SRL-based online learning. Before the intervention, the researcher administered a pretest and a posttest using the SRL questionnaire.

Researchers conducted research in Pesantren, Gresik, Indonesia, with a sample of 131 students. Previously, all students studied foreign languages and did not use online learning because they were required to live in pesantren with face-to-face learning. Since pandemics all students did online learning with the e-learning platform (Si-Oke). The participants are 46 (35%) were sophomore students, 45 (34%) were juniors, and 40 (31%) were seniors.

INSTRUMENTS

STRATEGIES FOR DEVELOPING THE SRL QUESTIONNAIRE

Writing Strategies for Self-regulated learning questionnaire (WSSRLQ) is used by researchers to evaluate the SRL method, which contains four evaluation components: cognition (text processing, knowledge rehearsal), metacognition (goal-oriented, idea planning), social behavior (feedback management, peer learning), and motivational regulation (self-motivation, interest enhancement, and emotional control) (L. I. N. S. Teng & Zhang, 2016). The SRL questionnaire has a Likert scale rating system ranging from very true to extremely false to very accurate by measuring the context of writing, specific writing assignments, and strategies students employ to evaluate SRL strategies in writing. The instrument's validity and reliability The Cronbach alpha approach was used to compute the measurements, which yielded a result of 0.899.

Table 1: Descriptive Statistics for writing strategies for an SRL questionnaire

SRL Aspect	WSSRLQ Subscale	Mean	Std. Deviation
Cognition	Text processing	17.6260	3.02893
	Knowledge rehearsal	10.1145	2.73339
Metacognition Social	Idea planning	12.5115	2.14607
	Goal-oriented monitoring	18.5802	4.64254
Social Behaviour	Peer learning	8.1603	1.50290
	Feedback handling	12.7939	3.04003
Motivational Regulation	Interest enhancement	14.6718	2.50980
	Motivational self-talk	26.8092	4.07075
	Emotional control	8.1527	2.50990
	Valid N (listwise)		

The researcher developed an SRL-based writing learning model with SRSD by modifying students' writing skills. The picture above explains that the

learning model with SRL includes activating students' initial abilities, discussion, modelling, memorizing, helping, and developing independently. The teaching strategy begins with the learner's motivation to activate their initial abilities/activation of the learner's knowledge through reviewing the writings they choose. Furthermore, learning uses the POW strategy (Pick the Idea, Organize the Idea, Write the Idea) and the TREE strategy (Topic, Reason, Ending, and Examining) (Harris et al., 2011). Thus, students can use POW and TREE strategies to identify structures in the essays they read. At this time, teachers can provoke students' thinking by asking critical questions. After that, the students discussed the SRL strategy so that they could plan, view new writing, set goals, and independently evaluate their writing.

Students are also encouraged to analyze their writing independently with instruments developed by teachers. All class activities are carried out to help students understand so that during the learning process, students can go around

to monitor the progress of individual students.

PROCEDURES

First, the researcher gave the WSSRLQ questionnaire to all participants to report the strategies they used. The questionnaire was given after the intervention to determine the effect of learning strategies in academic writing activities.

Before learning (research) begins, all academic writing lecturers are invited to conduct a Forum Group Discussion (FGD) so that they can use research instruments that researchers have made. The experimental group received treatment for eight weeks (once a week for 150 minutes). Both groups (experimental and control) received learning materials in the form of writing genres (narrative, exposition, essay, and argumentative) during the learning process. Researchers gave the same books and assignments to ensure their material comparability. The experimental group used the SRSD model of the SRL learning strategy.

ANALYZING OF DATA

The researcher ensures that the research data is normally distributed. An analysis can be carried out directly using statistics to compute the difference between pretest and posttest scores. Researchers used a t-test to determine the acquisition of writing scores between groups (experiment and control....

III. FINDINGS

DIFFERENCES IN PRE-POST TEST RESULTS BETWEEN THE EXPERIMENTAL AND CONTROL GROUPS

The experimental group's academic writing learning scores had a standard deviation of 5.97492. The control group comes in dead last with an average score of 49.5507 and a standard deviation of 6.38826. The experimental group's posttest academic writing score is 82.0645, with a standard deviation of 7.15833. The control group's average score is 75.8551, with a standard deviation of 8.64543.

According to the data in the table, the independent sample t-test test results show that the academic writing learning outcomes obtained a t-count of 0.593 with a significance of 0.554 greater than 0.05, which indicates that the group did not experience a significant difference. Meanwhile, after the intervention, the t-count value of the posttest of academic writing learning outcomes was 4.448 > 0.05) with a significance of 0.000, so It is possible to infer that there is no statistically significant difference between the two groups.

PRE-POSTTEST OUTCOMES DIFFERED BETWEEN THE EXPERIMENTAL AND CONTROL GROUPS USING SRL

According to the result, the independent sample t-test before a therapy based on SRL ability revealed that the academic writing learning outcomes obtained t-count -.850 with a significance of 0.397, more diminutive than 0.05, indicating that the group experienced significant differences. Posttest data after the intervention showed a t-count value of 4.493 > 0.05) with a significance of 0.000, so It is possible to infer that there is no statistically significant difference between the two groups.

IV.

V.

DESCRIPTIVE STATISTIC OF SRL STRATEGY

The table describes the descriptive pre-post test results of the SRL strategy after the intervention. It is used to determine the different dimensions between groups.

COGNITIVE STRATEGY

The findings of descriptive statistics on text processing skills have improved—the experimental group score 19.8387 on the pretest and 20.1935 on the posttest. On the other hand, the control group scored 18.7246 on the pretest and 18.1449 on the posttest. According to the statistics, there is no substantial rise in the control group.

The following capacity in cognitive strategy is knowledge rehearsal. According to the data, the experimental group has a pretest score of 12.3871 and a posttest score of 11.3065. Because of this, the experimental group's capacity to rehearse knowledge is not enhanced. However, the control group scored 11.7971 on the pretest and 12.7536 on the posttest.

METACOGNITIVE SOCIAL STRATEGY

The experimental and control groups show no difference in their ability to layout ideas using descriptive analysis. Experimenters achieve posttest scores of 9.0645 and 9.5000. Pretest scores for the control group are 9.5507 and 9.1304, respectively. The value in the control group does not only not rise, but it also tends to fall.

The ability for goal-oriented monitoring does not increase in terms of concept planning. The experimental group's pretest and posttest scores for this skill are 16.9677 and 16.8710. On the other hand, the control group scored 16.9565 on the pretest and 17.2899 on the posttest.

SOCIAL BEHAVIOR STRATEGY

The following analysis is a social behavior strategy, and students experience an increase in peer learning abilities after the intervention. Students get the average value when the pretest is 9.5645, and the posttest is 10.1452 for the experimental group. At the same time, the control group got a pretest score of 10.1594 and a posttest score of 9.7101. So, It is possible to infer that there is no

statistically significant rise for the control group.

There is no substantial increase in students' capacity to handle feedback in experimental and control groups. The control group scored 14.4032 on the pretest and 14.5645 on the posttest. On the other hand, the control group has a pre-and posttest scores of 14.8551 and 14.8406, respectively.

MOTIVATIONAL REGULATION STRATEGY

It is found that students receive a pre-and posttest scores of 15.9516 and 16.6935, respectively, for interest enhancement. The control group's pretest and posttest scores are 16.2754 and 17.5797, respectively. In both the experimental and control groups, there is a significant increase.

Data on students' motivating self-talk ability revealed a substantial improvement in the experimental and control groups. The experimental group gets posttest pretest scores of 28.3387 and 30.2742. In contrast, the control group's average score is 29,0000 for the pretest, and the posttest score is 30.3188.

The experimental group's descriptive analysis of emotional regulation capacity receives an average score of 9.0645 in the pretest and 10.0968 in the posttest. The control group has a pretest score of 9.1304 and a posttest score of 10.1304. According to the results, there is a considerable rise in both the experimental and control groups of pupils.

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VI. DISCUSSION

ENHANCING PROBLEM-SOLVING METHODS TOWARDS STUDENT'S COMPUTATIONAL THINKING SKILL IN DESCRIPTIVE WRITING

This study explains the SRL learning strategy on writing skills for students in Islamic boarding schools during the pandemic with an online learning model for 16 (sixteen) weeks. Overall, the experimental group experienced a significant increase even though there was no improvement in some abilities. So, students in the experimental group show that they tend to be independent learners who can look for suitable strategies to improve their abilities after special treatment.

Overall, the experimental group outperformed the control group. According to the average pretest and posttest scores, this has a positive impact on writing learning outcomes (Goudas et al., 2017; Sophie & Jun, 2019; Winne, 2017). The self-regulated learning (SRL) strategy increases students' self-awareness so that they can control writing during the writing process to get maximum results. In addition, students can also use writing methods suitable for students.

The researcher also revealed that it would produce good results with the help throughout the learning process of pupils. The difference between the two groups indicates that learners need to use the SRL strategy to create a positive effect. In addition, researchers also suggest that students consider the linguistic aspect in implementing SRL strategies in writing skills because the results found by the researcher's pretest findings influence posttest outcomes.

Overall, there was no significant difference between the experimental and control groups in the influence of SRL on the cognitive component. The average pretest and posttest scores increased in both groups. The growth is in the use of test processing and Knowledge rehearsal. Thus the researcher concludes that with the SRL strategy, students can improve their strategy on text processing to produce better text.

Significant disparities exist in concept preparation and goal-oriented monitoring incorporated in the capacity of metacognitive methods. Learners in the experimental group did not experience an increase in their idea planning ability even though they received an intervention for 16 (sixteen) weeks. They seemed to have decreased from the average value of the pretest and posttest. As a result, the experimental and control groups did not use metacognitive strategies in generating their ideas before writing. However, the ability of Goal-oriented monitoring experienced a significant increase in both groups (experimental and control). It demonstrates that the use of metacognitive strategies can improve their understanding in completing

writing targets; in line with previous research, which empirically proves that this strategy can encourage and enhance students' understanding (Alamri, 2018; Al-Jarrah et al., 2019; Cer, 2019; Qin & Zhang, 2019; F. Teng, 2019).

Learners can increase social interaction with their friends while completing writing assignments. Thus, it is understandable that the experimental group received preferential treatment to help students interact with their friends. From what has been explained (Zimmerman & Schunk, 2011b), peer interaction contributes to building their learning environment. Thus, it can be concluded that social roles can encourage students to use SRL strategies. While the feedback handling ability of students did not increase significantly, these results tended to decrease.

After the intervention, students experienced a significant improvement in motivational regulation strategies, and they were able to leave negative emotions during the writing process. This study indicates that students who use the SRL strategy in writing will motivate to complete writing

assignments by interacting or collaboratively with their peers. In line with (F. Teng, 2019), who explained that the SRL strategy could encourage students to write assignments.

Except for their metacognitive abilities and social conduct, the students' writing capabilities employing online SRL tactics are considerably enhanced. This occurs because online learning is extremely dynamic (Bailey & Lee, 2020), and it differs from face-to-face learning, which students have traditionally done. As a consequence, it is probable that students in online learning will become more motivated as a result of the outcomes of the motivating technique. Our results supported by (Xu, 2021), by revealing that more students utilize SRL strategy and fewer employ Social behavior strategies. Furthermore, our data show that students are less likely to apply metacognitive methods. This helps the author comprehend that the feedback from this study indicates that instructors may blend online and offline learning approaches to improve the quality of student writing.

Because students prefer the feedback learning model, this study has ramifications for Islamic boarding school education (Pesantren), as they may utilize the online SRL strategy as a supplement in writing in post-COVID-19. Furthermore, supporting instructors must present more explicit examples of the application of SRL in learning, particularly writing content. Furthermore, lecturers must pay attention to each student while assessing themselves and their peers. This is true for online instruction during COVID-19, when students struggle to connect with one another via the internet. Finally, given the research site is a semi-modern Islamic boarding school, the study's shortcomings must be addressed.

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VII. CONCLUSION

The researcher tested the impact of the SRL learning strategy on the writing ability of Foreign Language students who had been in Islamic boarding schools. Online learning is taboo for students living in Islamic boarding schools, and during the pandemic, all educational institutions under the auspices of Pesantren must conduct online learning. This study shows that special treatment for the experimental group positively affects students. In some abilities, there is no increase, and there is a decrease, but overall it has a positive effect. These results encourage students to be proactive in promoting writing skills. The SRL learning strategy assumes that humans are social beings who can collaborate to achieve maximum results.

Researchers suggest that students can integrate SRL strategies with learning to write so that students can determine writing strategies and can evaluate independently. The results provide that SRL strategies in teaching should consider individual differences. So that students can diagnose the use of the SRL strategy with the student's condition. It is intended that students can improve writing skills and increase motivation in learning. In addition, a learner must always carry out and find multi-dimensional learning strategies to integrate the learner's regulation and motivation. Further research is expected to be able to apply writing learning using

other dimensions in SRL so that students become independent learners about motivational regulation techniques for the development of self-regulated writers. The teaching only addressed four distinct SRL approaches in the cognitive, metacognitive, and social behavioral parts, leaving out motivational regulation strategies, which are an integral part of the SRL process. The SRL strategy-based writing instruction was effective in raising students' awareness of the effectiveness of SRL strategies from a multidimensional perspective, better understanding the breadth of the SRL strategy repertoire, developing positive writing self-regulated learning, and enhancing their writing performance despite these limitations..

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