Improving Students' Writing Ability In The Procedure Text Using Duolingo Application At 8 Grade Students Of SMP Negeri 5 Pati 2023/2024

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Abstract: *Improving Students' Writing Ability In The Procedure Text Using Duolingo Application At 8 Grade Students Of SMP Negeri 5 Pati. Final Project, English Study Program, Faculty of Language and Arts Education, Universitas PGRI Semarang. Supervisor I Dra. Maria Yosephin, M.Pd, Supervisor II: Dra. Siti Lestari, M.Pd. This study aims to 1) to find out the improvement of students' writing competence in procedure text before they are taught using the Duolingo application. 2) to find out the improvement of students' writing competence in procedure text skills after they are taught using the Duolingo application. 3) to explain the significant difference in students' writing competence in procedure text taught before and after using Duolingo application. In this study, the researcher used quantitative research. An experimental design was applied in carrying out this study. The researcher took two classes as samples: VIII A (experimental group) and VIII B (control group). The experimental group has been given treatment by duolingo application in procedure text. On the other hand, the control group was not assigned treatment at all. The population in this study was class VIII in the academic year 2023/2024. This study indicated that using Duolingo Application in procedure text is an effective technique. The results of the pre-test mean scores in both classes were 66.34 for the experimental group and 66.94 for the control group. In addition, the mean post-test score of experimental group was 84.78, and the control group was 76.66. These findings were calculated using the t-test formula. The t-test > t-table, based on the test results. T-table 5% percentage is 1.670. the computation shows that 6.180 > 1.670. There is a significant difference in students using the Duolingo application in procedure text for students of grade 8 of SMP Negeri 5 Pati. Students are interested and excited when using Duolingo Application in the learning and teaching process with the goal of developing students' writing skills. Based on the research findings, the researcher concludes that using Duolingo Application in procedure text can help students to develop and improve students writing skills.*

Keywords: *Effective learning, motivation to learn, duolingo application*

BACKGGROUND OF STUDY

Background of the Study

Bashir & Azeem (2015), stated that Language is a system of arbitrary symbols for human beings' communication in speech and writing, which is used by the people of a particular community. Language is a communication system used by humans to interact, exchange information, and convey ideas and feelings between one another. Language also has various functions, such as expressing emotions, communicating, acquiring knowledge, and maintaining cultural and social identity. Language can be spoken or written and can vary from one region or community to another. Language is divided into 3 skills namely speaking, writing, reading, and listening because these three skills are how we use language to communicate. Writing skill has several parts, one of them is procedure text.

Recognizing the significance of the English language, Indonesia, as a developing country, has made English a mandatory component of its educational curriculum. The government's objective is to foster the development of Indonesian human and natural resources by emphasizing English proficiency. This decision is rooted in the understanding that the majority of scientific and technological knowledge is disseminated in foreign languages, with English being the predominant medium. As a result, English has been designated as the primary foreign language that must be formally taught to all Indonesian students, commencing from Junior High School (SMP) through the university level.

By the 2013 revised curriculum for Junior High School, the aim of teaching writing is for students to enhance their proficiency in conveying meaning and utilizing appropriate rhetorical structures through various types of written language in everyday contexts. These types include descriptive, recount, narrative, report, and procedure texts. According to Anderson, a procedure text provides instructions to readers on how to create or achieve something or carry out a specific action. The objective of teaching writing procedure texts is to develop students' ability to accurately compose the standard structure of a procedure text. This structure typically consists of three parts: the goal, the materials, and the steps. In the goal section, students are expected to express the purpose of the text through a title. Subsequently, in the materials section, students should list the necessary ingredients or resources required for the procedure. Finally, in the steps section, students are to provide a sequential explanation of the procedure required to achieve the stated goal.

Despite the standardized curriculum set by the Ministry of Education and Culture of the Republic of Indonesia (Kemendikbud), many Indonesian students still struggle with effective written communication, particularly in the case of procedure texts. This was highlighted by an English teacher at SMPN 5 PATI. Students face difficulties in comprehending the generic structure of procedure texts and struggle to construct sentences correctly. This is evident from their writing scores, as only 7 out of 40 students achieved the Minimum Passing Grade (MPG) of 75 based on their transcripts. Additionally, during the researcher's teaching practice, it was observed that many students face challenges in writing procedure texts, often arranging the steps incorrectly. Furthermore, students exhibit a lack of interest in writing due to uninteresting and unengaging learning processes. Given these reasons, there is a need to enhance students' writing skills to align with the objectives of the English subject, as outlined in the Curriculum 2013 standards.

After I observed the teaching practicum at SMP Negeri Pati, I found that the English writing procedure text skills of the students in the school were weak, and they lacked coherence

in practicing their writing skills. Moreover, the teaching media used by teachers in class affects the learning and teaching process. The use of conventional media in teaching writing is still prevalent in the classroom. (Sukardi et al., 2017) also reported that the learning process in the participant school is still carried out conventionally, where the learning process is still focused on the teacher, this causes the students to be less motivated to find new things that can be used as experience in the learning process. This results in less attractive and less optimal learning. Therefore, it is essential to adopt an interesting and student-centered approach to the learning process to keep students engaged and interested. Thus a learning process that is interesting and more focused on students is needed so that students feel enjoyed.

Based on these problems, it can be concluded that the problem of "Improving Students' Writing Ability In The Procedure Text Using Duolingo Application At 8 Garde Students Of SMPN 5 Pati" , is facilitated in this study. The problem is described in serval statements as follows:

1. How is the improvement of students' writing competence in procedure text before they are taught the Duolingo application?
2. How is the improvement of students' writing competence in procedure text after they are taught using the Duolingo application?
3. What is the significant difference betweenstudents' writing competence in procedure text taught before and after using the Duolingo application?

PREVIOUS STUDIES

The first previous study, by Erfiani and Cut Raudhatul Miski (2022) in their article entitled "The Use of Duolingo in Enhancing Students' Vocabulary Mastery at SMA Negeri 3 Bangko Pusako During Pandemic Covid-19" published by the Indonesian Journal of In In In Integrated In the In English In Language In Teaching Volume 8, No. 1 in June 2022, from the State Islamic University of Sultan Syarif Kasim Riau which aims to evaluate significant differences in students' vocabulary mastery between those who use the Duolingo application and those who do not use the application at SMA Negeri 3 Bangko Pusako during the Covid-19 Pandemic. This study uses a quantitative method with a quasi-experimental design. The two classes involved in this study were the experimental group (using Duolingo) and the control group (without using Duolingo). The results showed that the independent t-test shows a significance value of 0.000 which is smaller than the alpha of 0.05. This means that the alternative hypothesis (Ha) is accepted while the null hypothesis (Ho) is rejected.

In other words, there was a significant difference in students' vocabulary mastery between those who were taught using Duolingo and those who were not at SMA Negeri 3 Bangko Pusako.

The second, Noeris Meiristiani and Nastasia Agistina (2022) in their article entitled "Developing Students' Skills in Writing Procedure Text Using YouTube Videos" published by Jurnal Ilmiah Lingua Idea Volume 13, No. 1 in June 2022, from Pancasakti University Tegal which aims to find out whether the use of YouTube videos is effective in teaching procedure text writing during online learning. This research was conducted using an experimental approach, involving all students of Class XI TMI in the first semester of SMK YPT Tegal in the 2020/2021 academic year, with a total of 327 students. Samples were taken from as many as 40 students using a cluster random sampling technique. They were divided into two groups: (1) a control group consisting of 20 students who were not taught using YouTube videos, and (2) an experimental group consisting of 20 students who were taught using YouTube videos. The data were then analyzed using SPSS version 22 and the results showed that the average post-test score for the two groups was $78.50 > 64.50$. The results of the hypothesis test with the independent sample t-test showed a significance value of 0.000, which is smaller than the significance value of 0.05. This means that Ha is acceptable or there is a significant difference between the experimental and control groups.

RESEARCH METHODS

Design of the Research

This research is about "Improving Writing Procedure Text Skills Through the Duolingo Application: A Study on Grade 8 Students of SMP Negeri 5 Pati". This research methodology is a quantitative experimental research. According to Creswell (2014), "Quantitative research uses a scientific approach and relies on numerical data collection, statistical analysis, and hypothesis testing to answer research questions".

In this study, the researcher used a quasi-experiment design to analyze the "Improving Writing Procedure Text Skills Through the Duolingo Application" as a way to improve students' writing skills. The researcher has two groups: the experimental and control groups. The researcher used three steps to ascertain the responses from those groups, they are pre-test, treatment, and post-test. The design of the experiment research was as follows:

The Design of the Experiment Research
Table 1

Group	Pre-test	Treatment	Post-test
Class 8A (Experiment Class)	01	X	02
Class 8B (Control Class)	03	-	04

Note:

O1: Pre-test for the experimental group

O2: Post-test for the experimental group

O3: Pre-test for the control group

O4: Post-test for the control group

X: Treatment using

Subjects of the Research

1. Population

The population is the sum of all elements, subjects, or members who have one or more characteristics from which the research subject is taken. The population of this study were all students of class VIII SMP N 5 Pati. There are 288 students divided into nine classes.

2. Sample

The sample is part of the population. From a total of 288 students, the researchers took samples from a population of 64 students, 8A and 8B of each class consisting of 32 students.

Instrument of the Research

In this study, researchers used test instruments to collect data. The instrument was tested to measure students' writing text procedure ability. There are two types of tests that researchers use, namely pre-test and post-test. To do the test, the researcher asked the students to practice writing a text procedure. This test is used to determine students' writing ability before being taught using the Duolingo Application.

Method of Data Analysis

The data analysis technique is an analytical technique used to determine the results of research. The researcher analyzed data using quantitative data by statistical methods by SPSS. The researcher used the scoring rubric of the writing test procedure to measure students' pretest and posttest results. To find out the effectiveness of improving students' writing ability in the procedure text using the Duolingo application for 8th-grade students of SMPN 5 Pati.

According to Brown (2007), there are 5 five scales. These scales will be used to classify the written procedure text by students.

Table 2

Score	Definition
1-20	Organization
1-20	Logical Development of Ideas
1-20	Grammar
1-20	Punctuation
1-20	Style & quality expression (Vocabulary)

The researcher analyzed the data statistically by using the Independent sample T-test through SPSS 27.0. The researcher calculated the t-table from the value of df (degree of freedom) and the significant value (with a significant level of 5% at a 95% confidence level). Then t-table can be determined by the following formula:

$$t_{table} = \frac{\alpha}{2} ; (df)_2$$

if $t_{count} > t_{table}$ so H_0 is rejected and H_A is acceptable.

if $t_{count} < t_{table}$ so H_0 is acceptable and H_A is rejected.

After assigning grades to students' work, the researcher employed the completed grading system given by Brown (2004):

Level of Achievement

Score	Level of Achievement	Criteria
90-100	A	Excellent
80-89	B	Good
70-79	C	Adequate
60-69	D	Inadequate/Unsatisfactory
Below 60	E	Fail/Unacceptable

FINDINGS AND DISCUSSION

Finding

The study participants consisted of two groups: the experimental group, which consisted of 32 students from class VIII A, and the control group, which consisted of 32 students from class VIII B. Then, both the experimental and the control groups were selected. Then, both the experimental and control groups conducted a pre-test and post-test. The students were given instructions to write a procedure text. Comparing the students' learning outcomes before and after the treatment showed the effectiveness of using the Duolingo application for writing procedure text.

a. The Student's Ability in Writing Procedure Text without the Duolingo Application.

The control group was a group of participants who did not use the Duolingo application while acquiring skills in composing procedure text. In the control class treatment, the researcher used conventional methods to instruct the composition of procedure text. This group consisted of 32 students who participated in the test. Before the treatment, the first step taken was to conduct a pre-test. The researcher used conventional methods to explain the procedure text material. After receiving conventional teaching without using the Duolingo application, students were given a post-test to evaluate their understanding of the material. Below is a table containing the results of the data obtained:

Table 3
The Distribution of Pre-test Score of Control Group

Pre-test Control

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	54-58	3	9,4	9,4	9,4
	59-63	5	15,6	15,6	25,0
	64-68	9	28,1	28,1	53,1
	69-73	8	25,0	25,0	78,1
	73-78	7	21,9	21,9	100,0
	Total	32	100,0	100,0	

Table 4
Statistical Data of Pre-test Score of Experiment Group

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pretest	32	55	78	66,94	6,430
Valid N (listwise)	32				

Table 5
The Distribution of Post-test Score of Control Group

Post-test Control

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	64-68	1	3,1	3,1	3,1
	69-73	7	21,9	21,9	25,0
	74-78	11	34,4	34,4	59,4
	79-83	8	25,0	25,0	84,4
	84-88	5	15,6	15,6	100,0
	Total	32	100,0	100,0	

Table 6
Statistical Data of Post-test Score of Experiment Group

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Posttest	32	65	85	76,66	5,475
Valid N (listwise)	32				

The table above shows the comparison of the results obtained by students without the Duolingo application when writing procedure text. In the pre-test table, it shows that the average score of the pre-test is 66.94. Meanwhile, the average score obtained after the post-test is 76.66. The difference in the average score only increased by 9.72 points after the treatment.

b. The Student's Ability in Writing Procedure Text with the Duolingo Application.

The experimental group consisted of 32 students who successfully completed the exam. The students were required to take a pre-test. The pre-test was conducted before the implementation of the treatment and post-test. After the pre-test was conducted, the experimental group received the prescribed treatment. The treatment consisted of presentations and examples using the Duolingo application to facilitate writing text. After

the treatment, a post-test was administered to the students. This post-test aimed to ascertain whether there was a statistically significant difference between the scores of the students who used the Duolingo application and those who did not. Below is a table displaying the results of the data analysis:

Table 7
The Distribution of Pre-test Score of Experiment Group

Pre-test Experiment Class

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	54-59	5	15,6	15,6	15,6
	60-65	13	40,6	40,6	56,3
	66-71	5	15,6	15,6	71,9
	72-77	7	21,9	21,9	93,8
	78-83	2	6,3	6,3	100,0
	Total	32	100,0	100,0	

Table 8
Statistical Data of Pre-test Score of Experiment Group

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test Experiment Class	32	55	80	66,34	7,644
Valid N (listwise)	32				

Table 9
The Distribution of Post-test Score of Experiment Group

Post-test Experiment Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	74-79	4	12,5	12,5	12,5
	80-85	16	50,0	50,0	62,5
	86-91	10	31,3	31,3	93,8
	92-97	2	6,3	6,3	100,0
	Total	32	100,0	100,0	

Table 10
Statistical Data of Post-test Score of Experiment Group

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Score	32	75	95	84,78	5,034
Valid N (listwise)	32				

The table above explains the comparison of the scores of students who were taught and those who needed to be acquainted with the Duolingo application when writing procedure texts. The mean score of the pre-test is 66.34. Meanwhile, the average post-test score is 84.78. The average value shows that the class that used the Duolingo application to write procedure text had a higher score of 18.44 after receiving treatment.

c. The Significant Difference of Students' About Writing in Procedure Text Between With and Without Using the Duolingo Application.

The post-test was given to the two groups to determine the level of difference in students' scores between those who used the Duolingo application and those who did not in writing procedure texts. The results of the scores showed a significant difference. The following is a table of the scores of the Experiment and Control groups:

Tabel 11
The Differences Between Pre-test and Post-test of Experiment Group and Pre-test and Post-test of Control Group

Data	N	Min	Max	Mean	Mean Different
Pre-test Experiment	32	55	80	66.34	18,44
Post-test Experiment	32	75	95	84,78	
Pre-test Control	32	55	78	66,94	9,72
Post-test Control	32	65	85	76,66	

From the table above, the data presented shows that the average score obtained from the pre and post-test given to the experimental group was 18.44. Meanwhile, the control group's intermediate pre and post-test score was 9.72. It can be concluded that the average value of the experimental group was higher than that of the control group. In addition, in the experimental group, the average was higher after the Duolingo application treatment than before. This shows that using the Duolingo application in writing procedure text is a better way for students to improve their writing ability.

Discussion

From the first research question, it showed that the experiment and control group scores are low. To address this question, the researchers utilised data relating to the pre-test scores of both the experimental and control groups. The mean pre-test score of the control group was 66.94. The obtained scores varied between 55 to 78. As a result of not being exposed to the Duolingo application, the control group only received conventional learning methods. The control group subsequently completed a post-test. The mean score on the post-test was 76.66, ranging from a minimum of 65 to a maximum of 85. It can be concluded from these results that the control group has more opportunity for development in terms of their proficiency in writing procedure texts because numerous pupils continue to achieve poor grades. Meanwhile, the mean score on the pre-test for the experimental group was 66.34. The pre-test provided a variety of scores ranging from 55 to 80. As shown in Tables 4.1 and 4.5, many students obtained scores below 79 (adequate). Due to their pre-treatment difficulties with composing procedure texts, the students achieved poor grades. In this study, the researcher implemented a treatment to enhance the students' writing abilities, specifically in procedure text.

From the second research question, The researchers utilised the experimental group's post-test score data to address the second research. The post-test value was used because the post-test was administered after the impact of the Duolingo application treatment. After completing the pre-test, the experimental group was administered the Duolingo application as a form of treatment to improve their proficiency in writing procedural texts. The post-treatment evaluation was conducted. To enable researchers to figure out the differences provided. The range of post-test scores is from 75 to 95, with an average score of 84.78. Indeed, this value surpasses the mean value obtained in the pre-test. The post-test scores demonstrated excellent results. Students' writing abilities enhanced after utilising the Duolingo application. The score's outcome, initially classified as adequate, was subsequently upgraded from good to excellent. It can be conclude, using the Duolingo application can improve students' proficiency in composing procedure texts.

SUGGESTIONS

According to the findings of the research, the following are some possible suggestions that could be taken into consideration when it comes to the teaching of English skills:

1. For Teacher

   Teachers can apply the Duolingo application to teach students how to write procedure text with the correct vocabulary so that students' writing skills increase and students become more interested in using the Duolingo application to learn English, especially for writing. Therefore, students will feel energized, and joyful and find it easier to understand and accept the provided material.

2. a. Students should be more motivated to learn English to enhance their skills, particularly in writing. Students can use any entertaining method to improve their text-writing abilities.

   b. Students should enhance their English language skills, particularly their ability to compose procedure text. Students can use the Duolingo application to develop their vocabulary.

   c. Students should learn more about the text's grammar, vocabulary, and structure. Learning can be from any source.

3. Readers

   For the readers who read this research, writing is easy. It depends on how the teacher explains things and the willingness to write.

4. Researchers

The results of this research can be used as a guide to improving writing skills using the Duolingo application. It is expected that the subsequent researchers will be able to apply the Duolingo application method the English skills.

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