INVESTIGATION ON GENDER AND LEARNER-CENTERED TEACHING STRATEGIES TOWARD LEARNERS' WRITING PERFORMANCE

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ABSTRACT

This research investigated the interaction effects between gender and Learner-Centered Teaching Strategies toward learners' writing performance. The study was a quasi-experiment using tests as the research instrument. The participants were 72 learners of the English Department at a state institution consisting of 34 males and 38 females. The class was classified into two parts: experiment groups consisting of self-directed learning class (SDL), discovery learning class (DL), and small group discussion class (SGD); and a control group: lecturing class (L). A two-way ANOVA was used for data analysis. The findings confirmed a significant difference by gender (F=10.629. Sig. 0.002<0.05); and Learner-Centered Teaching Strategies F=20.658. Sig. 0.000<0.050) on the learners' writing performance. It also indicated that females (means score 73.46) were higher than males (means score 64.45). In contrast, no interaction effect simultaneously occurred among gender and the Learner-Centered Teaching Strategies (F 2.70) = 2.301. Sig. 0.086>0.050). Both of them did not contribute simultaneously to writing performance. Lastly, the r squared was 0.574 indicating a high correlation of teaching strategies and gender (57%). The teachers were suggested to apply learner-centered teaching strategies in an L2 writing class at a higher education level.

Keywords: gender; learners-centered teaching strategies, writing performance

ABSTRAK

Penelitian ini menyelidiki pengaruh interaksi antara gender dan strategi pengajaran terpusat pada peserta didik terhadap kinerja menulis peserta didik. Jenis penelitian ini adalah kuasi eksperimen dengan instrument yang digunakan adalah tes. Partisipan berjumlah 72 mahasiswa Jurusan Bahasa Inggris di sebuah universitas negeri yang terdiri dari 34 laki-laki dan 38 perempuan. Kelas diklasifikasikan menjadi dua bagian: kelompok eksperimen yang terdiri dari kelas self-directed learning (SDL), kelas discovery learning (DL), ; kelas diskusi kelompok kecil (SGD); dan kelompok kontrol: kelas kuliah (L). Anova dua jalur digunakan pada analisis data. Temuan mengkonfirmasi perbedaan yang signifikan terjadi untuk jenis kelamin (F = 10,629. Sig. 0,002 <0,05); dan strategi pengajaran terpusat pada peserta didik F=20.658. Sig. 0,000<0,050) terhadap kemampuan menulis siswa. Hal ini juga menunjukkan bahwa perempuan (rata-rata skor 73,46) lebih tinggi daripada laki-laki (rata-rata skor 64,45). Sebaliknya, tidak ada efek interaksi yang terjadi secara simultan antara gender dan strategi pengajaran terpusat pada peserta didik (F 2,70) = 2,301. Tanda tangan. 0,086>0,050). Keduanya tidak berkontribusi secara bersamaan pada kinerja menulis. Terakhir, nilai r kuadrat adalah 0,574 yang menunjukkan korelasi tinggi antara strategi pengajaran dan gender (57%). Para guru disarankan untuk menerapkan strategi pengajaran yang berpusat pada peserta didik di kelas menulis L2 di pendidikan tinggi.

Kata kunci: *gender; strategi mengajar berfokus ke siswa; kemampuan menulis*

INTRODUCTION

Although many studies have been on learner-centered learning in recent years, further research is still needed to fulfill higher education demand in the millennial era. The teaching strategy is lesson preparation, including arrangement, instructional goals, and an outline to implement the teaching strategy (Issac, 2010). Commonly, the professor spent most of the time lecturing in class; the students only watched and listened to the lesson. This is the typical model of lecturing class. The learners study individually in class, and working together is discouraged. Traditionally, teachers focused on lecturing in the classroom setting. This is called teacher-centered learning. In teacher-centered learning, teachers were dominant in the classroom setting. Teachers are information sources to monitor learners (Zohrabi et al., 2012). According to Acat and Dönmez (2009), teachers usually use particular textbooks, which are mostly grammar oriented and to compare the language structures of native and target languages. In teacher-centered learning, the questions were responded to directly by teachers without learners' involvement. The teachers control every learning experience (Nagaraju et al., 2013). In traditional teaching, teachers work harder than learners. Learners

have less time to practice. Meanwhile, teachers have much time to practice.

In contrast to teacher-centered learning, learner-centered learning changes the classroom atmosphere from teacher to student. In this case, learners-centered learning becomes a pioneer of developing the learning paradigm. Here, learners' activities are essential indicators in the learning process (Zohrabi et al., 2012). This learning was connected with flexible, experiential, and self-directed learning (Acat & Dönmez, 2009). Additionally. Karamustafaoglu (2009) also states that learner-centered methods involve learning models participating in the classroom setting. In learner-centered teaching, learners move from passive participants to active participants. A teaching model positioned the learner at the epicentrum of classroom activity. The teacher has to motivate and facilitate learners in learning.

Learner-centered teaching employs various teaching methods. This model focuses on shifting the teachers' duty from information givers to facilitators and motivators in student learning. Learner-centered teaching strategies cover active learning, cooperative learning, and inductive learning. Nunan (2004, p. 8) stated that a learner-centered class involves students in the classroom setting in the learning

process. There are some reasons to take a learner-centered approach. It assists learners to study in their way. It put learning responsibility at learners and is seen as best practice internationally. Teaching will have a solid foundation to develop learning skills. The teachers' duty is as a facilitator in the classroom setting. Cheang (2009) studies on the related topic. The study revealed that the learner-centered method effectively improved motivation and learning strategies. In the present study, the study was restricted to three models of learner-centered teaching strategies, namely self-directed learning (SDL); discovery learning (DL); and group discussion (SGD).

SDL is a learning model in which learners have the initiative to diagnose the needs of learning, determine objectives, choose learning materials, apply suitable learning methods, and make an assessment (Knowles, 1975, p. 18). SDL is a learning model when students formulate the goals (Fisher et al., 2001). Teachers provide scaffolding, mentoring, advising. Most SDL studies reveal that SDL can increase learners' self-assessment and motivation (Bourner, 2003; Dynan et al., 2008; Schmenk, 2005). Previous studies confirm that SDL deals with graduate education (Acar, 2014; Fisher et al., 2001; Fox, 2011; Sarmasoglu & Görgülü, 2014; Williamson, 2007). The findings

confirmed that instructional environments have to be designed to improve learners' self-control skills. Edmondson et al. (2012) believed that learners using SDL effectively have more benefits than others. Ilhan-Beyaztaş (2014) also confirmed that successful learners become effective learners by determining goals, providing a learning atmosphere, and monitoring their studying. In addition, Karasakaloglu and Saracaloglu (2009) confirm that female students performed better in academic self-design than male students. The finding of relevant researches revealed that SDL is in congruent level thinking skills.

Discovery Learning (DL) is a learning method providing learners to conclude. It means that learners were problem solvers in the learning process (Balım, 2009, p. 2). This idea is supported by Abrahamson and Kapur (2018), stating that discovery learning is a learning process that occurs when students are not presented with final lessons but are expected to organize themselves. Meanwhile, Wenning (2010) stated that DL is a learning model that enables learners to acquire knowledge.

Small group discussion (SGD) is a cooperative learning method giving more chances to learners to collect ideas and knowledge. SGD is a group of

students working corporately to achieve specific goals (Brown, 2001). Moreover, Slavin (2006, p. 234) states that in SGD, learners work in four to six member groups to talk about a specific theme. It was stated that it is a situation in which students exchange and share information with their group to find the solution to the task given. Wu (2008) confirms that SGD improves learners' participation in constructing knowledge. Anggraini and Soesatyo (2016) study the effect of SGD to improve students' scores in learning English for Senior High School. The finding revealed that Small Group Discussion successfully had a significant effect in improving students' results in learning and making students active during the learning process. Next, Putri et al. (2015) revealed that SGD performed better than the others in reading. Last, Juan (2014) shows that Group discussion increases learners to train the four language skills. Besides, SGD helps build the confidence and sense of participating in the classroom.

Moreover, some investigations evidenced that gender differences contributed to writing achievement. Therefore, gender differences are another variable that contributed to this study. The current investigation revealed that men and women have differences in structures and function in the brain. For example, there are differences in the male and female cerebral cortex (Rabinowicz et al., 2002). Brains are more asymmetric in men but not in women (Frederikse, 1999). This data motivates the researcher to validate the previous findings. Therefore, the present study explores the interaction effects between gender and Learner-Centered Teaching Strategies toward writing ability. This study involved gender difference as a potential factor influencing learners' writing achievement. Based on the facts above, the questions were: (a) how does gender significantly affect the learners' writing performance? (b) how does learner-centered teaching strategy significantly affect the learners' writing performance? (c) is there any interaction between gender and learner-centered teaching strategy to the learners' writing performance? The aim is to investigate whether gender and learner-centered teaching strategies are simultaneous to the learners' writing performance? The distinction is that the study involves gender and learner-centered teaching strategy as variables that influence the learners' writing accuracy.

METHOD

The quasi-experimental design using factorial design was employed (Ary et al., 2010, p. 641). The design is suitable since it examined two

categorical variables. The participants involved were 72 learners of the English Department, consisting of 34 males and 38 females. The class was divided into two groups: experiment groups consisting of SDL class; DL class, SGD class; and a control group: lecturing class. The study applied a two-way analysis of variance to analyze data. The participants were self-directed learning (13) consisted of 8 males and five females; discovery learning (19) consisted of 8 males and 11 female; small group discussion (22) consisted of 12 males and ten female; and lecturing class (18) consisted of 6 males and 12 female, as illustrated in Table 1.

Table 1. The Participants of the Study

Types of Teaching Strategies	Gender		Total
	Male	Female	
SDL	8	5	13
DL	8	11	19
SGD	12	10	22
Lecturing	6	12	18
Total	34	38	72

The first step to do the research was divided into two groups: experiment groups consisting of experiment 1, experiment 2, experiment 3, and a control class. Each class was given by the teacher a different treatment. Experiment class 1 was treated using self-directed learning (SDL); experiment class 2 was treated using discovery learning (DL); experiment class 3 was treated using

small group discussion (SGD), and a control class was taught using lecturing (L). The instrument was a writing test. After being given treatment, the participants were assigned to write an essay of about 450-500 words on the selected topic. Before analyzing the data, the assumption tests were conducted before analyzing the data, such as testing the normality using the Kolmogorov Smirnoff test (Sig.0.200 > p. 0.050, and testing homogeneity using Levene's Test of Equality of Error Variances (Sig. 0.870 > p.0.050 (Pallant, 2000, p. 2). The output revealed that the data were normally distributed and did not violate the homogeneity.

The null hypotheses were: (a) L2 learners with different gender did not significantly differ in their writing performance; (b) L2 learners with different types of learner-centered teaching strategies did not significantly differ in their writing performance? (c) L2 learners with different gender and learner-centered teaching strategies did not significantly differ in their writing performance. A two-way analysis of variance was employed to analyze data on the effect of gender and learner-centered teaching strategies on learners' writing performance. Finally, interpretation of the result was made to see whether there was an effect or not gender and learner-centered teaching

strategies simultaneously on the learners' writing performance.

FINDINGS AND DISCUSSION

findings

The test was followed by 72 participants consisting of 34 males and 38 females, as seen in Table 2.

Table 2. Participant classification

		Value Label	N
teaching strategies	1.	SDL	13
	2	DL	19
	3	SGD	22
	4	Lecturing	18
Gender	1	Male	34
	2	Female	38

The participants were self-directed learning (13) consisted of 8 males and five females; discovery learning (19) consisted of 8 males and 11 females; small group discussion (22) consisted of 12 males and ten females, and lecturing class (18) consisted of 6 males and 12 female. The learners' writing performance was described in Table 2.

Table 3. The learners' writing performance

teaching strategies	Gender	Mean	Std. Deviation	N
self-directed learning	Male	73.3750	6.27780	8
	Female	84.8000	5.76194	5
	Total	77.7692	8.21740	13
discovery learning	Male	59.3750	22.64596	8
	Female	77.7273	10.72465	11
	Total	70.0000	18.70829	19
small	Male	68.3333	6.31497	12

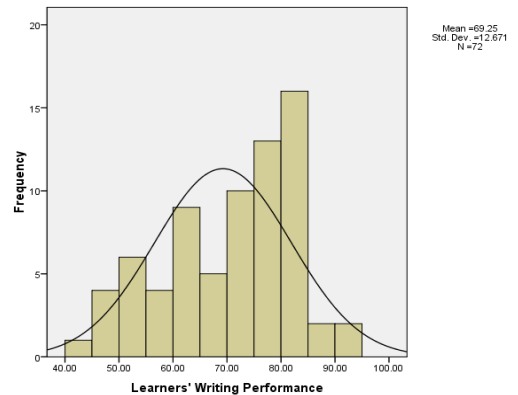| teaching strategies	Gender	Mean	Std. Deviation	N
group discussion	Female	77.3000	7.93095	10
	Total	72.4091	8.29032	22
Lecturing	Male	56.8333	11.75443	6
	Female	54.0000	10.18019	12
	Total	54.9444	10.46828	18
Total	Male	65.3824	13.85863	34
	Female	71.0526	14.98097	38
	Total	68.3750	14.64071	72

Figure 1. The learners' writing performance

The output showed the summary of Descriptive Statistics from the analyzed data. It covered the means score, standard deviation, and the number of participants. This revealed that means score for learners' writing performance based on gender and teaching strategies were: self-directed learning (male, 73.38; female 84.80; total 77.77); Discovery learning (male, 59.38; female 77.73; total 70.00); Small Group Discussion (male, 68.33; female 77.30; total 72.41); lecturing (male, 56.83; female 54.00; total 56.91). The learners'

writing performance was described in Figure 1.

Testing Statistical Hypothesis

To respond to the research questions, the two-way ANOVA table is described as illustrated in Table 3.

Table 3. the two-way Anova: test between subjects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6541.543[a]	7	934.506	12.311	.000
Intercept	321453.213	1	321453.213	4.235E3	.000
Teaching strategies	4704.190	3	1568.063	20.658	.000
Gender	806.776	1	806.776	10.629	.002
Teaching strategies * gender	524.053	3	174.684	2.301	.086
Error	4857.957	64	75.906		
Total	356680.000	72			
Corrected Total	11399.500	71			

a. R Squared = ,574 (Adjusted R Squared = ,527)

The output showed the data to test the hypothesis. The first column showed the factors to be discussed in the study. The second column showed the total square. The third column showed the degrees of freedom (df). The fourth column showed the means squared. The fifth column showed the F value. The sixth column showed the Significance value. The result of the ANOVA test indicated that the corrected model was (F=12.311, p. 0.000<0.050). The model was valid to be investigated using a two-way analysis of variance. The intercept indicated (F=4.235E3, p. 0.000<0.050). The intercept was significant. The effect of teaching strategies toward writing accuracy was (F(3.71)=20.658. Sig. 0.000<0.050). Since it was smaller than 0.05, it was said that teaching strategies contributed to writing performance. Then, The effect of gender on the learners' writing performance was (F=1.71)=10.629. Sig. 0.002<0.05). Since it was lower than 0.05, it was said that gender also contributed to writing accuracy. However, the interaction effect between teaching strategies and gender on learners' writing performance was (F (3.71)= 2.301. Sig. 0.086>0.050). Since it was more significant than 0.05, it was said that gender and teaching strategies did not contribute to writing performance. There was no interaction between gender and teaching strategies to learners' writing performance. The error value was 75.906; it was categorized as minor: the smaller, the better of the model. In addition, the r squared was 0.574. it indicated a high correlation. The variability of teaching strategies and gender learners' writing performance was 57%. A further explanation was explained:

Gender did not affect writing performance

To respond to the first research question: "(a) does gender significantly affect the learners' writing performance?" the two-way analysis of variance table explained the answer, as explained in Table 3 above. The output indicated that the F value of gender was (F=10.629. Sig. 0.002<0.05). It was said that there was a difference in writing performance because of gender factors. In this case, female was higher than male in their writing performance. The average male score was 66.45, and female was 73.46, as illustrated in Table 4.

Table 4. Gender factor

Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Male	66.448	1.540	63.371	69.525
Female	73.457	1.500	70.460	76.453

The output showed the difference in means score on learners' writing performance between males and females. It indicated that the means score of male was 64.45 and female was 73.46. Then, the Pairwise Comparison Table revealed that the mean difference was 8.978* and p. 0.002. There was a significant difference among males and females on writing performance (F=10.629, p.0. 002<0.05)., as illustrated in Table 5.

Table 5. Pairwise Comparisons analysis

(I) gender	(J) gender	Mean Difference (I-J)	Std. Error	Sig. [a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
m	f	-8.978*	2.756	.002	-14.484	-3.472
f	M	8.978*	2.756	.002	3.472	14.484

Teaching strategies did not affect writing performance.

Table 3 also indicated that the effect of learner-centered teaching strategies on the learners' writing performance was (F=20.658. Sig. 0.000<0.050). Since it was lower than 0.05, it was said that learner-centered teaching strategies affected learners' writing performance. The null hypothesis expressing that learner-centered teaching strategies did not contribute to writing performance was rejected, and the alternative hypothesis expressing that learner-centered teaching strategies significantly affected the learners' writing performance was accepted. Then, it was concluded that there was a difference in writing performance bacause of the learner-

centered teaching strategy factor. SDL, DL, and SGD differed significantly in their writing performance. The mean score of self-directed learning/ SDL (79.09), discovery learning/ DL (72.49), small group discussion/SGD (72.82) compared with lecturing (55.42), as explained in Table 6.

Table 6. Learner-Centered Teaching Strategies (Dependent Variable: Writing Performance)

| Learner-Centered Teaching Strategies | Mean | Std. Error | 95% Confidence Interval | |
			Lower Bound	Upper Bound
Self Directed Learning (SDL)	79.088	2.483	74.126	84.049
Discovery learning (DL)	72.489	2.024	68.445	76.532
Small Group Discussion (SGD)	72.817	1.865	69.090	76.543
Lecturing (L)	55.417	2.178	51.065	59.768

The output showed the difference in means scores on learners' writing performance among SDL, DL, SGD, and Lecturing. It indicated that the means score of experiment groups: SDL (79.09), DL (72.49), SGD (72.82), performed better than the control group: Lecturing (55.42). It was said that Learner-centered Teaching Strategies performed better than Teacher-Centered Teaching Strategies.

EFL learners with different gender and learner-centered teaching strategies do not differ significantly in their writing performance.

The output of Table 3 also indicated that the F value of gender and learner-centered teaching strategies was (F=2.301. p. 0.086>0.050). This meant no interaction between gender and learner-centered teaching strategy to the learners' writing performance. It meant that both gender and learner-centered teaching strategy did not simultaneously affect their writing performance, as explained in Table 7.

Table 7. Teaching strategies * gender

| teaching strategies | gender | Mean | Std. Error | 95% Confidence Interval | |
				Lower Bound	Upper Bound
(SDL)	male	73.375	3.080	67.221	79.529
	female	84.800	3.896	77.016	92.584
(DL)	male	67.250	3.080	61.096	73.404
	female	77.727	2.627	72.479	82.975
(SGD)	male	68.333	2.515	63.309	73.358
	female	77.300	2.755	71.796	82.804
(L)	male	56.833	3.557	49.728	63.939
	female	54.000	2.515	48.976	59.024

This indicated that all independent variables (gender and learner-centered teaching strategies) did not contribute simultaneously to writing performance. Then, the r squared was 0.574. it indicated a high correlation. Next, a post hoc test was employed to see the

difference among variables, as described in Table 8.

Table 8. Multiple Comparisons of Writing Performance

(I) teaching strategies	(J) teaching strategies	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
(SDL)	DL	4.4534	3.13591	.492	-3.8186	12.7255
	SGD	5.3601	3.04781	.303	-2.6795	13.3998
	L	22.8248*	3.17110	.000	14.4599	31.1896
(DL)	SDL	-4.4534	3.13591	.492	-12.7255	3.8186
	SGD	.9067	2.72860	.987	-6.2909	8.1043
	L	18.3713*	2.86566	.000	10.8122	25.9305
(SGD)	SDL	-5.3601	3.04781	.303	-13.3998	2.6795
	DL	-.9067	2.72860	.987	-8.1043	6.2909
	L	17.4646*	2.76898	.000	10.1605	24.7688
(L)	SDL	-22.8248*	3.17110	.000	-31.1896	-14.4599
	DL	-18.3713*	2.86566	.000	-25.9305	-10.8122
	SGD	-17.4646*	2.76898	.000	-24.7688	-10.1605

The output showed the mean (MD) difference between SDL and DL was 4.4534 (Sig. 0.492) > p.0.05. It meant there was no difference between Self Directed Learning (SDL) and Discovery learning (DL) to writing performance. Then, the MD between SDL and SGD was 5.3601 (Sig. 0.303) >0.05. It meant that there was no difference between Self Directed Learning (SDL) and Small Group Discussion (SGD) to writing performance. On the contrary, the MD between SDL and Lecturing was 22.8248* (Sig. 0.000) <p=0.05; DL and Lecturing was 18.3713* (Sig. 0.000) <p=0.05; SGD and Lecturing was 17.4646* (Sig. 0.000) <0.05; there was statistically difference among SDL, DL, and SGD with lecturing. In this case, SDL, DL, and SGD performed better than lecturing to writing performance. The plot diagram indicated no interaction effect among variables, as described in Figure 2.
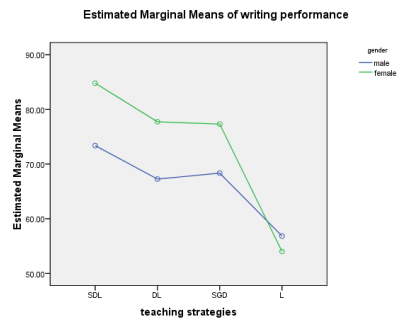

Figure 2. The interaction effect among variables

Discussion

The finding dealt with the three research questions as follows: (a) "How does gender give significant effect to the learners' writing performance? (b) How does learner-centered teaching strategy significantly affect the learners'

writing performance? (c) Is there any interaction effect between gender and learner-centered teaching strategy to the learners' writing performance?" The analysis confirmed a significant difference for gender (F=10.629. Sig. 0.002<0.05); and Learners-Centered Teaching Strategies F=20.658. Sig. 0.000<0.050) on the learners' writing performance. It also indicated that females (means score 73.46) were higher than males (means score 64.45) on writing performance. On the contrary, there was no interaction effect simultaneously between gender and the Learners- Centered Teaching Strategies (F=2.301. Sig. 0.086>0.050). Both of them did not contribute simultaneously to writing performance. Lastly, the r squared was 0. 574 indicating a high correlation, and the variability of teaching strategies and gender was 57%. This finding was in accordance with Lu et al. (2008), Anggraini and Soesatyo (2016), Putri et al., (2015) Juan (2014), Balım (2009), Schmenk (2005), Fox (2011); Sabarun and Tazkiyatunnafs (2020), Nursamsu (2021), Edmondson et al. (2012), Ilhan-Beyaztaş (2014), Karasakaloglu and Saracaloglu (2009), Saban (2008), and Demirtaş and Özer (2007). The finding confirmed that Learners- Centered Teaching Strategies outperformed better than teachers-Centered learning. The finding also followed Cheang (2009), mentioning

that the learner-centered method effectively improved motivation and learning strategies. This was also in line with several investigations (Indrianti, 2012; Kidwell & Triyoko, 2012). This was possible due to some factors. First, Learners- Centered Teaching method assisted learners to study in their way. It put learning responsibility at learners. Second, Learners- Centered Teaching method gave a solid foundation to develop learning skills. The teachers' duty was as a facilitator in the classroom setting. Third, it provided an insightful overview of learners' learning needs as input to syllabus design, material planning, and classroom instruction practice. The finding suggested that learners-centered teaching methods should be applied in L2 writing classes. Teachers should use learners centered learning methods appropriately based on the materials discussed. This finding accurately described the importance of gender difference and learner-centered teaching strategies in L2 writing. Based on the results, some recommendations were proposed. First, learner-centered teaching strategies could be the alternative method in L2 writing class. Therefore, writing teachers should use various methods using learners' centered teaching in the classroom setting. Second, writing teachers should consider the gender difference in

arousing learners' motivation to write better. This was also an essential part of the writing process. Some elements affecting the learners' achievement in learning writing include aspirations of the soul, learners' ability, the condition of learners, environmental conditions of learners, dynamic elements in learning writing, and teachers' efforts in learning writing. Other researchers and academicians can conduct similar research to a more significant number of samples with different academic levels or use other elements that may affect learning writing outcomes. Since this study limited the learning outcomes to students' writing tests, future researchers may also expand to a broader definition of learning outcomes to investigate the following research profoundly. It was also recommended that the other researchers conduct similar research studies in different levels of education, perspective, and paradigm. The limitations of the present study leave gaps for future investigators to fill in through further investigations.

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