AN INVESTIGATION OF GENDER DIFFERENCES AND SELF-EFFICACY IN WRITING PERFORMANCE AMONG COLLEGE EFL LEARNERS

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ABSTRACT

This study was conducted to examine if gender and self-efficacy affected the writing performance of Indonesian EFL learners in college level. The research sample consisted of 150 students, comprising 67 males and 83 females. The sample was selected using convenience sampling technique, and all participants signed an informed consent form. This correlational study employed statistic analysis to determine the relationships among independent and dependent variables. Statistical analysis involved Pearson correlation test, independent t-test, and hierarchical multiple regression analysis. The results showed that writing performances of male and female groups were significantly different. However, the evidence strengthening the claim that male and female learners perform differently in terms of linguistic aspects of written outcomes was limited. Gender proceeded to explain considerable differences in writing performance, in addition to composition skills.

Keyword : *Writing performance, Gender differences, EFL learners*

INTRODUCTION

Writing is a major teaching methods for assisting learners in comprehending and expanding their understanding of the subject (Lea & Street, 1998). College students' knowledge mainly depends on the academic written product (Thesen, 2001). Geiser & Studley (2002) emphasized the significance of advanced written product, stating that the ability to write additional essays has become one of the determining factors of the academic progress and difficulties among college students. Krause (2001) linked educational achievement to writing because many disciplinary courses are assessed through various types of written products such as reports, exam papers, research papers, essays, and short answers. Discipline teachers need to have the ability to evaluate their students' learning progress through writing outcome (Ellis & Yuan, 2004). Students' characteristics are linked to

different writing performance. Gaining adequate understanding of students' differences and their impacts on writing performance is necessary to determine effective writing instructions (Kormos, 2012). Writers differ in terms of academic language abilities, as well as age, gender, interest in writing products, self-efficacy, and many other variables. Different intellectual capacities lead to different levels of effectiveness in writing. Several studies have found that transcription skill which includes spelling and handwriting is a cognitive resource for other text production (Hayes, 2012; Hayes & Chenoweth, 2006). For instance, students with inadequate transcription abilities often have lower focus on creating written material and arranging texts. However, as early school transcription skills become suitably automated, more resources must be made accessible for other purposes, such as developing ideas and transcription (Hayes, 2012). This suggests that processes that are improperly automated can lead to cognitive overload. Therefore, ones' self-efficacy and their rate in writing process may differ based on their cognitive abilities (Kormos, 2012).

Similarly, various gender issues have been recognized in writing products (Beard & Burrell, 2010; Olinghouse, 2008; Troia et al., 2013). Gender differences have been featured to a variety of factors, including motivation and linguistic skills. Moreover, gender is linked to variations in writing performance, but little attention has been paid to how these differences occur. It is considered critical to investigate the factors that moderate the relationships of variables that affect the final writing products. Unlike fluency, gender and content efficiency have not been related to language comprehension. Therefore, it is necessary to examine how cognitive, linguistic, and motivational factors, as well as differences in writing performance are influenced by gender.

One of the proposed elements that affects whether or not gender differences are located is that manufacturing is expected on the basis of manufacturing-based measures, such as writing of quantity and writing of quality (the communication value of what is produced) (Adams & Simmons, 2019). Gender differences, however, is more consistently found in assessments of the productivity than in assessments the quality of writing product (e.g. Fearrington et al., 2014; Mäki et al., 2001). Several studies have only discovered gender differences in performance assessments, while gender differences derived from written text value attributes were not yet determined (e.g. Adams et al., 2015; Jewell & Malecki, 2005; Jones & Myhill, 2007; Williams & Larkin, 2013), despite the fact that other investigations have found gender differences affecting writing quality and writing productivity (e.g. Adams & Simmons, 2019; Babayiğit, 2015; Kim et al., 2015; Malecki & Jewell, 2003; Olinghouse, 2008). It is critical to assess productivity and quality on the basic

concept of valid attributes of writing skills by specifically investigating factors that affect gender differences in writing .

The goal of this study was to investigate if there are gender differences in college students' writing in English as a foreign language and what factors account for this gender difference, such as English skills. This study examined the effect of gender on writing self-efficacy and performance. Aspects such as the uses and functional areas of writing, the importance of organizing and textualization processes, and the role of revision processes were investigated. The current study was designed to improve the understanding of gender differences in writing and text quality by exploring the role of gender differences in writing among Indonesian EFL college students (Zhang et al., 2019). Especially in the Indonesian context, research on those aspects were limited. The research questions were proposed as follows.

(1) Is there any relationship between gender and writing performance of Indonesian college students?

(2) To what extent do writing self-efficacy and writing performance of Indonesian college students differ by gender?

METHOD

Participants

The participants were 150 college students from six classes majoring EFL at State University Of Yogyakarta, Indonesia. Of the total number, 67 students were males and 83 were females who speak Indonesian language as their L1 and English as their foreign language. Participants were selected using convenience sampling technique and all of them signed the informed-consent forms.

Data Analysis

Data of this research were analyzed in a correlation test in the form of Pearson Correlation test to determine the relationship between independent and dependent variables. In the correlation test, the strength of the relationship is shown by the correlational value. Correlational value closer 1 or -1 shows strong relationship, while value close to 0 indicates weak relationship.

Following the correlation test, the independent T-test, which is a comparative or distinct test to assess whether there is a significant difference in the mean or mean between the two independent groups with frequency data scale, was conducted. The two independent groups

were unpaired, meaning that datasets were obtained from distinct subjects. Class A and class B, for example, were two sets of participants who were interested in distinct subjects as seen from the pre-test and post-test scores.

After that, multiple regression hierarchical analysis was performed, including regression test as a statistical inference tool that determined the effect of an independent variable (independent) on the dependent variable (dependent). The regression model was regarded feasible if the significance value of ANOVA was < 0.05. The regression is also regarded feasible if the standard error of estimate < standard deviation. The regression model feasibility was shown by coefficient of determination (KD = R square x 100%). Value closer to 1 showed better regression model. Furthermore, Freadman non-parametric statistics was also employed to test the differences of three or more samples that are correlated to each other.

FINDINGS AND DISCUSSION

Findings

Descriptive Statistics

Statistics is a preliminary data analysis technique that provides an overview of the variables being measured. Descriptive statistics analyzes the data concentration (mean, mode, median, etc.) and data distribution (standard deviation, variance, etc.). Table 1 shows the mean scores and standard deviation of all research variables.

Table 1: Descriptive Statistics of the Research Variables

No	Item	Male		Female	
		Mean	SD	Mean	SD
1	Tasks assessing vocabulary	2.90	1.56	2.82	1.56
2	Letter knowledge	3.06	1.37	3.08	1.35
3	Phonological awareness	3.17	1.53	3.14	1.53
4	Phonological short-term	3.37	1.51	3.37	1.48
5	Memory skills	3.20	1.58	3.16	1.59
6	A number of transcription	3.54	1.46	3.50	1.48
7	Uses and functions	3.02	1.54	2.95	1.54
8	Idea	3.40	1.42	3.40	1.40
9	Organization	3.21	1.53	3.17	1.54
10	Revision and Modifications	3.32	1.49	3.29	1.51
11	Reproductive conception	2.98	1.55	2.91	1.56
12	Spelling	3.08	1.41	3.07	1.38
13	Handwriting	2.85	1.62	2.77	1.61

Table 1 presents the description of the mean scores and standard deviation of all variables in this research based on two gender groups: male and female. The results showed that the average scores in the tasks assessing vocabulary, phonological awareness, memory skills, number of transcription, uses and functions, organization, revision and modifications, reproductive conception, spelling, and handwriting variables obtained by male learners were higher than the female group. Meanwhile, the average score in the letter knowledge of female learners was higher than the male group. Meanwhile, the average phonological short term and idea variables in the male and female groups were relatively equal.

Pearson Correlation

Pearson correlation was a statistical analysis employed in this research to examine the relationship between variables. Table 2 presents the results of the Pearson's correlation test.

Table 2: The Results of the Pearson Correlation Test in This Study

No	Item	Male						
		1	2	3	4	5	6	7
1	Tasks Assessing Vocabulary		0.573**	0.782**	0.803**	0.811**	0.831**	0.995**
2	Letter Knowledge	0.573**		0.839**	0.866**	0.816**	0.828**	0.549**
3	Phonological Awareness	0.782**	0.839**		0.984**	0.993**	0.979**	0.786**
4	Phonological Short-term	0.803**	0.866**	0.984**		0.989**	0.990**	0.806**
5	Memory Skills	0.811**	0.816**	0.993**	0.989**		0.990**	0.817**
6	A Number Of Transcription	0.831**	0.828**	0.979**	0.990**	0.990**		0.836**
7	Uses And Functions	0.995**	0.549**	0.786**	0.806**	0.817**	0.836**	
		Female						
		1	2	3	4	5	6	7
1	Tasks Assessing Vocabulary		0.536**	0.760**	0.763**	0.798**	0.815**	0.995**
2	Letter Knowledge	0.536**		0.822**	0.868**	0.800**	0.802**	0.508**
3	Phonological Awareness	0.760**	0.822**		0.961**	0.991**	0.978**	0.763**
4	Phonological Shortterm	0.763**	0.868**	0.961**		0.966**	0.961**	0.762**
5	Memory Skills	0.798**	0.800**	0.991**	0.966**		0.991**	0.802**
6	A Number Of Transcription	0.815**	0.802**	0.978**	0.961**	0.991**		0.820**

| 7 | Uses And Functions | 0.995** | 0.508** | 0.763** | 0.762** | 0.802** | 0.820** | |

**. Correlation is significant at the 0.01 level (2-tailed)

Table 2 shows significant correlations among the variables both in the male and female gender groups. The tasks assessing vocabulary variable shows values of r > 0.75 for phonological awareness, phonological short term, memory skills, number of transcription, and uses and functions. Meanwhile, letter knowledge variable has a correlation value of <0.60 when compared to the correlation value in the male and female learners. It can be seen that the overall correlation scores of the variables are higher in males than the female learners with a standard of deviation of 0.02 for each variable.

Table 3: The Results of the Pearson Correlation Test between Variables

No	Item	Male					
		1	2	3	4	5	6
1	Idea		0.958**	0.956**	0.773**	0.893**	0.753**
2	Organization	0.958**		0.994**	0.825**	0.889**	0.808**
3	Revision And Modification	0.956**	0.994**		0.780**	0.854**	0.762**
4	Reproductive Conception	0.773**	0.825**	0.780**		0.780**	0.994**
5	Spelling	0.893**	0.889**	0.854**	0.948**		0.949**
6	Handwriting	0.753**	0.808**	0.762**	0.994**	0.949**	
		Female					
		1	2	3	4	5	6
1	Idea		0.954**	0.952**	0.748**	0.856**	0.731**
2	Organization	0.954**		0.993**	0.808**	0.829**	0.791**
3	Revision And Modification	0.952**	0.993**		0.758**	0.788**	0.739**
4	Reproductive Conception	0.748**	0.808**	0.758**		0.902**	0.993**
5	Spelling	0.856**	0.829**	0.788**	0.902**		0.908**
6	Handwriting	0.731**	0.791**	0.739**	0.993**	0.908**	

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 presents that the variables measured in the study which show significant correlations both in the male and female gender groups. The ideal variable has r values of > 0.75 for the organization, revision and modifications, reproductive conception, spelling, and handwriting variables. Compared to the correlation value in the male and female groups, the overall correlation score of the variables in the male group is greater than the female group with a deviation of 0.02 for each variable.

Independent T-Test

An independent t-test was performed to determine the presence of considerable mean difference between two independent groups with interval or ratio management of data. Both independent groups are unpaired groups, which mean that the datasets are from distinct subjects. The pre-test and post-test groups were the ones who were put to the test in this study. Table 4 shows the findings of the independent T test used in this investigation.

		Levene's Test for Equality of Variances		T-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
Writing Performance	Equal variances assumed	.019	.892	.169	148	.866	.03867	.228858	-.41304	.49038
	Equal variances not assumed			.169	147.970	.866	.03867	.228858	-.413055	.49038

Table 4: Independent Samples T-test

Mean scores show the difference in the average or mean scroes in the two groups (male and female). In the writing performance variable, the mean score obtained is 0.03867. The positive value means that the first group (male) has a higher mean than the second group

(female). Overall, the independent T-test findings reveals no meaningful difference in the mean scores of the male and female groups at sig. of 0.892 which is greater than 0.05.

Analysis of Hierarchical Multiple Regression

The relationships among variables are signified by a high correlation between variables. The relationship can be a mutually influential relationship between variables. In this study, the influence of gender on the writing performance was examined in a regression test, Then it will be seen how the model is formed from the pattern of relationships between variables and how well the regression model is obtained. The results of the regression analysis are presented in table 5.

Table 5: Regression Analysis

No	Item	Male			Female		
		B	F	R-Sq	B	F	R-Sq
1	Letter Knowledge	-0.06	0.000	0.999	-0.04	0.000	0.999
2	Phonological Awareness	0.39*			0.33*		
3	Phonological Shortterm	-0.29*			-0.41*		
4	Memory Skills	-0.05			0.17*		
5	A Number Of Transcription	-0.04			-0.04		
6	Uses And Functions	0.15			-0.03		
7	Idea	0.11*			0.06		
8	Revising And Modifications	0.34*			0.33*		
9	Reproductive Conception	0.05			0.20		
10	Spelling	0.25*			0.33*		
11	Handwriting	0.20*			0.16*		
* Significant (<0.05)							

The model proposed in this research with writing performance as the dependent variable and 11 other variables (letter knowledge, phonological awareness, phonological short term, memory skills, a number of transcription, uses and functions, idea, revision and modifications, reproductive conception, spelling, and handwriting) as independent variables is presented in Table 5.

Gaps have been identified between the male and female groups. In the male group, six variables show a considerable effect on writing performance. The six variables are phonological awareness, phonological short term, idea, revision and modifications, spelling, and handwriting. The p-values for the six variables are smaller than 0.05. The results show that 11 independent variables have a significant simultaneous influence on writing

performance as indicated by F (0.000) value lesser than 0.05. The R-square value is 0.999 (99.9%), implying that 11 variables included in the study explain the variability of writing performance scores by 99.9%, while the other 0.1% is explained by variables that are not discussed in this research.

Out of 11 dependent variables in the female group, six variables have significant effects on writing performance (phonological awareness, phonological short term, memory skills, revising and modifications, spelling, and handwriting). The p-values of the six variables which are lesser than 0.05. Overall, the independent variables have a significant influence on writing performance as seen from F (0.000) of lesser than 0.05. The R-square value is 0.999 (99.9%), indicating that the 11 variables included in the study explain the variability of writing performance scores by 99.9% o, while the other 0.1% is presented by other variables not included in this study.

Friedman test

Friedman test is part of non-parametric statistics which is used to find out if the differences of three or more samples that are related each other are found. The results of the Friedman test in this study are presented as follows.

Table 6: Friedman Test Results

Item	Mean Rank	Chi-Square	Asymp. Sig
Male	1.99	71.053	0.000
Female	1.01		

Mean rank average writing performance in the form of ranking shows that male group has better performance than the female group. The Chi-square value is 71.053 with Asymp. A sig of 0.000 which indicates whether the average difference in writing performance between the male and female groups is significantly different. The Sig obtained is 0.000 smaller than 0.05. Therefore, the average writing performance of the male group is significantly different from the writing performance of the female group.

Discussion

The goal of this study was to investigate if there are gender differences in college students' writing in English as a foreign language and what factors account for this gender difference, such as English skills. This study examined the effect of gender on writing self-efficacy and performance. In regard to the first research question, the results of the data

analysis show that gender affects male and female college students in writing differently. Both groups demonstrate significant correlations among the variables of this research. Male group exhibits greater writing performance greater than female group. The average scores of the tasks assessing vocabulary, phonological awareness, memory skills, number of transcription, uses and functions, organization, revision and modifications, reproductive conception, spelling, and handwriting variables in the male group are higher than the female group. However, the average score of the letter knowledge variable in the female group is higher than the male group. Females appear to have a more difficult time conceiving of or being fully aware of the significance of writing in academic achievement. Other authors have also noticed this struggles in being informed of the cognitive capacity of writing (Boscolo et al., 2007; Ellis et al., 2007; Prain & Hand, 1999).

In regard to the second research question, the large gender effect differs due to the lack of variation in self-efficacy. Writing self-efficacy is found equal in both male and female groups. This finding supports (Villalón et al., 2015). According to Pajares (2003), these variations tend to fade at school, which is comparable to the college levels investigated here, particularly when writing self-efficacy beliefs are evaluated by learners' assessments of self-belief that they obtain different educational qualifications and can achieve multiple educational goals, rather than by comparative assessments of their writing ability in comparison to other males and females in their class and other students in their class. Another factor that may have contributed to this outcome is the reduced level of complexity and variety of the writing process being tested. Some authors discovered that the self-efficacy of female students increases when more complicated structural skills are evaluated (Pajares, 2007).

The results of this research support (Lavelle & Zuercher, 2001; Pajares, 2003) who found that selg-efficacy affects the writing performance, To sum up, data show that self-efficacy beliefs and students' writing conceptions predict writing performance in regard to gender differences.

Future researchers are encouraged to address a variety of methodological issues. This research is an exploratory research to seeif the variables that explain the differences that exist in writing could also describe gender differences. Intriguing areas for future research have been identified. However, it should be clearly stated that the investigation is inadequate, despite the fact evaluations and a stress on outcome measures reduce this concern. Nonetheless, until large-scale recombination is possible, conclusions about group differences

should be carefully drawn with caution. To sum up, in relation to gender, self-efficacy and students' believe in writing indicate their writing performance.

CONCLUSION AND SUGGESTION

The evidence supported the claim that male and female writers perform differently in terms of linguistic aspects of written outcomes. Statistically significant differences arose at the small-sentence level. While greater gaps emerged at the text level, they were significantly weaker than those indicated by performance level. Gender proceeded to explain considerable differences in writing performance, in addition to composition skills. Future researchers need to focus on the linguistic and cognitive aspects that may accommodate gender differences in determining writing instructions. Several practical recommendations can be proposed for educators, policymakers, and other stakeholders. Firstly, it is advisable to develop inclusive writing instructions, taking into account gender differences in linguistic aspects. Educators should design learning activities that support both genders, considering individual preferences and needs. Secondly, there should be an increased focus on the development of composition skills by designing learning activities that involve broader text writing. Thirdly, providing specific training to enhance writing skills at the small-sentence level, with exercises focusing on sentence construction, word usage, and language structure. Fourthly, it is crucial to integrate linguistic and cognitive aspects into instructional design, with a deeper understanding of the impact of gender differences on these aspects. Fifthly, supporting further research in this field to gain deeper insights into the factors influencing gender differences in writing performance. Sixthly, ensuring gender fairness in the assessment system with criteria and evaluation methods that do not favor one gender, paying more attention to individual progress and potential. Seventhly, providing training to teachers on gender equality and how to manage these differences in the classroom. Lastly, collaborating with parents to understand the individual needs of students and designing a more holistic learning approach. All of these recommendations are expected to create a more inclusive learning environment and support balanced writing development among male and female students.

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