Enhancing EFL Students' Descriptive Writing Performance trough the Clustering Technique

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ABSTRACT

The purpose of this study was to determine whether a significant difference existed between the writing achievement of students taught through the clustering technique and those instructed using conventional methods at the tenth-grade level of SMK Muhammadiyah Tawang Rejo. The population of this research included all tenth-grade students, totaling 38 learners. The sample was selected using a purposive sampling technique, ensuring that the chosen participants met specific criteria relevant to the study. This research employed an experimental approach, specifically utilizing a quasi-experimental design to compare the two instructional techniques. A writing test was administered as the primary instrument to measure students' performance. The statistical analysis revealed that the t-obtained value of 2.946 exceeded the t-table value of 2.042, indicating a meaningful difference between the two groups. Additionally, the significance value for the two-tailed test was 0.00, which is lower than the predetermined significance level of 0.05. These results provided sufficient evidence to support the acceptance of the Alternative Hypothesis (Ha), while the Null Hypothesis (H0) was rejected. Therefore, the findings confirmed that the students who received instruction using the clustering technique achieved significantly better writing outcomes than those taught through traditional or conventional instruction. In conclusion, the study demonstrated that the clustering technique had a positive impact on students' writing ability and proved to be more effective than the conventional method for the tenth-grade students of SMK Muhammadiyah Tawang Rejo.

Keywords: *Clustering Technque; Decriptive Writing; EFL Students; Vocational Hisgh School.*

INTRODUCTION

Language plays an essential role in human social interaction because it functions as the primary medium for exchanging ideas, conveying messages, and maintaining interpersonal communication. In an increasingly globalized world, English has become a dominant international language that allows people from different cultural and linguistic backgrounds to communicate effectively (Kurniati et al., 2025). To participate actively in academic, professional, and social contexts, learners must develop adequate competence in English. This competence is reflected through mastery of the four fundamental language skills: listening, speaking, reading, and writing (Kurniati & Chojimah, 2021).

Among these skills, writing is considered one of the most complex and cognitively demanding. Writing requires learners to generate, organize, and express ideas coherently while applying appropriate linguistic structures. Leotta & Ahmad (2025) emphasizes that writing promotes critical thinking, encourages systematic idea organization, and strengthens learners' ability to summarize and evaluate

information. With strong writing skills, learners are able to construct different genres of texts, including descriptive, narrative, argumentative, and recount texts. However, descriptive writing, although seemingly simple, often becomes a significant challenge for many students due to its requirement for clarity, detail, and vivid explanation.

Descriptive writing is a fundamental skill in English language learning that enables students to portray people, places, objects, or events vividly through well-structured and detailed explanations (Kuspiyah et al., 2025). This type of writing requires learners to select precise vocabulary, generate clear mental images, and organize ideas coherently so that the reader can easily visualize the subject being described. As highlighted in prior research, students often struggle with descriptive writing due to limited vocabulary, weak imagination, and difficulties in arranging ideas into unified and coherent paragraphs. Therefore, effective instructional strategies such as the use of engaging media or structured pre-writing techniques are essential to help students improve their descriptive clarity, enrich their expressions, and strengthen their overall writing performance.

Challenges in descriptive writing are evident in the context of vocational high schools. Based on initial observations and discussions with the English teacher at SMK Muhammadiyah Tawang Rejo, many students struggle to produce clear and understandable descriptive texts. Their difficulties stem from limited ability to visualize ideas and transform those ideas into well-organized written paragraphs. As a result, students frequently lose focus on the topic, experience confusion, and produce writing that lacks coherence and descriptive quality. Moussu & Llurda (2008) asserts that writing tends to be more difficult than other language skills even for native speakers because it involves complex processes such as idea generation, linguistic encoding, and logical organization.

To overcome these challenges, teachers need to implement instructional techniques that can facilitate idea development and support the writing process. One potential technique is the clustering technique, which is known for helping learners generate and connect ideas more effectively. This visual mapping strategy assists students in expanding topics, forming associations, and organizing concepts before writing. Rahmat (2017) describe clustering as a method for arranging ideas by illustrating their relationship to a central concept, allowing learners to create a clearer structure for their writing. By encouraging students to brainstorm visually, the clustering technique can help them build richer mental imagery and produce more detailed descriptive texts.

Considering the significance of writing competence and the persistent difficulties experienced by students, the researcher finds it necessary to investigate the application of the clustering technique in improving descriptive writing

performance among vocational high school learners. Therefore, this study is entitled**:** "Enhancing EFL Students' Descriptive Writing Performance through the Clustering Technique".

METHODS

Research Design

In this research, a quasi-experimental design was applied. Creswell & Creswell (2018) note that this design involves dividing participants into groups, but the assignment process does not rely on full randomization. Such an approach is frequently adopted in educational settings where random assignment is difficult to implement due to practical limitations related to class structure or institutional policies. Additionally, Ary et al., (2010) highlight that experimental research is characterized by the use of both an experimental group and a control group, which enables researchers to make valid comparisons between different treatments. Although quasi-experimental studies do not use complete random assignment, the implementation of treatment and measurement follows a structured and controlled procedure, helping to maintain the reliability and credibility of the results.

Variable of the Study

In the context of research, a variable is understood as any feature or characteristic that exhibits differences across individuals within a group. According to Creswell and Creswell (2018), variables serve as the central elements or concepts that researchers aim to investigate. Likewise, Ary et al. (2010) describe variables as attributes, qualities, or measurable aspects of people, objects, or activities that vary and are intentionally examined to draw conclusions. Furthermore, Ary et al. (2010) classify variables based on the nature of their relationship into two main categories: independent variables, which provide the influence, and dependent variables, which reflect the outcomes of that influence. In this study, the independent variable is the Clustering Technique, and the dependent variable is the students' descriptive writing ability.

Population and Sample of the Research

The population of this study consisted of all tenth-grade students at SMK Muhammadiyah Tawang Rejo, as presented in Table 1 below.

Table 1. Population of the Research

No	Class	Number of Students
1	X Multimedia	19
2	X Perkantoran	19
3	X TKRO	13
	Total	51

Sources: SMK Muhammadiyah Tawang Rejo Academic year 2022/2023

The sample in this study was selected through purposive sampling. Cohen (2018) states that purposive sampling involves choosing individuals who possess certain characteristics or qualifications that make them suitable representatives based on prior information. This technique was applied because the selected classes

demonstrated similar low levels of English proficiency, particularly in writing descriptive texts. Therefore, Class X Multimedia was assigned as the experimental group, while Class X Office Administration served as the control group. The details of the sample are presented in Table 2.

Table 2. The Sample of the Research

NO	CLASS	GROUP	TOTAL
1	X Multimedia	Experimental	19
2	X Perkantoran	Control	19
TOTAL			38

Data Collection

In this study, data were gathered through a series of tests, which included a pre-test, the instructional treatment, and a post-test. Fraenkel et al. (2012) describe a test as an instrument used to assess an individual's competence, knowledge, or performance within a particular field. To obtain the required data, the researcher administered a writing proficiency test. The sequence of the research procedures is depicted in the diagram below.

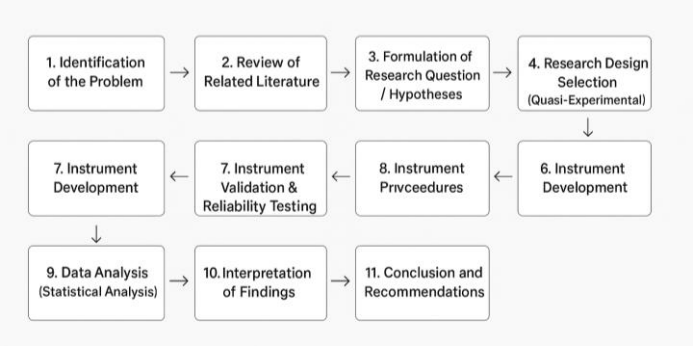

Figure 1. Research's flowcart

Data Analyzing

To assess the students' writing performance, the researcher used a descriptive scoring rubric. This writing assessment rubric includes five key components: content, organization, vocabulary, language use, and mechanics. Each of these aspects is outlined in detail in Table 3.

Table 3. Scoring system in writing test

NO	Component	Score	Classification	Descriptions
1	Content	30	Excellent to Very Good	Knowladgeable-Substaintive-etc.
		25	Good to Average	Some knowledge of subject-adequate range-etc.
		20	Fair to Poor	Limited knowledge of Subject-litle Substance-etc
		15	Very Poor	Does not show knowledge of subject-not substantive-etc
2	Organization	20	Excellent to	Fluent expression-ideas clearly stated-etc.

NO	Component	Score	Classification	Descriptions
			Very Good	
		15	Good to Average	Somewhat choppy-losely organized but main ideas stand out-etc
		10	Fair to Poor	Non fluent-ideas confused or disconnected-etc
		5	Very Poor	Does not communicate-no organization-etc
3	Vocabulary	20	Excellent to Very Good	Sophisticated renge-effective word / idiom choice usage-etc
		15	Good to Average	Adequate range-occasional errors of word/idiom form,choice,usage but meaning not obscured
		10	Fair to Poor	Limited range-frequent errors of word/idiom form choice usage-etc
		5	Very Poor	Essentially translation-litle knowledge of English vocabulary
4	Language use (Grammar)	25	Excellent to Very Good	Effective complex constructions-etc
		20	Good to Average	Effective but simple construction-etc
		15	Fair to Poor	Major problems in simple/complex constructions-etc
		10	Very Poor	Virtually no mastery of sentence construction rules-etc
5	Mechanics	5	Excellent to Very Good	Demonstrates mastery of conventions-etc
		4	Good to Average	Occasional errors of spelling,punctuation-etc
		3	Fair to Poor	Frequent errors of spelling,punctuation, and capitalization-etc
		2	Very Poor	No mastery convention-dominated by errors of spelling,punctuation,capitalization, and paragraph-etc

RESULTS AND DISCUSSION

The Result of the Pre Test and Post Test Score in the Experimental Group

The researcher gave students pre-test for experimental group before conductedthe treatment, then calculated the students' score. After the researcher gave 4 times for treatment to the students in teaching paragraph writing especially in descriptive text used clustering technique, the researcher gave the students post-test which was intended to know how far the students' progress in their writing. In the pre-test and post-test the sample of the students were 19 students. The data of the frequency of the students' score for pre-test and post-test of experimental group can be seen on the table 4 and 6.

Table 4. Frequency of the pre-test score in the Experimental Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	61	1	5,3	5,3	5,3

62	1	5,3	5,3	10,5
63	2	10,5	10,5	21,1
64	5	26,3	26,3	47,4
65	2	10,5	10,5	57,9
66	3	15,8	15,8	73,7
67	2	10,5	10,5	84,2
70	2	10,5	10,5	94,7
71	1	5,3	5,3	100,0
Total	**19**	**100,0**	**100,0**	

Based on the table 4, mode of pre test score in experimental group was 64. the lowest score was 61. the highest score was 71, and in chart 3 mean of the score was 65.37 with standard deviation 2,712. Next, the researcher interpreted the students' score into distribution table as presented on the table 5.

Table 5. The Distribution Score of Pre-test in the Experimental Group

Score Interval		Category	Frequency	Percent
Valid	0-55	Poor	0	0%
	56-75	Average	19	100%
	76-85	Good	0	0%
	86-100	Very Good	0	0%
Total			**19**	**100%**

From table 5 of descriptive statistic result, it was found that criteria of pre-test the experimental group there was no student (0%) who got very good category, there was 19 students (100%) who got average category. In addition, the following table was the frequency of the students' score for post-test of experimental group. It is shown on table 6.

Table 6. Frequency of the post-test score in the Experimental Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	66	2	10.5	10.5	10.5
	67	2	10.5	10.5	21.1
	70	1	5.3	5.3	26.3
	75	4	21.1	21.1	47.4
	76	1	5.3	5.3	52.6
	77	1	5.3	5.3	57.9
	80	1	5.3	5.3	63.2
	81	2	10.5	10.5	73.7
	82	4	21.1	21.1	94.7
	83	1	5.3	5.3	100.0
	Total	**19**	**100.0**	**100.0**	

Based on the table above,mode of the post-test score in experimental group was 75 & 82 the lowest score was 66, the highest score was 83 and in chart 4 the mean of was 75,89 with standard deviation 6.064. Next the interpreted the students' score into distribution table as presented on the table 7.

Table 7. The Distribution score of Post-test in the Experimental Group

Score Interval	Category	Frequency	Percent

Valid	0-55	Poor	0	0%
	56-75	Average	9	47,4%
	76-85	Good	10	52,6%
	86-100	Very Good	0	0%
Total			**19**	**100%**

From the table 7 above, it was gotten that criteria of post-test the experimental group there was no student (0%) who got very good category, there was 10 students (52,6%) who got good category,9 students (47,4%) who got average category, 0 students (0%) who got poor category.

Table 8. Descriptive Statistic of Pre-test and Post-test in the Experimental Group

Statistic	N	Range	Min	Max	Sum	Mean	Std. Deviation	Variance	Skewness
Pre-test	19	10	61	71	1242	65.37	2.712	7.357	0.702
Post-test	19	15	66	77	1442	75.89	6.064	36.766	-0.542

From the table 8, data descriptive statististic of pre-test and post-test experimental group showed the total number (N) was 19,the range score was 10 & 17,the minimum score was 61&66, the maximum score was 71&83,the sum score was 1242 & 1442, the mean score was 65.37 &75.89,the standard deviation was 2.712 & 6.064,the variance was 7.357 & 36.766, skewness score was .702& -.542 and the last kurtosis score was .032 & -1.125.

The Result of the Pre Test and Post Test Score in the Control Group

Before the researcher conducted this research in the control group, the researcher gave a pre-test to the students to know the students' paragraph writing especially in writing descriptive text. After the researcher gave treatment did not use clustering technique, the researcher gave a post-test to know how far students' mastery in writing ability especially in writing descriptive text. In the pre-test and post-test of control group, sample of the students were 19 students. The data of the frequency of the students' score for pre-test and post-test of control group can be seen on the table 9 and 10.

Table 9. Frequency of The Pre-test Score in Control Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	61	1	5,3	5,3	5,3
	62	1	5,3	5,3	10,5
	63	2	10,5	10,5	21,1
	64	5	26,3	26,3	47,4
	65	2	10,5	10,5	57,9
	66	3	15,8	15,8	73,7
	67	2	10,5	10,5	84,2
	70	2	10,5	10,5	94,7
	71	1	5,3	5,3	100,0
	Total	19	100,0	100,0	

From the table 9, mode of the pre-test score in control group 64. median was 65.00, the lowest score was 61. and the highest score was 71. Meanwhile, in chart 1 mean of the score was 65,37 with standard deviation 2.712. Then the researcher interpreted the students' score into distribution table as presented on the table 10.

Table 10. The Distribution Score of Pre-test in the Control Group

Score Interval		Category	Frequency	Percent
Valid	0-55	Poor	0	0%
	56-75	Average	19	100%
	76-85	Good	0	0%
	86-100	Very Good	0	0%
Total			**19**	**100%**

Based on the result of descriptive statistic above, it was found that criteria of pre-test the control group there was no student (0%) who got very good category, there was no student (0%) who got good category, 19 students (100%) who got average category and no student (0%) who got poor category. Furthermore, the following table is the frequency of the students' score for post-test of control group. It is shown on table 11.

Table 11. Frequency of Post-test Score in the Control Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	62	1	5.3	5.3	5.3
	66	4	21.1	21.1	26.3
	67	1	5.3	5.3	31.6
	68	1	5.3	5.3	36.8
	69	1	5.3	5.3	42.1
	70	1	5.3	5.3	47.4
	73	3	15.8	15.8	63.2
	75	6	31.6	31.6	94.7
	77	1	5.3	5.3	100.0
	Total	**19**	**100.0**	**100.0**	

From the table above, mode the post-test score in control group was 75, median was 69.00, the minimum score was 62, and the maximum score was 77. Meanwhile, in chart 2 mean of the score 70.54, with standard deviation 4,438. Then the researcher interpreted the students' score into distribution table presented on the table 12.

Table 12. The Distribution score of Post-test in the Control Group

Score Interval		Category	Frequency	Percent
Valid	0-55	Poor	0	0%
	56-75	Average	18	94,7%
	76-85	Good	1	5,3%
	86-100	Very Good	0	0%
Total			**19**	**100%**

From table 12 of descriptive statistic result, it was found that criteria of post-test the control group there was no student (0%) who got very good category, there was 1 students (5,3%) who got good category,18 students (94,7%) who got average category and no stdent (0%) who got poor category.

Table 13. Descriptive Statistics of Pre-test and Post-test in the Control Group

Statistic	N	Range	Min	Max	Sum	Mean	Std.	Variance	Skewness

							Deviation		
Pre-test	19	10	61	71	1241	65.37	2.712	7.357	0.702
Post-test	19	15	62	77	1346	70.84	4.438	19.696	-0.381

From the table above, data descriptive statististic of pre-test and post-test control group showed the total number (N) is 19,the range score was 10 & 15,the minimum score was 61 & 62, the maximum score was 71&77,the sum score was 1242 & 1346, the mean score was 65.37 & 70.84,the standard deviation was 2.712 & 4.438,the variance was 7.357 &19.696, skewness score was .702 & -.381 and the last kurtosis score was .032 & -1.192.

Statistical Analyses

Test of Normality and Homogeneity

Before analyzing the data, the test of normality and homogeneity data should be measured. In determining of the data, Kolmogorov-Smirnov was used. The results of the normality test of the post-testscore in the experimental and control group were described as in the following on the table 14.

Table 14. Test of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
using clustering technique	.178	19	.114	.865	19	.012
using conventional technique	.215	19	.021	.896	19	.040

Based on the calculation of statistics above, the result of normality test showed the significant value of writing using clustering technique was higher than 0.05 level, which has 0.2, it meant that the distribution of the data in writing using clustering technique was normal. Meanwhile, writing using conventional technique has a significant value 0.2, which was also higher than 0.05. It mean that the distribution of the data writing using conventional technique was also normal.

In addition, to knew the sample were homogenousor not, the researcher used the test of homogeneity of variances. The researcher calculated by SPSS 21.It could be seen on the table 15.

Table 15. Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
1.189	1	36	.283

According to the table 15 above, the calculation of Levene Statistic used SPSS 21, it was found that the value of sig. was .283,it was higher than value of sig. (0.05). So, it mean that the sample taken from experimental and control group were homogeneous.

The Result of Independent Sample t-test

The Independent t-test is the most commonly used method to evaluate the differences in mean between the two groups. To find out whether or not there were any significant differences in descriptive text writing, the researcher compared the result of the post-test in control group and experimental group used Independent Sample t-test. The result Of the SPSS 21 calculation was described as follows:

Table 16. Independent Samples Test

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
nilai	Equal variances assumed	1.189	.283	2.946	36	.006	5.105	1.733	1.591	8.620
	Equal variances not assumed			2.946	33.228	.006	5.105	1.733	1.581	8.630

According to Creswell & Creswell (2018) to test the hypothesis will be tested through the table of criteria of value of t-table. if $t_{\text{-obtain(t-obt)}}$more than the critical value of t- table, so the alternative hypothesis is accepted and null hypothesis is rejected. If $t_{\text{-obtain}}$ ($t_{\text{-obt}}$)lower than the critical value of t-table, so the alternative hypothesis is rejected and null hypothesis is accepted.

Based on the table I9 above, the value of $t_{\text{-obtained}}$= 2.946 was higher than $t_{\text{-table}}$ =2.042. The value of sig. (2 tailed) = 0.00 less than the value significance level (0.05).Finally, the researcher concluded that Alternatif Hypothesis (H_a) of this research was accepted and Null Hypothesis (H_0) of this research was rejected.

CONCLUSION

Based on the analysis of the data in chapter four, it was found that the students' achievement was different Based on the findings in previous chapter, Independent Sample t-test of the post-test score in the Experimental and Control group gave the value of $t_{\text{-obtain}}$was 2.946 and the value of Sig (2-tailed) was 0.00, it meant that the value oft-$_{\text{obt}}$ was 2.946 higher than t-table = 2.042 with df was (n-2) = (38-2) = 36, and value of Sig (2-tailed) was less than the value of significance level (a = 0.05). the Null Hypothesis was rejected and Alternative Hypothesis (Ha) was accepted. It can be concluded there was any significant difference between student who were taught by using clustering technique and student who were taught by using conventional technique of the tenth graders of SMK Muhammadiyah Tawang Rejo. From the data, it was also found that the student can reduced their problem in writing since clustering technique applied in their classroom. By using clustering technique, one of strategy can solve their problem of descriptive paragraph writing and the technique good strategy to get better understand about the material

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