

THE EFFECT OF SELF-REGULATED LEARNING STRATEGY ON WRITING QUALITY OF UNIVERSITY STUDENTS HAVING DIFFERENT COGNITIVE STYLES

by

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Abstract:

Writing skills are still considered difficult and complex to master by second and foreign language students. Hence, students need to have a good self-regulated learning (SRL) strategy to enhance their writing quality. Furthermore, different types of students' cognitive styles may influence the effect of the SRL strategy used by the students in writing. This article aims to investigate the effect of SRL strategy on the writing quality of students with different cognitive styles. By employing an ex post facto research design, thirty-nine English students joined this study. Direct writing test, SRL questionnaire, and Group Embedded Figure Test (GEFT) were used to collect the data, and simultaneous regression was used to analyze the data. The findings indicate that students' SRL levels and cognitive styles vary, which in turn affect their writing quality. However, the result of the simultaneous regression calculation (0.384) was higher than the significance level (0.05). It means that there was no significant effect of the SRL strategy on the writing quality of students having different cognitive styles simultaneously. Those variables may affect students' writing quality independently. The implication is that EFL instructors should consider individual learner factors independently rather than assuming interaction between SRL and cognitive styles.

Keywords: *writing quality, self-regulated learning strategy, cognitive style*

Abstrak:

Ketrampilan menulis dianggap sebagai ketrampilan yang sulit dan kompleks untuk dikuasai oleh pembelajar bahasa kedua dan asing. Sehingga, pembelajar perlu mempunyai strategi pembelajaran mandiri yang baik untuk meningkatkan kualitas tulisan mereka. Bahkan, tipe gaya berpikir yang berbeda mungkin mempengaruhi efek strategi pembelajaran mandiri yang diterapkan oleh pembelajar dalam menulis. Penelitian ini bertujuan untuk menginvestigasi pengaruh strategi pembelajaran mandiri terhadap kualitas tulisan mahasiswa dengan gaya kognitif yang berbeda. Dengan menggunakan desain penelitian ex post facto, 39 pembelajar bahasa Inggris mengikuti penelitian ini. Tes menulis secara langsung, angket pembelajar mandiri, dan GEFT digunakan untuk mengumpulkan data dan regresi simultan digunakan untuk menganalisis data. Hasil penelitian menunjukkan bahwa pembelajar yang

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memiliki level pembelajaran mandiri yang berbeda, dan tipe gaya berpikir yang berbeda mempunyai kualitas tulisan yang berbeda. Namun, berdasarkan hasil penghitungan regresi simultan, nilai signifikansi yang diperoleh (0.384) lebih besar dari level signifikansi 0.05. Artinya, tidak ada pengaruh strategi penbelaran mandiri yang signifikan terhadap kualitas menulis siswa yang memiliki gaya berpikir yang berbeda secara bersamaan. Variabel-variabel tersebut mungkin mempengaruhi kualitas menulis siswa secara mandiri. Implikasinya bahwa instruktur EFL perlu mempertimbangkan faktor perbedaan individu setiap pembelajar daripada mengasumsikan interaksi antara strategi pembelajaran mandiri dan gaya belajar.

Kata kunci: *kualitas tulisan, strategi pembelajaran mandiri, gaya kognitif*

INTRODUCTION

Writing is a productive skill that is not easy for students to master. It requires a higher level of productive language control compared to the other language skills (Styati & Rodliyah, 2021). It needs a sufficient level of students' linguistic competence. Writing is a complex skill that university students must master. The complexity of writing skill begins when the writer first thinks of the topic and continues until the final product is produced. This process becomes more challenging in second/foreign language writing (Gibriel, 2019). The differences between the first and second/foreign language become barriers for students in mastering writing skills. Therefore, writing skills are still considered difficult to master for Indonesian students (Muth'im, 2010; Wahyuni, 2018; Widiati, U., & Cahyono, B.Y., 2006).

In foreign language contexts, numerous studies (Flores & Lopez, 2019; Javid, Farooq, & Umer, 2013; Umamah et al., 2019; Wahyuni, 2014) have investigated writing difficulties among Saudi EFL learners. They found that the students often encounter difficulties in lexical, organizational, and grammatical areas. Then Wahyuni also found that EFL students face difficulties in choosing the appropriate words and in formulating grammatical sentences (Wahyuni, 2014). Furthermore, Flores and Lopez found that English foreign language (EFL) students face difficulties in writing because of insufficient vocabulary, lack of English proficiency, poor reading skills, and source ability (Flores & Lopez, 2019). In line with previous studies, Umamah et al. also found similar findings (Umamah et al., 2019). They conducted a study in an Indonesian context. They found that Indonesian students often face writing problems in content, organization, grammar, mechanics, and style.

Given the complexity and difficulty of EFL writing, students require effective self-regulated learning strategies (SRLS) to improve their writing quality. SRLS in writing is the use of the writer's self-initiated thought, feelings, and actions to attain various goals of

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literary, to improve their writing skills, and to enhance their writing quality (Zimmerman & Risemberg, 1997). It consists of six dimensions, namely motive, method, time, performance, physical environment, and social environment (Zimmerman and Bandura, 1994 as cited in Andrade & Bunker, 2009). Self-regulation is the replacement term for language learning strategies (LLS) proposed by Dörnyei (2005, as cited in Mizumoto, 2018). It is the application of metacognitive strategies. Self-regulation is the skill to manage, regulate, direct, and guide learning through planning, monitoring, and evaluation (Wenden, 1998, cited in Umamah & Cahyono, 2020). Based on Bandura's social cognitive theory (as cited by Abadikhah et al., 2018), self-regulated learning consists of three aspects. Those are personal (cognition and emotion), behavioral, and environmental aspects. The effect of those aspects on writing quality is still a concern for many researchers.

EFL students tend to use self-regulated writing strategies (SRWS) at a moderate to high level, and more proficient students tend to use SRW strategies more frequently than the less proficient students (Abadikhah et al., 2018). Furthermore, Gibriel found that students' writing strategies have an impact on their writing achievement; therefore, teacher needs to help students in enhancing their writing strategies (Gibriel, 2019). In addition, Umamah and Cahyono also conducted a study on investigating self-regulated writing (SRW) strategies of university students in writing expository essays. They found that EFL students frequently use self-regulated writing (SRW) strategies in their writing process. All of the dimensions of self-regulated writing strategies are used by EFL students when they write (Umamah & Cahyono, 2020). The students who have good self-regulated learning tend to have good awareness of knowledge quality, beliefs, motivation, and cognitive processing (Butler & Winne, 1995; Umamah & Cahyono, 2020). Therefore, different types of students' cognitive styles may influence the self-regulated learning (SRL) strategy used by the students in writing.

Previous studies have focused on self-regulated learning and writing skills. However, few have examined the simultaneous effect of SRL and cognitive styles on writing quality in early-semester EFL learners. The present study then investigates the effect of the SRL strategy on the writing of students with different cognitive styles. Cognitive style is the preferred way in which individuals process information or approach a task (Larsen-Freeman & Long, 1991, as cited in Wahyuni, 2017). It is divided into two: field-dependent and field-

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independent. Field-dependent students tend to work in groups and require extrinsic motivation. In contrast, field-independent students prefer to work individually and are intrinsically motivated (Ellis, 1993). The research questions of this study are formulated as follows:

1. Does the SRL strategy affect the writing quality of students with different cognitive styles?
2. Do field independent (FI) students with high self-regulated learning (HSRL) have better writing quality than field dependent (FI) students with HSRL?
3. Do field-independent students with moderate SRL have better writing quality than field-dependent students with moderate SRL?
4. Do field-independent students with low SRL have better writing quality than field-dependent students with low SRL?

METHOD

Design

This study aims to investigate how the writing quality of students with different cognitive types is affected by self-regulated learning (SRL) strategies. To reach this purpose, an ex post facto research design is employed. This design is chosen since the researcher cannot manipulate the independent variables. In ex post facto research designs, the researcher does not have control over the independent variable and is unable to randomly allocate the research subjects to various groups (Lammers & Badia, 2005); it explores problems or conditions after the fact.

In this type of study, the researcher has limited control over the independent variable because it is usually a life event or a life experience of the participant that cannot be manipulated. The purpose of using this study is to determine the cause-and-effect relationship between two or more variables (Gay, Mills & Airasian, 2011).

There are three variables in the present study: independent, dependent, and moderator variables. The independent variable of this study is the students' self-regulated learning (SRL) strategy in writing. It is divided into high, moderate, and low levels. Then the dependent

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variable is the students' writing quality on a descriptive essay. The last is students' cognitive styles as the moderator variable. The design of this study is presented in Table 1.

Table 1 Research design

<i>Cognitive styles</i>	<i>Self-Regulated Learning (SRL) Strategy</i>		
	<i>HSRL</i>	<i>MSRL</i>	<i>LSRL</i>
<i>Field Independent (FI)</i>	<i>WQ</i>	<i>WQ</i>	<i>WQ</i>
<i>Field Dependent (FD)</i>	<i>WQ</i>	<i>WQ</i>	<i>WQ</i>

Notes:

- HSRL : High Self-Regulated Learning
- MSRL : Moderate Self-Regulated Learning
- LSRL : Low Self-Regulated Learning
- WQ : Writing Quality

Participant

The participants of this study are forty-five English students from the State Islamic Institute (IAIN) of Kediri. They are in the second semester. However, only thirty-nine students filled the instruments. The students are taking a Paragraph and Essay Writing course that focuses on writing various types of paragraphs and essays, including descriptive, report, and recount. This course has four credits with twice-weekly meetings. They are at the intermediate level of writing skill.

Instrument

Three research instruments are used in this study: the Self-Regulated Learning Strategy Questionnaire (SRLSQ), a writing test to assess students' writing quality, and the Group Embedded Figure Test (GEFT) to evaluate students' cognitive styles. SRLSQ was adopted from Abadikhah et al. (2018) to collect the data on students' self-regulated learning strategies used (Abadikhah et al., 2018). SRLSQ consists of six dimensions (motive, method, time, performance, physical environment, and social environment).

The blueprint of the questionnaire is presented in Table 2. It consists of sixty (60) items with a 5-point Likert scale from never (1) to always (5). The questionnaire is ready to use and has a high reliability level (0.95).

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Table 2. The blueprint of the questionnaire

<i>Dimensions</i>	<i>Scales</i>	<i>Items</i>
<i>Motive</i>	<i>Goal-setting, self-efficacy</i>	<i>1,2,9,10,17, 18,25,26,33,34, 39. 44, 51, 60</i>
<i>Method</i>	<i>Task strategies</i>	<i>8,16,24,32, 38,43,50,53,56,58</i>
<i>Time</i>	<i>Time-management</i>	<i>7,15,23,31, 37,42,49,54</i>
<i>Performance</i>	<i>Self-evaluation, self-consequence</i>	<i>3,5,11,13,19, 21,27, 29, 35, 40,45, 46, 47, 52, 55, 57, 59</i>
<i>Physical Environment</i>	<i>Environmental structuring</i>	<i>6,14,22,30,41</i>
<i>Social environment</i>	<i>Help-seeking</i>	<i>4,12,20,28, 36,48</i>

The writing test then asks students to write a descriptive essay. In the writing prompt, students are asked to choose one of the provided topics (describing a place, a person, or a thing) and write an approximately 500-word piece. The last instrument used in this study was the Group Embedded Figure Test (GEFT). For practical reasons, since determining the type of students' cognitive style was beyond the researcher's field of study, the ready-for-use test designed by Witkin et al. was adopted (Witkin et al., 1981). GEFT aimed at gathering data concerning the students' cognitive styles by measuring the students' ability to find a simple form hidden in a complex figure. This test, developed by Witkin in the English language, was translated into Indonesian by Degeng, a lecturer at the Graduate School of Teknologi Pembelajaran at the State University of Malang. It is a standardized test that has been used as a reliable instrument in measuring the students' Cognitive styles. The classification of cognitive style used in this study was based on Witkin and Goodenough's classification. They classified the students' cognitive style into field-dependent and field-independent students.

GEFT consisted of three sequence phases. The first phase was an exercise for students to take the test. In this phase, the students were asked to find simple forms in seven complex figures. The time allotted for this test was two minutes. Since it was the exercise phase, the results were not used in scoring the students' cognitive styles. The second and third phases were the original tests to measure the students' cognitive styles. In the second phase, the students were asked to find simple forms in nine complex figures. The time allotted for this test was ninety-three minutes. Similar to the second phase, in the third phase, the students

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were asked to find simple forms in nine complex figures in ninety minutes. Thus, the total test items were eighteen.

Some considerations of choosing this test as the instrument of this study were as follows. First, this test provided an exercise for students before the original test, so they were familiar with and expected to be able to do the test. Next, the time allotted for this test was short, requiring only nineteen minutes. Then, the administration of this test was easy since it did not require specific skills. Last, the test was valid and reliable in measuring the students' cognitive style since it had been tested (Fatirul, 2012; Tegeh, 2009).

Data collecting technique

In collecting the data, the researcher conducted several steps. The first step was to distribute SRLSQ to the students to collect data on their self-regulated learning strategies in writing. The questionnaire was distributed through Google Forms and sent to students via an instant messaging group. They did the questionnaire during the class meeting. The next step was to distribute GEFT to the students to collect data on their cognitive styles. In this test, the students are asked to find a simple form hidden in a complex figure. The last task was asking the students to take a writing test. In the writing test, the students were asked to write a descriptive essay about describing a person, a place, or a thing with a length of approximately 500 words.

Data analysis technique

The data collected from the questionnaire were analyzed using descriptive statistics in SPSS. The analysis of the average score for each dimension and its constituent items was completed. The classification of the self-regulated learning strategy level is presented in Table 3.3. It is based on Oxford's classification (Umamah & Cahyono, 2020).

Table 3: The Classification of the SRLS level

<i>Level</i>	<i>Mean Score</i>
<i>High</i>	<i>3.45 – 5.00</i>
<i>Moderate</i>	<i>2.45 – 3.44</i>
<i>Low</i>	<i>1.00 – 2.44</i>

The data of students' writing products were scored by an analytical scoring rubric adopted from Jacob (1981) consisting of 5 components (content, organization, vocabulary,

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language use, and mechanics). Then, for the GEFT, each proper response received a score of 1, and each wrong response received a score of 0. This test had a total score of eighteen points. Students with scores between 0 and 9 were classified as having a field-dependent learning style. Additionally, students with scores between 10 and 18 were classified as having a cognitive style that was more field independent. Next, to answer the research questions, all the data were analyzed by using simultaneous regression.

RESULT AND DISCUSSION

Result

The result of this research is divided into four parts. These results include the findings from the self-regulated learning strategy questionnaire, the group embedded figure test, the writing test, and the hypothesis testing result.

1. The result of the SRLS questionnaire

The SRLS questionnaire was administered to students to collect data on their self-regulated learning level. The descriptive statistics of SRLSQ are presented in Table 4.

Table 4: Descriptive Statistics

	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
<i>Self-regulated</i>	39	145	258	195.69	27.414
<i>Valid N (listwise)</i>	39				

From Table 4, it can be seen that the minimum score of the whole questionnaire item score is 145, and the maximum score is 258. The frequency of the self-regulated learning level is presented in Table 2.

Table 5: The classification of SRLS questionnaire result

<i>No</i>	<i>SRL Level</i>	<i>Frequency</i>	<i>Percentage (%)</i>
1.	<i>High</i>	12	30.8
2.	<i>Moderate</i>	26	66.7
3.	<i>Low</i>	1	2.5
	<i>Total</i>	39	100 %

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Table 5 shows that many participants have a moderate level of SRL (26 students or 66%) in writing. Then it is followed by a high level of SRL (12 students or 30.8%). The last is a low level of SRL (only 1 student or 2.5%). This finding shows that university-level students tend to have a good to excellent level of SRLS in writing.

2. The result of GEFT

In GEFT, the students were asked to find a simple form hidden in a complex figure. The descriptive statistics of the test are presented in Table 6.

Table 6: Descriptive statistics of group embedded figure test result

	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>SD</i>
<i>GEFT</i>	39	1	17	12.05	5.196
<i>Valid N (listwise)</i>	39				

Table 6 shows that 39 students are completing the Group Embedded Figure Test. The minimum score of GEFT is 1, and the maximum score is 17. As mentioned previously, the students' cognitive style is categorized into field independent if the score obtained is 10-18, and is categorized into field dependent if the score obtained is 1-9. Based on the criteria, the result of the Group Embedded Figure Test classification is presented in Table 7.

Table 7: The classification of group embedded figure test results

<i>No</i>	<i>GEFT Classification</i>	<i>Frequency</i>	<i>Percentage (%)</i>
1.	<i>Field Independent</i>	28	71.79
2.	<i>Field Dependent</i>	11	28.21
	<i>Total</i>	39	100

According to Table 7, 28 students (71.79%) are categorized into the field-independent cognitive style. Then, 11 students are categorized into field-dependent students (18.21%). Therefore, it can be said that almost all students have a field-independent cognitive style.

3. The result of the writing test

A direct writing test was administered to the students to gather data on their writing quality. In this test, the students were asked to write a descriptive essay with a length of approximately 500 words. Then the students' writing products were scored by using an

analytical scoring rubric. The descriptive statistics of the writing test results are presented in Table 8.

Table 8: Descriptive statistics of writing test results

<i>Writing components</i>	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>
<i>C</i>	39	17	28	21.77	3.773
<i>O</i>	39	10	20	14.28	3.086
<i>V</i>	39	10	20	13.97	2.570
<i>LU</i>	39	10	22	16.49	3.085
<i>M</i>	39	2	5	3.28	.560
<i>Total</i>	39	50	92	69.79	11.877
<i>Valid N (listwise)</i>	39				

Table 8 presents the descriptive statistics analysis results of the writing test for each component of writing quality. From the table, it can be seen that the minimum and maximum scores for each component are. In terms of content, the mean score is 21.77, which is categorized as a reasonable level. Similarly, the mean scores for the organization and vocabulary components are 14.28 and 13.97, respectively, both of which are categorized as good. Unlike the previous components, the language use and mechanics components are at a fair level, with mean scores of 16.49 for language use and 3.28 for mechanics. Then the descriptive statistics of writing score based on SRL level are presented in Table 8.

Table 8: The descriptive statistics of students' writing scores based on their SRL level

<i>SRL Level</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Sum</i>	<i>Mean</i>	<i>SD</i>
<i>High</i>	12	50	82	795	66.25	10.402
<i>Moderate</i>	26	52	92	1835	70.58	11.850
<i>Low</i>	1	92	92	92	92.00	.
<i>Valid N (listwise)</i>	1					

Table 8 shows that the high level of students' self-regulated learning achieves a lower mean score than the moderate and low levels of students' self-regulated learning. The mean score for high-level students' self-regulated learning was 66.25, and the mean score for moderate-level students' self-regulated learning was 70.58. In contrast, the low level of students' self-regulated learning achieves a score of 92. This result contradicted the researcher's assumption that higher levels of students' self-regulated learning would correspond to better writing scores. The summary result is presented in Table 9.

Table 9: The descriptive statistics of students' writing scores based on their cognitive styles

<i>Cognitive Style</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Sum</i>	<i>Mean</i>	<i>SD</i>
<i>Field Independent</i>	28	50	92	2001	71.46	13.000
<i>Field Dependent</i>	11	52	80	721	65.55	7.216
<i>Valid N (listwise)</i>	11					

Table 9 presents a significant difference in mean scores between field-independent and field-dependent students. Field-independent students tended to have better writing scores than field-dependent students. They achieved a mean score of 71.46, and the field-dependent students achieved a mean score of 65.55. In terms of standard deviation, the field-dependent students tended to be smaller than the field-independent students. It means that the field-dependent students' writing scores were more homogeneous than the field-independent students' writing scores.

4. The result of hypothesis testing

Before testing the hypothesis, the normal distribution of the data was tested. The data normality testing criteria in this research used the general level of significance in the Kolmogorov-Smirnov scale (Dörnyei, 2011). The data distribution was normal if Sig. \geq .05. The summary of data normality testing results is presented in Table 10.

Table 10: Tests of normality

	<i>Group GEFT</i>	<i>Kolmogorov-Smirnov^a</i>		
		<i>Statistic</i>	<i>df</i>	<i>Sig.</i>
<i>Writing Skill</i>	<i>Field Independent</i>	.155	28	.084
	<i>Field Dependent</i>	.185	11	.200*
<i>Self-Regulated</i>	<i>Field Independent</i>	.137	28	.194
	<i>Field Dependent</i>	.152	11	.200*

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

From Table 10, it can be seen that the top value was .200, and the lowest value was .084. All of the values were above the Kolmogorov-Smirnov level of significance (.05), indicating that the data were normally distributed. Stated differently, every piece of data

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generated by the samples resembled a bell-shaped curve. The data met the requirements to be used for evaluating the hypotheses using the parametric test since the data distributions were normal. Therefore, simultaneous regression data analysis was used to test the first hypothesis.

As presented previously, the first hypothesis of this study is as follows:

There is a significant effect of self-regulated learning strategy on the writing quality of students with different cognitive styles.

Ho₁: There is no significant effect of self-regulated learning strategy on the writing quality of students having different cognitive styles.

The null hypothesis (Ho) cannot be disproved if the value produced is greater than the significance level ($p > 0.05$). However, the null hypothesis can be rejected if the obtained significant value is less than the significant level ($p = 0.05$). The result of the simultaneous regression computation is presented in Table 11.

Table 11: The hypothesis testing result

<i>ANOVA^a</i>						
<i>Model</i>		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
<i>1</i>	<i>Regression</i>	<i>277.592</i>	<i>2</i>	<i>138.796</i>	<i>.983</i>	<i>.384^b</i>
	<i>Residual</i>	<i>5082.767</i>	<i>36</i>	<i>141.188</i>		
	<i>Total</i>	<i>5360.359</i>	<i>38</i>			

a. Dependent variable: writing skill

b. Predictors: (Constant), group of GEFT, average score of SRL

Table 11 shows that the significance value was 0.384; it was greater than the significance level (0.05). It means that there was not enough evidence to reject the null hypothesis. In other words, the null hypothesis could not be rejected. There was no significant effect of self-regulated learning strategy on the writing quality of students with different cognitive styles. Those variables might affect students' writing quality; however, there is no significant effect of both variables simultaneously on the students' writing quality. Since there was no significant effect of self-regulated learning strategy on the writing quality of students with different cognitive styles, this study could not proceed to analyze the data to test the following hypotheses.

Discussion

Different levels of students' self-regulated learning strategies had different mean scores, and different types of students' cognitive styles also had different mean scores; however, the differences of both variables did not significantly affect the students' writing quality. The mean scores for high, moderate, and low levels of students' self-regulated learning were 66.25, 70.58, and 92.00, respectively. From these results, it could be assumed that there was a significant difference in writing quality among the levels of students' self-regulated learning strategies. In contrast, this result contradicted the researcher's assumption that higher levels of students' self-regulated learning strategies would correspond to better writing scores. Then, based on students' cognitive styles, the writing mean score of field-independent students was 71.46; meanwhile, the field-dependent students got the writing mean score of 65.55. From these results, there was a notable difference in writing quality between field-independent and field-dependent students. Field-independent students outperformed field-dependent students in terms of writing quality. However, statistically, there was no significant effect of self-regulated learning strategy on the writing quality of students with different cognitive styles. Neither variable had a simultaneous effect on the students' writing quality. Students' self-regulated learning strategy and their cognitive styles might affect their writing quality independently. Besides those two variables, there might be other factors affecting students' writing quality.

There were several possible reasons for the insignificant result of this study, including the insignificant effect of the self-regulated learning strategy on the writing quality of students with specific cognitive styles. The first possible problem was the number of participants. This study had only thirty-nine students participating altogether. This small number of participants may influence the result of this study. If the number of participants exceeded 100, a significant interaction effect might be observed between self-regulated learning strategies and cognitive styles on students' writing quality. The number of participants of a study would influence the significance of the research variables (Heriyawati et al., 2018; Wahyuni, 2017). Furthermore, based on the data analysis, only one student was categorized as having a low level of self-regulated learning strategy. The study was not balanced, given the unequal

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number of students in high and moderate levels of self-regulated learning strategy (12 and 26 students).

In addition, the proficiency level of the students might also become another possible reason for the insignificant result. As mentioned previously, the participants of this study were the students in the second semester. They might not be proficient enough since they were still first-year university students. The students still needed more time to study and adjust to the new learning system at the university level, which differed significantly from their secondary education, and to become proficient in English, particularly in writing skills. Therefore, their writing skills were still not very good; the mean score was only 69.79. It was in line with Styati and Rodliyah's study, which found that students' proficiency level influenced their writing quality (Styati & Rodliyah, 2021).

Furthermore, students' self-regulated learning strategies may not significantly impact their writing quality, as they were still adjusting to the learning process and were in the early stages of essay writing. They might still struggle to implement their self-regulated learning strategy in their writing. It is in line with Umamah and Cahyono's study, which found that students in the early stage of essay writing were not autonomous yet (Umamah & Cahyono, 2020); they tended to seek help and assistance as social support when performing writing tasks as their self-regulated learning strategy in writing (Yot-Domínguez & Marcelo, 2017). In contrast, the writing test administered in this study was an individual task with a limited time duration, and it did not allow for interaction among students and the lecturer. In addition, the students lacked access to open resources to support their writing task. Therefore, the higher writing score of students with a low level of self-regulated learning strategy than other levels, moderate and high, was more likely influenced by other factors. It was in line with Evans, Hartshorn, McCollum and Wolfersberger's study who found that the first language, nationality, cultural identity, learning style, values, attitudes, beliefs, socioeconomic background, motives, future objectives, and other aspects of the learners' backgrounds all play a role in how effective the study is (Evans et al., 2010).

The findings of this study seemed to contrast with some previous studies, which found that self-regulated learning strategies improved students' writing quality (Geres-Smith et al., 2019) and students' learning motivation (Bai & Guo, 2019). Furthermore, students with

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different proficiency levels tended to use self-regulated learning strategies differently in writing; high-proficient students used these strategies more frequently than less proficient students (Abadikhah et al., 2018; Umamah & Cahyono, 2020).

The lack of evidence of interaction between self-regulated learning strategy and cognitive styles on the writing quality of the students in this study proves that students' cognitive styles did not significantly influence their writing quality. The study's participants, who are learning a foreign language, might not be conscious of their cognitive patterns. They could modify any instructions they received because they were adult learners. They might be adaptable enough to handle any instruction that is provided (Ellis, 1993). Other factors, such as the learners' proficiency level, played a significant role in the way they write (Lee, 2008). The results of this study appear to corroborate the idea that there is no connection between students' cognitive styles and their learning methods. It seems to agree with Ellis' study, which reveals that there is no significant correlation found between cognitive styles and any of the language knowledge assessments. The mastery of pupils' linguistic knowledge is unaffected by their cognitive modes (Ellis, 1993).

CONCLUSION AND IMPLICATION

Conclusion

In line with the research findings and the discussions of the study, it can be concluded that there is no significant effect of self-regulated learning strategy on the writing quality of students having different cognitive styles. The significant value obtained was higher than the significance level ($0.384 > 0.05$). Those variables might affect students' writing quality; however, there is no significant effect of both variables simultaneously on the students' writing quality. Both variables may affect students' writing quality independently.

Limitation

This study is limited to investigating the effect of a self-regulated learning strategy on the writing quality of students with different cognitive styles. In addition, it is limited to the quality of writing descriptive text. Furthermore, only thirty-nine undergraduate students from the second semester or first year of study participated in this study. Considering the limitations of their study, further researchers could broaden the scope by incorporating more

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student variables, such as competence level, recruiting more participants, and imposing additional test-taking requirements, like writing in different text genres. Ultimately, a deeper comprehension of the results may result in a theoretical advancement of the corpus of knowledge about the impact of cognitive styles and self-regulated learning strategies on writing quality.

Implication

In short, the study's conclusions should be regarded cautiously. The findings of this study imply that EFL instructors should consider individual learner factors independently rather than assuming interaction between SRL and cognitive styles.

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Wahyuni et al. (2025)

REFERENCES

- Abadikhah, S., Aliyan, Z., & Talebi, S. H. (2018). EFL students' attitudes towards self-regulated learning strategies in academic writing. In *Issues in Educational Research*, 28(1), 1-17. <https://www.iier.org.au/iier28/abadikhah.pdf>
- Andrade, M. S., & Bunker, E. L. (2009). A model for self-regulated distance language learning. *Distance Education*, 30(1), 47–61. <https://doi.org/10.1080/01587910902845956>
- Bai, B., & Guo, W. (2019). Motivation and self-regulated strategy use: Relationships to primary school students' English writing in Hong Kong. *Language Teaching Research*, 25(3), 378–399. <https://doi.org/10.1177/1362168819859921>
- Butler, D. L., & Winne, P. H. (1995). Feedback and Self-Regulated Learning: A Theoretical Synthesis. *Review of Educational Research*, 65(3), 245–281. <https://doi.org/10.3102/00346543065003245>
- Dörnyei, Z. (2011). *The psychology of the language learner: Individual differences in second language acquisition*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Ellis, R. (1993). *Individual learning styles in classroom second language development*. In Ellis, R. (ed.). *Second language acquisition and language pedagogy*. Clevedon: Multilingual Matters LTD.
- Evans, N. W., Hartshorn, K. J., McCollum, R. M., & Wolfersberger, M. (2010). Contextualizing corrective feedback in second language writing pedagogy. *Language Teaching Research*, 14(4), 445–463. <https://doi.org/10.1177/1362168810375367>
- Fatirul, A. N. (2012). *The effect of learning strategy (problem-based learning with internet assistance and without internet assistance) and cognitive styles toward learning achievement (Pengaruh Strategi Pembelajaran (Problem-Based Learning Berbantuan dan Tanpa Berbantuan Internet) dan Gaya Kognitif terhadap Prestasi Belajar)*. Unpublished Dissertation. Malang: State University of Malang.
- Flores, E. R. & L. M. (2019). Self-reported summarizing and paraphrasing difficulties in L2 writing context: Some pedagogical interventions. *Indonesian Journal of Applied Linguistics*, 9(2), 286-296. <https://doi.org/10.17509/ijal.v9i2.20219>
- Gay, L. R. M. G. E. and A. P. (2011). *Educational Research: Competencies for Analysis and Applications*. 10th Edition. New York: Pearson Education International.
- Geres-Smith, R., Mercer, S. H., Archambault, C., & Bartfai, J. M. (2019). A Preliminary Component Analysis of Self-Regulated Strategy Development for Persuasive Writing in Grades 5 to 7 in British Columbia. *Canadian Journal of School Psychology*, 34(1), 38–55. <https://doi.org/10.1177/0829573517739085>

Wahyuni et al. (2025)

- Gibriel, M. (2019). Investigating Writing Strategies, Writing Anxiety and Their Effects on Writing Achievement : A Mixed Method Design. *The Journal of AsiaTEFL*, 16(1), 429–436. <https://doi.org/10.18823/asiatefl.2019.16.1.33.429>
- Heriyawati, D. F., Saukah, A., & Widiati, U. (2018). Working memory capacity, content familiarity, and university EFL students' reading comprehension. *Indonesian Journal of Applied Linguistics*, 8(1), 21-27. <https://doi.org/10.17509/ijal.v8i1.11458>
- Javid, C. Z. , F. M. U. & U. M. (2013). An investigation of Saudi EFL learners' writing problems: A case study along gender-lines. *Kashmir Journal of Language Research*, 16(1), 174-203. <https://www.proquest.com/docview/1634208630?sourcetype=Scholarly%20Journals>
- Lammers, W. J. , & B. P. (2005). *Fundamentals of Behavioral Research*. Ca: Thomson/Wadsworth.
- Lee, I. (2008). Student reactions to teacher feedback in two Hong Kong secondary classrooms. *Journal of Second Language Writing*, 17(3), 144–164. <https://doi.org/10.1016/j.jslw.2007.12.001>
- Mizumoto, A. (2018). On Questionnaire Use in Language Learning Strategies Research. *Journal of Asia TEFL*, 15(1), 184–192. <https://doi.org/10.18823/asiatefl.2018.15.1.12.184>
- Muth'im, A. (2010). *EFL Learners' ability in writing comparison-contrast essays*. In B. Y. Cahyono (Ed.), *Second Language Acquisition and English Language Teaching*. Malang: State University of Malang (UM Press).
- Styati, E. W., & Rodliyah, R. S. (2021). Investigating the writing quality of students with different proficiency levels in interaction-based pair works. *Indonesian Journal of Applied Linguistics*, 11(1), 39–48. <https://doi.org/10.17509/ijal.v11i1.34659>
- Tegeh, I. M. (2009). *Comparison between learning achievement of students taught by using problem-based learning and those taught by using expository having different cognitive style (Perbandingan Prestasi Belajar Mahasiswa yang Diajar dengan Menggunakan Problem-Based Learning dan Ekspositori yang Memiliki Gaya Kognitif Berbeda)*. Unpublished Dissertation. Malang: State University of Malang.
- Umamah, A., & Cahyono, B. Y. (2020). Indonesian university students' self-regulated writing (SRW) strategies in writing expository essays. *Indonesian Journal of Applied Linguistics*, 10(1), 25-35. : <https://doi.org/10.17509/ijal.v10i1.24958>
- Umamah, A., Hidayanti, I., & Kurniasih, K. (2019). *Kesulitan mahasiswa dalam menulis teks eksposisi: analisis berbasis gender*[Students' difficulties in writing exposition texts: gender-based analysis]. *Jurnal Pendidikan Dan Kebudayaan*, 4(1), 33–50. <https://doi.org/10.24832/jpnk.v4i1.1004>

Wahyuni et al. (2025)

- Wahyuni, S. (2014). Student teams-achievement division to improve students' writing skill, *Inferensi*, 8(1), 1-22. <https://doi.org/10.18326/infs13.v8i1.1-22>
- Wahyuni, S. (2017). The effect of different feedback on writing quality of college students with different cognitive styles. *Dinamika Ilmu*, 17(1) 39–58. <https://doi.org/10.21093/di.v17i1.649>
- Wahyuni, S. (2018). Peer Correction On Writing Quality Of College Students Having Different Cognitive Styles. *Inferensi*, 12 (2), 259-282. <https://doi.org/10.18326/infs13v12i2.259-282>
- Widiati, U., & Cahyono, B. Y. (2006). The teaching of EFL writing in the Indonesian context: the state of the art. *Jurnal Ilmu Pendidikan*, 13(3), 139–150. <https://doi.org/10.17977/jip.v13i3.40>
- Witkin, H. A. , & G. D. R. (1981). *Cognitive styles: essence and origins, field dependence and field independence*. New York: International University press.
- Yot-Domínguez, C., & Marcelo, C. (2017). University students' self-regulated learning using digital technologies. *International Journal of Educational Technology in Higher Education*, 14(1),38-. <https://doi.org/10.1186/s41239-017-0076-8>
- Zimmerman, B. J. and R. R. (1997). Becoming a self-regulated writer: A social cognitive perspective. *Contemporary Educational Psychology*, 22(1), 73-101. <https://doi.org/10.1006/ceps.1997.0919>