

## The Effect of Paperpal AI-Based Learning on Students' Motivation in EFL Writing Classroom

Uni Dwi Ramadhani  
unidwi11@gmail.com

English Education Department, Faculty of Teacher and Education, Universitas PGRI Jombang, Indonesia

Doi: <https://doi.org/10.210985/et7kp140>

Date of Submission: 02-02-2025

Date of Acceptance: 30-04-2025

Date of Publish: 30-04-2025

### Abstract

Writing is one of the skills that must be mastered in learning English and is an important part, but many students do not like it and are not enthusiastic about taking writing classes, which hinders their writing skills. In this case, it should be noted that the use of technology-based media such as Paperpal Artificial Intelligence can be a solution to overcome this problem. Paperpal AI can be chosen to increase student motivation in EFL writing classes. This study aimed to determine the effect of artificial intelligence-based learning on increasing student motivation in writing classes. This study used a quantitative approach with a quasi-experimental design involving two classes, with each experimental class consisting of 32 students and a control class consisting of 32 students. The instrument used was a questionnaire. The researcher analyzed the data using the Independent Sample T-Test. The study results showed a significant difference and a high increase in student motivation towards writing learning in the experimental and control classes. It is recommended that teachers use this media as an innovation in teaching and learning activities to improve students' writing skills. The limitations of this study only examined student motivation in writing classes. It is recommended that further researchers pay attention to the process of using Paperpal AI media for research materials, understanding, and the use of other research methods.

**Keywords:** Effect, Writing, Motivation, Paperpal, Artificial Intelligence

### 1. INTRODUCTION

In this era, technology is very rapid, which is an important part and the center of human attention. Technology can be used in various fields, including education. Information technology is one of the important factors that enables the speed of transformation of knowledge for students and the nation's generation in general (Januar et al., 2021). Technology is a vital language teaching tool in this case because the use of technology can increase student motivation (Yundayani, 2019). In the world of education, information technology is used as part of the learning media to present lesson materials to make them more interesting, not monotonous, and facilitate the delivery of material (Anshori, 2018). Therefore, technology is very

helpful in the development of education as an innovation in learning in the classroom. In every learning, one thing that must be watched out for is to create interactive, creative, fun learning, and proper use by providing interesting media innovations.

This media combines and synergizes all media, consisting of text, graphics, photos, videos, animations, music, narration, and interactivity programmed based on learning theory (Fitriani, 2021). Through the media, a new classroom atmosphere is created in the teaching and learning process. One of the trending technologies of this era is AI, with various types and the latest features designed like human intelligence. AI has a new learning experience in content creation, writing, graphic design, providing feedback, and tutoring (Nazari et al., 2021). AI that can be a learning tool, such as Paperpal AI. According to Auro et al (2023), Paperpal AI is an AI tool that is very useful for writers or non-writers in helping to improve the process of creating or perfecting written results. Paperpal AI has many advantages and features, so it produces interesting writing with the use of correct grammar. The presence of media in classroom learning activities will certainly have an impact on students. Likewise, in writing classes, students can express creative ideas, get feedback, avoid plagiarism, and learn the correct grammar to use. Pratiwi & Huda (2023). Writing is a skill that requires students to follow the writing stages carefully to produce good paragraphs or essays.

Therefore, in every learning, of course, innovations are needed, but in teaching activities, motivation cannot be separated; even before learning, teachers are expected to provide a little motivation so that students feel enthusiastic about continuing learning in class or outside the classroom. Motivation itself is an encouragement to do something positive. According to Siska et al. (2021), motivation is a factor that can help students trigger a sense of enthusiasm and interest in learning something, such as writing. Meanwhile, according to Lathtif (2017), motivation is the main factor that teachers must pay attention to because it can determine the success or achievement of students in learning. Therefore, motivation can help someone to improve their work results in any aspect of life to be better.

The gap between this research and previous studies is the lack of student motivation in taking English writing classes, which can be innovated by using intelligence to contribute through Paperpal as a more interesting assignment media. Several researchers focus on materials, learning strategies, and others. Several researchers analyzed student motivation (A. Pratiwi et al., 2021; Ariff et al., 2021; Guspariar et al., 2023). So, it is necessary to provide innovations with technology-based media that have appeal and are in line with developments. Thus, this study aims to combine writing skills with student motivation using artificial intelligence learning media in Paperpal. It also shows that online teaching brings varying qualities depending on student motivation, which must be considered when using technology. Which should be considered for the use of technology.

The novelty of this research alignment lies in the effectiveness of using Paperpal artificial intelligence as a learning medium for writing classes. In this way, we can focus on the level of motivation obtained by students and their academic writing skills, especially in English, to create personal letters at the level of high school students. Motivation is seen when students carry out writing classes with the teacher. Teachers who make new contributions innovate learning using Paperpal as a medium and pay attention to improving students' writing skills.

---

<sup>1\*</sup> Corresponding author, email: [xxxxx@.mail.com](mailto:xxxxx@.mail.com)

Students' Motivation in EFL Writing Classroom. *ICPD Journal of Global Multidisciplinary Innovations (IJGLOMI)*, Vol. Number(Issue Number), Beginning page- End page.

Received Month Date, Year; Revised Month Date, Year; Accepted Month Date, Year

**DOI:** xxxx.xxxx.xxxx

## **2. LITERATURE REVIEW**

### **2.1. Artificial Intelligence**

Artificial Intelligence is a field of computer science that aims to realize meaning in information autonomously. AI is used to design automated devices that can analyze the environment and perform tasks as humans do (Nazari et al., 2021). Artificial Intelligence is a system with the same intelligence as humans and is characterized by the ability to learn, adapt, solve problems, make decisions, and understand human language (Shidiq, 2023). AI is a useful intelligence in EFL English language classes with rapid development and can help in facilitating grammar checking, writing assignments, or the like, and creating written work automatically (Marzuki et al., 2023). This tool has many types with different working speeds and features for each AI, such as Paperpal (AI), which helps in writing a work or checking a piece of writing automatically without paying. According to Marzuki et al. (2023), mention the types of AI that can be used in writing and helping students, including Paperpal. According to Stojanovic (2023), Paperpal is an AI used by writers as a feedback tool in the writing process so that writing can be written well. Paperpal is used to produce writing and helps to check the writing results made from the features it has.

#### *2.1.1 Advantages and Disadvantages of Artificial Intelligence*

Marzuki (2023) stated that in every media development, there are advantages and disadvantages. Advantages of AI systems will impact learning Motivation, skills, and knowledge as proper learning outcomes (Alam, 2021; Luckin, 2017; Ouyang & Jiao, 2021). This artificial intelligence is easy to access, and the processing is speedy. AI could be an excellent tool for students to experiment with different writing styles and ideas (Marzuki et al., 2023). Apart from that, the advantages of Paperpal AI are that it can be accessed easily, has good speed, is free, corrects words, and has many features that are very helpful in writing English and other foreign languages. And the disadvantages of AI are that these tools may not fully understand the intricacies and nuances of human language and emotions, producing suggestions that may not be appropriate or accurate in specific contexts (Haleem et al., 2022). According to Iskender (2023) provides a critical perspective is provided, arguing that using AI writing tools may reduce necessary thinking skills if students become too dependent on such tools. Therefore, we must understand the benefits of using AI. Artificial intelligence that looks so perfect also has shortcomings that need to be considered, We must be good users and pay attention to every aspect of our needs.

### **2.2. Motivation**

Motivation is an encouragement that causes someone to do something and creates positive values within themselves. According to Deci & Ryan (2020), motivation is the force that drives individuals to carry out certain activities. Motivation is a crucial element of education and plays a vital role in the success of the learning process (Kew et al., 2018). Motivation aims to move or awaken someone to consciously and deliberately create the desire and ability

to do something so that they can get results and achieve the desired goals, so it is very important to apply it to yourself. According to Deci & Ryan (2020), there are two basic types of goal motivation: intrinsic motivation and extrinsic motivation. These two types are closely related to each other in creating and increasing motivation within oneself. The motivation level can be used to see whether students have high motivation or low motivation during learning with the specified value.

### 2.2.1 Types of Motivation

Intrinsic motivation is the motivation inferred from the understudy self, such as the desire to secure information, the craving to realize learning objectives, the drive to meet learning needs, and Extrinsic Motivation could be a motivation that comes from the exterior of the student's self, such as parents' requests, a comfortable learning environment, fun learning companions, and curious and repulsive learning activities (Aryanika, 2016). According to Deci & Ryan (2020) Intrinsic is like motivation that arises from within oneself when carrying out an activity with self-improvement, so that it results in a change in perspective and significant improvement, while extrinsic motivation is motivation that gets encouragement from outside or various parties that help support someone to do something better. This type of motivation is very important in encouraging someone to do an activity in school learning, students will feel appreciated and learn to be disciplined (Nayir, 2017). Intrinsic and extrinsic motivation are relevant continuities to help in increasing students' learning motivation. Students will feel they are getting something new, both in terms of the nuance of learning and their feelings in writing or other learning.

## 2.3. Writing

Writing is a process that allows writers to express ideas and thoughts, and how writers construct language (Brown 2003: 2019). Accordingly, Pratiwi & Huda, (2023) Writing could be a skill that requires students to carefully follow the stages of writing to create significant sections or essays. Silvia & Roza, (2022) When learning to write a letter in a foreign language, there is a possibility of an error due to differences in writing structure between a foreign language and a mother language. Writing has its types of division, while according to Brown (2004: 2019), there are main genres of Writing, as follows: academic writing, job-related writing, and personal writing. Components of writing such as organization, content, grammar, vocabulary, and mechanics. writing becomes an important part of English language skills. By writing, students will understand the writing mechanism properly and correctly according to the material obtained during learning. There are many things that students need to pay attention to in creating written work so that it becomes beautiful and easy-to-understand written work.

### 3. METHODS

This study uses quantitative data analysis with quasi-experimental research. Experimental research is a research method carried out using experiments, used to determine the effect of independent variables (treatment) on dependent variables (outcomes) under controlled conditions (Sugiyono, 2019). Experimental designs have three designs: pre-experimental design, quasi-experimental design, and true experimental design. The experiment aims to determine the effect of cause and effect. This study used a pretest-posttest design, namely, the control class received one type of application, but it was different from the experimental class, which received different treatments over a certain period. Each group will be given a pretest to determine the initial conditions in the class.

From the results of the application, the researcher will provide a posttest to compare the results and see the differences in the control class and the experimental class. The population of this study was all students of class XI SMKN KUDU JOMBANG located in Kudu District. The population at the school was 64 students. where the sampling used the Cluster sampling technique. The cluster sampling technique is a sampling technique to shows which objects will be studied by dividing the population that has the same characteristics into clusters. The data in this study were obtained from the provision of student motivation questionnaires in the writing classroom that had been prepared. The researcher used the questionnaire as a pretest and a posttest. At the beginning of the pretest, or pre-questionnaire was given to determine the initial level of students' understanding in the class in writing activities before receiving the new implementation, and the posttest or post-questionnaire aimed to determine the extent of the development or increase in student motivation after receiving the implementation. After both groups received a pretest in the experimental class, the appropriate implementation was given. The experimental class during the learning activity used Paperpal Artificial Intelligence supporting media as a writing assignment tool, while the control group used Conventional Learning strategies. Then the two groups were given a posttest to determine the significant effect between the control class and the experimental class in the EFL writing classroom learning.

In this study, the researcher used the Student Writing Motivation Questionnaire as a research instrument. The questionnaire was used to measure the level of students' writing motivation to classify students into high and low levels of writing motivation. A questionnaire with a Likert scale, where the questionnaire is designed with indicators related to students' writing motivation. A writing comprehension test is used to assess students' achievement in EFL writing comprehension. The questionnaire is designed with Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1) adapted from Payne (2012) and used by other studies such as Surastina (2018). These dimensions involve two important factors in motivation, namely intrinsic and extrinsic motivation.

### 4. RESULTS

This study uses data analysis by testing the Independent Sample T-Test with a significance level of  $\alpha = 0.05$ . Before applying the Independent Sample T-Test, it is necessary to know that there are 2 requirements, namely the normality and homogeneity tests. The normality test uses the Lilliefors test, which can be seen in Table 1, while the homogeneity of variance is measured by the Levene test shown in Table 2.

## 4.1 Test of Normality

**Table 4. 1 Test of Normality**

		Shapiro-Wilk		
	Class	Statistic	Df	Sig.
Students Motivation	Experimental Class	.980	30	.786
	Control Class	.943	32	.563
Intrinsic Motivation	Experimental Class	.980	30	.340
	Control Class	.956	32	.440
Extrinsic Motivation	Experimental Class	.975	32	.115
	Control Class	.956	30	.133

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

a. Lilliefors Significance Correction

Based on Table 4.1 above in the Shapiro-Wilk table, the Sig value. Student motivation values in the experimental .786 and control class .563. Intrinsic motivation has values of .340 and .440. In comparison, extrinsic motivation has values of .115 and .133. All of these results have a high value. The value is high, so it can be declared normally distributed because it is  $>0.05$ .

## 4.2 Homogeneity

**Table 4. 1 Homogeneity**

	Levene Statistic	df1	df2	Sig.
Students_Motivation	.488	1	62	.487
Intrinsic Motivation	.000	1	62	.990
Extrinsic Motivation	.862	1	62	.357

In the homogeneity table above, it can be seen in the Sig value section of the experimental class and the control class. namely student motivation=  $487 > 0.05$ , intrinsic motivation =  $990 > 0.05$ , and extrinsic motivation=  $357 > 0.05$ . The significance (sig.) of the homogeneity test from this data has a high value because  $> 0.05$ . This means that the two classes have the same variance and the results are above homogeneous and equivalent.

## 4.3 Group Statistics

**Table 4. 2 Group Statistics**

	Class	N	Mean	Std. Deviation	Std. Error Mean
Students Motivation	Experimental	32	85.31	2.472	.485
	Control	32	78.22	1.472	.437
Intrinsic Motivation	Experimental Class	32	58.09	2.115	.374
	Control Class	32	53.34	1.982	.341
Extrinsic Motivation	Experimental Class	32	27.22	1.979	.350
	Control Class	32	24.88	1.669	.300

In group statistics, the table shows that the mean of student motivation in the control group was 78.22 (N=32), and in the experimental group 85.31 (N=32). The mean result can be seen in class 1, namely the control class, and class 2, namely the experimental class, where class 2 has a higher average than class 1. The standard deviation of student motivation is 2,472 experimental group and 1.472 control group. Therefore, the average results show that the class that uses artificial intelligence has a

higher average compared to those that do not use it.

**Table 4.4 Independent sample t-test**

		t-test for Equality of Means						
		T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
							Lower	Upper
Students Motivation	Equal variances assumed	10.872	62	.000	-7.094	.652	-8.398	-5.789
	Equal variances not assumed	10.872	61.352	.000	-7.094	.652	-8.398	-5.789
Post Intrinsic	Equal variances assumed	-9.388	62	.000	-4.750	.506	-5.761	-3.739
	Equal variances not assumed	-9.388	61.474	.000	-4.750	.506	-5.761	-3.738
Post Extrinsic	Equal variances assumed	-5.082	62	.000	-2.344	.641	-3.266	-1.422
	Equal variances not assumed	-5.082	60.608	.000	-2.344	.461	-3.266	-1.421

From the Independent Sample T-test table above, the sig (2-tailed) Post Motivation shows 0.000. This means that if  $\text{sig} < (0.05)$ , the significance value is lower than the significance level ( $0.000 < 0.05$ ). From these results, it can be seen that there is a difference in the average scores in the experimental class and control class in the research. It can be concluded that the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_a$ ) is accepted, which means that there is a significant influence in writing classes on the motivation of students who are taught using Paperpal artificial intelligence media. Overall, it can be concluded that teaching English in writing classes using artificial intelligence media in middle and high schools is very effective



## 5. DISCUSSION

Based on the purpose of the study to conduct an investigation, it was found that the artificial intelligence media used to increase student motivation in English writing classes can be seen from the difference in student learning motivation scores in the experimental and control classes. The results of the average motivation score in the experimental class were higher than the control class can be seen in Table 4.3. Group statistics. Several researchers (Guspiar et al., 2023; Ariff et al., 2021) explained that the level of student motivation in learning to write showed low performance. Therefore, researchers must innovate in learning to increase student motivation in writing English. The use of this media is an extrinsic factor that can help teachers in teaching and learning activities. According to several researchers (Anita & Kardenia, 2021; Silalahi et al., 2022), media, several types of which help create student motivation during the teaching and learning process in the classroom. The study reviewed the level of effectiveness of the use of learning media for students. The many types of media that can be used during learning are carried out, making it important factors in knowing student motivation. There is artificial intelligence that can be used as a learning medium. AI itself can be accessed anywhere and anytime for daily activities. AI is a technology that can help humans in doing various things, therefore, AI is often called 'adopting human intelligence' (Fitria, 2023; Moybeka et al., 2023; Stojanovic, 2023). AI can be used in education. The strong influence of AI on increasing student learning motivation. Artificial intelligence has many types, one of which is Paperpal. Paperpal is one part of AI that is used in writing, either correcting or creating writing. Paperpal is one of the sophisticated AI choices because it has many easily accessible features, such as grammar, so it is highly recommended for writing media (A. Pratiwi et al., 2021). Therefore, this media can help increase student learning motivation in writing classes. Maybe many students don't like writing, but when learning something new, it will arouse curiosity so that students feel happy and enjoy the teaching and learning process in English writing classes. From the results of the explanation above, the researcher innovated by using artificial intelligence media in writing classes to see students' learning motivation. This was done to determine the difference in students' learning motivation in writing classes that were given learning media and in classes that were not given learning media. The results of the study showed a significant difference in students' learning motivation in writing classes between the experimental class and the control class. The results can be seen in the Table. 4.

Many things need to be considered in creating effective and efficient learning. The difference in reading motivation in the experimental class and the control class shows that students' writing motivation can increase by using Paperpal AI media. This increase in writing motivation is also in line with students' willingness to learn to write better. The findings of this study expand on the findings of A Pratiwi (2021), who proved that the use of AI can increase learning motivation. Therefore, this study focuses on examining whether Paperpal AI media can increase students' motivation in learning writing in writing classes.

## 6. CONCLUSION

Based on the analysis that the researchers have carried out, the researchers concluded whether artificial intelligence media can effectively increase student motivation in writing classes. In this research, there were two classes, namely the experimental class, where this class provided applications in the use of artificial intelligence, while in the control class, students did not receive treatment using media; they only presented writing material in learning. English that has been adapted to students' abilities. From the findings that have been processed, researchers found that there was a significant difference in the results of questionnaire scores regarding students' motivation in applying artificial intelligence in writing classes with students who were taught without implementing Paperal AI. This is obtained from the results of statistical calculations in the previous chapter. Researchers carried out the calculation process using the SPSS 24.0 for Windows program.

From the calculation results obtained, the researchers compared the post-test scores between the experimental and control classes. After that, the researcher calculated and analyzed the data using the Independent Sample T-test. The results of the data analysis can be seen in the sig section. The 2-tailed in this result has a value of 0.000, which means the value is less than 0.05. So, it can be stated that the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_a$ ) is accepted. So, the application of artificial intelligence learning media has proven effective and can increase students' writing motivation compared to not using artificial intelligence. The use of AI Paperpal media has proven effective in increasing English writing motivation in second-grade students at SMKN Kudu Jombang in the 2023/2024 academic year.

## REFERENCES

- Aryanika, S. (2016). Motivation and Writing Ability. *English Education*.
- Ary, Donal, et al. (2010). Introduction to Research in Education (Eighth Edition). United States of America: Wadsworth.
- Brown, H Douglas (2003: 2019). Language Assessment Principles and Classroom Practices, California: Longman University Press.
- Brown, H Douglas (2007: 2019). Principles of Language Learning and Teaching, 5<sup>th</sup> Edition. New York: Pearson Longman Inc.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior*. Springer US. <https://doi.org/10.1007/978-1-4899-2271-7>
- Deci, E. L., & Ryan, R. M. (2000). *Self-determination theory*.
- Mahmud, F. A. (2023). Investigating EFL Students' Writing Skills Through Artificial Intelligence: Wordtune Application as a Tool. *Journal of Language Teaching and Research*, 14(5), 1395–1404. <https://doi.org/10.17507/jltr.1405.28>

Marzuki, Widiati, U., Rusdin, D., Darwin, & Indrawati, I. (2023). The impact of AI writing tools on the content and organization of students' writing: EFL teachers' perspective. *Cogent Education*, 10(2), 2236469.  
<https://doi.org/10.1080/2331186X.2023.2236469>

Payne (2012). Development of the academic writing motivation questionnaire.

Pratiwi, A., Nurjannah, N., & Wanto, H. (2021). Exploring Students' Motivation in Writing Learning: A Case Study of University Students. *Academic Journal Perspective : Education, Language, and Literature*, 9(1), 50.  
<https://doi.org/10.33603/perspective.v9i1.52>

