

The Effectiveness of Generative Pre-trained Transformer (GPT) Chat in Improving Students' Writing Skills at SMK PGRI 2 Ponorogo

Rita Nur Listianingsih¹, Fenty Andriani²

^{1,2}State Islamic Institute of Ponorogo, Indonesia

ARTICLE INFO	ABSTRACT
<p>Article History: Received: July 12, 2024 Revised: August 13, 2024 Accepted: September 14, 2024</p> <p>Keywords: writing skill; GPT chat; students</p>	<p>Writing skill is an important ability that every individual must have, especially in the field of education. In line with the current era of technological advances, it is very important to utilize technology in learning, such as using GPT Chat or Generative Pre-trained Transformer which is supported by artificial intelligence which can provide an interactive and interesting learning experience for students to improve students' writing skills. This research aims to find out whether students who were taught using Generative Pre-trained Transformer (GPT) Chat media obtained better writing test scores than students who were not taught at SMK PGRI 2 Ponorogo. This research used a quantitative approach with a quasi-experimental design. Data collection techniques used tests and documentation. The sample for this research was class experiment X TKR 1 and class control was TKR 2 students, totaling 30 students each. Analysis of this research data used independent sample statistical tests. The statistical test results show that the p or sig value obtained is 0.003, which is significant maller than 0.05. The application of GPT Chat in learning English at SMK PGRI 2 Ponorogo has an influenceand can be enriches students' learning experience, but also helps them develop better writing skill.</p>
<p>Corresponding Author: Rita Nur Listianingsih Email: nurlistia108@gmail.com</p>	

How to Cite:

Listianingsih, Rita Nur., Fenty Andriani. "The Effectiveness of Generative Pre-trained Transformer (GPT) Chat in Improving Students' Writing Skills at SMK PGRI 2 Ponorogo." *J-EMAIL: Journal of English as a Modern and International Language*, Volume 3, Number 2 (2024)

INTRODUCTION

Revolution industrial 4.0 has brought significant changes in the way people learn and teach.¹ As technology becomes more sophisticated, the learning process will become more interactive, flexible, and focused on developing 21st century skills.² Considering the fact, therefore, educational field has also got its impact. Teachers are not simply conveying information to students, they also become learning facilitator who encourage students to actively participate in the learning process. The role of teacher is also not limited to being a source of knowledge and providing information, but as a director, facilitator and guide for students in the teaching and learning process as well.³

In this digital era, teachers should be able to integrate technology to facilitate students in acquiring knowledge in a more interactive and fun way. Teacher must also be a mentor who is able to help students develop 21st century skills, such as collaboration, creativity and problem solving skills.⁴ Thus, teachers as learning facilitators in the current era must have good communication skills, the ability to adapt to technological developments, and the willingness to continue learning and developing themselves.⁵ Through this role, teachers can help to create a generation that is ready to face future challenges with comprehensive and relevant abilities.⁶

In the teaching and learning process, there are four skills, namely listening, speaking, reading and writing. These four skills are the foundation for learning and using English effectively. Listening skills are important for understanding conversations, interviews, and various audio in English. Speaking skills involve the ability to express ideas or thoughts. Reading skills to understand the text. Writing skills involve the ability to compose texts and various writings. Among these skills, writing is considered the most important because of its ability to convey information in a permanent, structured and in-depth manner.⁷

Writing is an effective way to convey ideas with clarity and consistency. Writing with clarity involves the ability to convey ideas, information, or arguments in a structured manner that is easily understood by readers. In addition, consistency in writing involves using correct grammar, choosing the right words, and developing a logical storyline or argument from the beginning to the end of the writing.⁸ By mastering writing skill, someone can convey

¹ Anissa Lestari Kadiyono et al., "Develop Leadership Style Model for Indonesian Teachers Performance in Education 4.0 Era," *Systematic Reviews in Pharmacy* 11, no. 9 (2020): 363–73, <https://doi.org/10.31838/srp.2020.9.52>.

² Tumas YULIANTO, İkrar PRAMUDYA, and İsnandar SLAMET, "Effects of the 21st Century Learning Model and Problem-Based Models on Higher Order Thinking Skill," *International Journal of Educational Research Review* 4 (2019): 749–55, <https://doi.org/10.24331/ijere.629084>.

³ Rezky Uspayanti, "Challenges and Teaching Strategies in Industrial," *EDUVELOP Journal of English Education and Development* 4, no. 2 (2021): 88–98.

⁴ S., S Durga and C S Rao, "Developing Students' Writing Skills in English-A Process Approach," *Journal for Research Scholars and Professionals of English Language Teaching* 2, no. 6 (2018): 1–5.

⁵ Fourth Industrial Revolution and Higher Education, 2019.

⁶ Ester Hutabarat, Ipts Institut, and Pendidikan Tapanuli, "THE EFFECT OF STAD METHOD IN WRITING DISCUSSION TEXT ABILITY AT THE XII GRADE STUDENTS OF SMA NEGERI 1 SIPIROK," n.d., 126–38.

⁷ Muhammad Fareed, Almas Ashraf, and Muhammad Bilal, "ESL Learners' Writing Skills: Problems, Factors and Suggestions," *Journal of Education & Social Sciences* 4, no. 2 (2016): 83–94, <https://doi.org/10.20547/jess0421604201>.

⁸ Rika Arista, Dewi Yana, and Sri Sugiharti, "Error Analysis of Students' Sentence Structure in

messages effectively, minimize reader confusion, and increase the attractiveness and effectiveness of their writing.

Unfortunately, based on the preliminary observation at SMK PGRI 2 Ponorogo, the students' writing skills are still poor.⁹ Many of them still have difficulty in composing good texts. At the same time, as a secondary school, SMK PGRI 2 Ponorogo is committed to educational progress and open to the application of technology in the learning process.¹⁰ Therefore, this school is an ideal place to conduct research with technological advances and a commitment to improving the quality of education.

As has been clarified earlier to make it easier for students to improve their writing skill, technology should also be used. One technology that is interesting to use in improving students' writing skill is GPT Chat. Generative Pre-Trained Transformer (GPT) Chat is a robot or chatbot that will be released in 2022. This technology utilizes artificial intelligence or OpenAI which can provide interaction and help humans in carrying out various tasks and answering various questions given by humans. According to Zhai, GPT chat is coherent, relatively (partially) accurate, informative and systematic. Apart from that, to expand understanding of writing skills.¹¹

Previous research entitled by Hao Yu, researching and explaining the approach to considering whether GPT Chat is prohibited in the context of education and teaching involves various considerations.¹² Benefits of GPT Chat in Education include help with Explanations and Information: GPT Chat can provide clear and useful explanations about complex topics, which can help students understand the material better. However, researchers consider limitations of GPT Chatbots in encouraging critical thinking, such as their inability to access information that is not in their data base or their lack of deep understanding of context. researchers argue that the use of GPT Chat in education is a complex topic that involves considering benefits and risks. Research that focuses on the benefits of GPT Chat for the development of critical scholarship would be an important addition to our understanding of the potential role of technology in education

In the research conducted by Debby R.E. Cotton, Peter A. Cotton & J. Reuben Shipway, 2023 with the title "Chatting and cheating: Ensuring Academic Integrity in the Era of Chat GPT" explains the issue of academic integrity in the context of Chat GPT and some relevant general considerations.¹³ The research method used is a research method that includes surveys, case studies, content analysis, interviews, or experiments to evaluate how Chat GPT affects academic integrity. The results of this research can provide guidance to universities

Writing Application Letter," *ANGLO-SAXON: Jurnal Ilmiah Program Studi Pendidikan Bahasa Inggris* 7, no. 2 (2015): 94, <https://doi.org/10.33373/anglo.v7i2.509>.

⁹ The results of observations and interviews with teachers at SMK PGRI 2 Ponorogo, on January 30, 2024

¹⁰ The results of observations and interviews with teachers at SMK PGRI 2 Ponorogo, on January 30, 2024

¹¹ Xiaoming Zhai, "ChatGPT User Experience: Implications for Education," *SSRN Electronic Journal*, 2023, <https://doi.org/10.2139/ssrn.4312418>.

¹² Yu, Hao. "Reflection on Whether Chat GPT Should Be Banned by Academia from the Perspective of Education and Teaching," n.d.

¹³ Cotton, D. R. E., Cotton, P. A., & Shipway, J. R. (2023). *Chatting and Cheating: Ensuring Academic Integrity in the Era of GPT Chat*.

and other educational institutions in developing appropriate policies and actions to prevent academic fraud.

Research on "The use of GPT Chat in education is based on an academic ethics perspective" by Muhammad Jafar Maulana¹⁴, Cecep Darmawan; 2023 using the research methods used may involve surveys, interviews, content analysis, or case studies to gain a better understanding of how GPT Chat is used in educational settings.¹⁴ This research may also include a review of literature related to academic ethics and the use of technology in Education. In this research, the researcher places more emphasis on students' writing skills.

Research conducted by M. Sallam in 2023 with the title "The Utility of Chat GPT in Health Education, Research, and Practice".¹⁵ This research focuses on exploring the use of GPT Chat in health education, research, and practice in the health sector. Research methods used include surveys, interviews, content analysis, or case studies to gain a better understanding of how GPT Chat is used in health contexts. The strength of this research is identifying the benefits of using GPT Chat in a health education context, such as providing easy-to-understand explanations of complex health topics. The disadvantages are limitations in generalization and limitations in information accuracy because GPT Chat may not always provide completely accurate or relevant information, which can have serious consequences in the health sector.

Therefore, this research aims to determine the effectiveness of using GPT Chat to improve students' writing skills at SMK PGRI 2 Ponorogo. It is hoped that this research can contribute to the development of English language learning strategies at SMK PGRI 2 Ponorogo, as well as provide useful information for teachers and teaching staff in improving the quality of education. Apart from that, the readiness of teachers and students to face the industrial revolution 4.0. Based on the description above, the researcher intended to conduct a thesis about "The Effectiveness of Generative Pre-trained Transformer (GPT) Chat in Improving Students' Writing Skills at SMK PGRI 2 Ponorogo".

RESEARCH METHOD

This section presents information about the design approach used by researcher in research. This research refers to a quantitative approach using statistical analysis to investigate objective phenomena. This research uses quasi-experimental research, namely finding out the influence of one variable on another under conditions previously determined by the researcher.¹⁶ The researcher used a cluster random sampling technique by choosing class X TKR 1 as the control class and class X TKR 2 as the experimental class with the same number of students in each class, namely 30 students. Data was collected through tests in the form of 1 question essay questions and documentation with measurement procedures, and the results were accurate and comprehensive.

This research used a quasi-experimental design with a Pre-Test and Post-Test type of design. In this research design, both class groups were given a pre-test to determine students'

¹⁴ Maulana, M. J., & Cecep. (2023). The Use of GPT Chat is based on an academic ethics perspective" Education. Unpublished manuscript.

¹⁵ M. Sallam (2023) "The Utility of Chat GPT in Health Education, Research, and Practice.

¹⁶ Sugiyono. "Metode Penelitian Kuantitatif". ALFABETA:Bandung. (2022):1-546. ISBN:978-602-289-373-8.

knowledge before being given treatment. Then, during the treatment the experimental group was given body treatment, namely applying GPT Chat as a medium for writing skills in learning English, while the control group applied textbooks and PPT media using the Genre Based Approach (GBA) method. After treatment, both groups were given a post-test as a benchmark to assess the extent to which the treatment was carried out. The test results were tested using statistical tests with SPSS Windows 22. Data analysis techniques are carried out using Normality Test, Homogeneity Test, and hypothesis testing with independent sample test.

RESULT AND DISCUSSION

Result

It refers to the total of outcomes, the result of data analysis. The results should be discussed for each. It covers how they can be interpreted from the perspective of the theories and studies. The findings and their implications should be addressed based on the context.

The discussion interprets and describes the significance of the findings in light of what was already known about the research problem being investigated. It also explains any new understanding or insights from the theories and/or the other research.

Table 1. Normality Testing Result

		Tests of Normality		
		Kolmogorov-Smirnov ^a		
	Class	Statistic	df.	Sig.
Scores Result	Pre-Test Experiment	.125	30	.200*
	Post-Test Experiment	.121	30	.200*
	Pre-Test Control	.100	30	.200*
	Post-Test Control	.127	30	.200*

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

a. Lilliefors Significance Correction

Based on the results of the Kolmogorov-Smirnov normality test using SPSS 22, it is indicated that the Sig. (significance) values for the pretest and posttest of the experimental group and control group same are $0.200 > 0.05$ as significance level (α). Therefore, it can be concluded that the data in the control group has a normal distribution.

Table 2. Homogeneity Testing Result

		Test of Homogeneity of Variance			
		Levene Statistic	df1	df2	Sig.
Scores	Based on Mean	.017	1	58	.897
Result	Based on Median	.011	1	58	.915

Based on Median and with adjusted df	.011	1	57.971	.915
Based on trimmed mean	.015	1	58	.902

Based on the data calculations using SPSS 22 for Windows, it was possible to draw the conclusion that the scores from both the experimental group and the control group were analyzed based on the mean values. The research results indicated that the significance value (Sig.) is 0.897. Since the Sig. value was higher than the significance level (α) of 0.05, then it indicates that the data was homogeneous.

Table 3. Hypothesis Testing Result

	Class	N	Mean	Std. Deviation	Std. Error Mean
Scores Result	Post-Test Eksperimen Class (using GPT Chat)	30	77.07	7.786	1.421
	Post-Test Kontrol Class (konvensional)	30	70.80	7.941	1.450

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	Df	Sig. (2-tailed)
Equal variances assumed	.017	.897	3.086	58	.003
Equal variances not assumed			3.086	57.977	.003

t-test for Equality of Means				
Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
		Lower	Upper	
6.267	2.030	2.202	10.331	
6.267	2.030	2.202	10.331	

Based on the data in the table above, the mean score for the experimental class is 77.07, while the control class is 70.80. It can be concluded that there is a difference in the mean score of students' Post-test between the experimental class and the control class post-test. Next, the researcher must interpret the results of the "Independent Sample Test" research to show whether there are significant differences or not. A number of decisions can be chosen considering the following methods:

- a.) If the value is significant (two-sided) ≤ 0.05 , then it is considered that there is a significant difference between students' writing achievement in the control class and the test class, and the hypothesis is considered accepted.
- b.) If the value is significant (two-sided). If ≥ 0.05 , it can be observed that there is no significant difference in the achievement of students' writing skills in the control group and the experimental group, or the hypothesis is null.

Find the Sig value in the table above, the value (two-tailed) for the experimental and control classes is 0.003, which indicates that there is a significant difference in the achievement of students' writing skill in the control and experimental classes, or the hypothesis is accepted.

Discussion

In this research, researcher focused on testing students' abilities at SMK PGRI 2 Ponorogo by implementing using GPT Chat in improving writing skills, not only how to write which is assessed but focus and goal, content and development, structure and organization, style and use of language, and grammar and spelling, especially to assess recount text material.¹⁷ This research was carried out in two groups, namely the experimental group and the control group, each of which was given different treatments. The experimental group received learning by using GPT Chat, while the control group only used Genre Based Approach (GBA). Learning methods, namely lectures and questions and answers. Researcher collect data by applying tests, then analyze it using descriptive statistical methods to answer the problem formulation that has been created.

Before carrying out treatment, the two groups were confirmed to have comparable abilities which were tested using an independent sample test. Then the experimental class was given treatment and tests. Based on the analysis above, the control group posttest average is 7,708. Meanwhile, the mean student score in the experimental group was 77.07. The results show that the P or sig value is 0,003 smaller than 0,005. This shows that the experimental group's score increased after the researcher gave treatment to the experimental class. The used of GPT Chat in recount text is effective in improving writing skill. With the strategies and media used in class, researchers observed that students in the experimental class turned out to have great motivation in participating in the learning process. This is something new when learning English. Applying GPT Chat helps them remember the details and essence of experiences and stories that they have written on paper. Apart from that, the application of GPT Chat makes students interested in writing about an event or personal experience. Students looked enthusiastic about working on questions and discussing with their groups.

Meanwhile, students in the control class who were taught used Genre Based Approach learning strategies and media seemed less active, only a few students seemed active in the learning process. This can be clearly seen from the participation of students in taking part in these activities in response to instructions from teachers and students who do not understand

¹⁷ Durga and Rao, "Developing Durga, S., S, and C S Rao. "Developing Students' Writing Skills in English-A Process Approach." Journal for Research Scholars and Professionals of English Language Teaching 2, no. 6 (2018): 1–5.Students' Writing Skills in English-A Process Approach."

the material but they try to understand the material well.

The application of GPT Chat media in learning is a new method that can be applied in utilizing this increasingly advanced technology, apart from that, the application of GPT Chat is used by them to understand the material more quickly, they can exchange ideas with each other and can solve problems.¹⁸ problem. This really attracts students' attention in understanding the material well.

Using good technology is an effective way to apply GPT Chat for teaching recount text. With current technological advances, the used of Generative Pre-trained Transformer (GPT) Chat which is supported by artificial intelligence can provide an interactive and interesting learning experience for students. Apart from that, implementing GPT Chat can help students improve their writing skill. Through discussions with GPT Chat, students can practice constructing sentences, composing stories, and developing their ideas creatively. Apart from that, GPT Chat can also provide useful feedback for students to improve their writing skill.¹⁹

The used in implementing GPT Chat for learning recount text can also increase student involvement in the learning process. By interacting with GPT Chat, students can feel more motivated and actively involved in learning. They can ask questions, share ideas, and discuss certain topics in depth. Apart from that, the application of technology in recount text learning also allows for personalized and adaptive learning. GPT Chat can be tailored to individual student needs, so that each student can learn according to their own level of understanding and learning pace.²⁰ Thus, the use of good technology, such as GPT Chat, can be an innovative and effective approach in teaching recount text. This not only enriches students' learning experience, but also helps them to develop better writing and critical thinking skills.

CONCLUSION

Based on the results of research that has been carried out at SMK PGRI 2 Ponorogo in implementing Generative Pre-trained Transformer (GPT) Chat media in learning English, it can be concluded that this media is effective in improving students' abilities, especially in writing skills. The results of this research show that there is a significant difference in the average score between experimental class students who use GPT Chat and control class students who apply conventional learning. Students involved in the experimental class showed a higher increase in their writing skill scores compared to control class students.

The results show that the P or sig value is 0,003 smaller than 0.005. This shows that the experimental group's score increased after the researcher gave treatment to the experimental class. The used of GPT Chat in recount text is effective in improving writing comprehension. With the strategies and media used in class, researchers observed that students in the experimental class turned out to have great motivation in participating in the learning

¹⁸ Shidiq, "The Use of Artificial Intelligence-Based Chat-Gpt and Its Challenges for the World of Education; From the Viewpoint of the Development of Creative Writing Skills."

¹⁹ Adi Setiawan and Ulfah Khairiyah Luthfiyani, "Penggunaan ChatGPT Untuk Pendidikan Di Era Education 4.0: Usulan Inovasi Meningkatkan Keterampilan Menulis," *JURNAL PETISI (Pendidikan Teknologi Informasi)* 4, no. 1 (2023): 49–58, <https://doi.org/10.36232/jurnalpetisi.v4i1.3680>.

²⁰ BY Mulu Geta Gencha, "The Impact of Blended Learning on Developing Students' Writing Skills and the Perceptions of English Language Instructors and Students: Hawassa University in Focus" 4, no. May (2016): 20.

process. This is something new when learning English. Applying GPT Chat helps them remember the details and essence of experiences and stories that they have written on paper. Apart from that, the application of GPT Chat s students interested in writing about an event or personal experience. Students looked enthusiastic about working on questions and discussing with their groups.

From the average value data obtained, it can be seen that students who use GPT Chat show better interest and performance in writing skills. They are able to apply well when using GPT Chat media during the learning process. Thus, it can be concluded that there are differences in students who are taught using GPT Chat get media better scores in writing test than those who are not in understanding recount text material. Thus, the results of this research provide an important contribution in the development of innovative and effective learning methods to improve students' abilities in writing skill.

REFERENCES

- Abdulkaki, Khalid, et al. "The Use of the Discussion Method at University: Enhancement of Teaching and Learning." *International Journal of Higher Education* 7.6 (2018): 118-128.
- Arista, Rika, Dewi Yana, and Sri Sugiharti. "Error Analysis of Students' Sentence Structure in Writing Application Letter." *ANGLO-SAXON: Jurnal Ilmiah Program Studi Pendidikan Bahasa Inggris* 7, no. 2 (2015): 94. <https://doi.org/10.33373/anglo.v7i2.509>.
- Berestova, Anna, Sergey Kolosov, Milena Tsvetkova, and Elena Grib. "Academic Motivation as a Predictor of the Development of Critical Thinking in Students." *Journal of Applied Research in Higher Education* 14, no. 3 (January 1, 2022): 1041-54. <https://doi.org/10.1108/JARHE-02-2021-0081>.
- Davies, Christine. "A Quick Guide to Quantitative Research in the Social Sciences." *Cognitive Translation Studies - Theoretical Models and Methodological Criticism* 19 (2020): 1-28.
- Díaz, Edgar. "Constructing Cohesive Meaning: A Textual Analysis of Diseases in an 11th-Grade U.S. History Textbook." *International Journal on Social and Education Sciences* 3, no. 2 (2021): 197-215. <https://doi.org/10.46328/ijonses.84>.
- Dr.Ngatno. *No Title Analisis Data Penelitian Dengan Program GeSCA*. 2nd ed., 2019.
- Durga, S., S, and C S Rao. "Developing Students' Writing Skills in English-A Process Approach." *Journal for Research Scholars and Professionals of English Language Teaching* 2, no. 6 (2018): 1-5.
- Dwiyanti, Kadek Erlita, and Ni Komang Arie Suwastini. "Assessment For Writing Skills in Online Learning." *Lingua Scientia* 28, no. 1 (2021): 8-19.
- Fareed, Muhammad, Almas Ashraf, and Muhammad Bilal. "ESL Learners' Writing Skills: Problems, Factors and Suggestions." *Journal of Education & Social Sciences* 4, no. 2 (2016): 83-94. <https://doi.org/10.20547/jess0421604201>.

- Hidayat, Wahyu, Arifuddin Arifuddin, and Kamaluddin Yusra. "Varieties and Accessibilities of Online Materials for Oral and Written English Skills" 465, no. Access 2019 (2020): 52–54. <https://doi.org/10.2991/assehr.k.200827.014>.
- Hutabarat, Ester, Ipts Institut, and Pendidikan Tapanuli. "THE EFFECT OF STAD METHOD IN WRITING DISCUSSION TEXT ABILITY AT THE XII GRADE STUDENTS OF SMA NEGERI 1 SIPIROK," n.d., 126–38.
- Johanna, Anne, Buschhaus Avinash, and Bevoor Bevoor. "Small group discussion method to increase learning activity: Its implementation in education." *International Journal of Educational Narratives* 1.1 (2023): 18-22.
- Kadiyono, Anissa Lestari, Rezki Ashriyana Sulistiobudi, Ikhfan Haris, Mohd Khaidir Abdul Wahab, Idan Ramdani, Agus Purwanto, Abdul Mufid, et al. "Develop Leadership Style Model for Indonesian Teachers Performance in Education 4.0 Era." *Systematic Reviews in Pharmacy* 11, no. 9 (2020): 363–73. <https://doi.org/10.31838/srp.2020.9.52>.
- Kasneci, Enkelejda, Kathrin Sessler, Stefan Küchemann, Maria Bannert, Daryna Dementieva, Frank Fischer, Urs Gasser, et al. "ChatGPT for Good? On Opportunities and Challenges of Large Language Models for Education." *Learning and Individual Differences* 103 (2023): 1–13. <https://doi.org/10.1016/j.lindif.2023.102274>.
- Kebble, Paul. "A Chat with ChatGPT: The Potential Impact of Generative AI in Higher Education Learning, Teaching and Assessment, with Specific Reference to EAL / D Students" 17, no. 1 (2023): 81–91.
- Lu, Mingxiao, Tianyi Cui, Zhenyu Huang, Hong Zhao, Tao Li, and Kai Wang. "A Systematic Review of Questionnaire-Based Quantitative Research on MOOCs." *The International Review of Research in Open and Distributed Learning* 22, no. 2 (2021): 285–313. <https://doi.org/10.19173/irrodl.v22i2.5208>.
- Maulida, Dewi Safira, M Arinal Rahman, Ciptro Handrianto, and Shahid Rasool. "A Review of the Blended Learning as the Model in Improving Students' Paragraph Writing Skills." *Abjadia: International Journal of Education* 7, no. 1 (2022): 59–72. <https://doi.org/10.18860/abj.v7i1.15901>.
- Mohamed Haggag, Haggag. "A Program Based on Chat Generative Pre-Trained Text Transformer (ChatGPT) for Enhancing EFL Majors' Descriptive Paragraph Writing Skills and Their English Grammar Use." 39, no. 6 (2023): 1–29. <https://doi.org/10.21608/mfes.2023.315599>.
- Mulu Geta Gencha, BY. "The Impact of Blended Learning on Developing Students' Writing Skills and the Perceptions of English Language Instructors and Students: Hawassa University in Focus" 4, no. May (2016): 20.
- Nagao, Akiko. "A Genre-Based Approach to Teaching Descriptive Report Writing to Japanese EFL University Students" 26, no. 3 (2022): 1–28.
- O. Nyumba, Tobias, et al. "The use of focus group discussion methodology: Insights from two decades of application in conservation." *Methods in Ecology and evolution* 9.1 (2018): 20-32.

- Parra G, Lorena, and Ximena Calero S. "Automated writing evaluation tools in the improvement of the writing skill." *International Journal of Instruction* 12.2 (2019): 209-226.
- Perumal, K., and I. Ajit. "Enhancing writing skills: A review." *Psychology and Education Journal* 57.9 (2020): 2229-2236.
- Revolution, Fourth Industrial, and Higher Education. "Pr Ep Rin t n Pe Er Re v Pr Ep t n Er v Ed," 2019.
- Sari, Yuli Ifana, Sumarmi, Dwiyo Hari Utomo, and I. Komang Astina. "The Effect of Problem Based Learning on Problem Solving and Scientific Writing Skills." *International Journal of Instruction* 14, no. 2 (2021): 11–26. <https://doi.org/10.29333/iji.2021.1422a>.
- Setiawan, Adi, and Ulfah Khairiyah Luthfiyani. "Penggunaan ChatGPT Untuk Pendidikan Di Era Education 4.0: Usulan Inovasi Meningkatkan Keterampilan Menulis." *JURNAL PETISI (Pendidikan Teknologi Informasi)* 4, no. 1 (2023): 49–58. <https://doi.org/10.36232/jurnalpetisi.v4i1.3680>.
- Shidiq, Muhammad. "The Use of Artificial Intelligence-Based Chat-Gpt and Its Challenges for the World of Education; From the Viewpoint of the Development of Creative Writing Skills." *Society and Humanity* 01, no. 01 (2023): 2023.
- Sugiyono. "Metode Penelitian Kuantitatif". ALFABETA:Bandung. (2022):1-546. ISBN:978-602-289-373-8.
- Uspayanti, Rezky. "Challenges and Teaching Strategies in Industrial." *EDUVELOP Journal of English Education and Development* 4, no. 2 (2021): 88–98.
- Yu, Hao. "Reflection on Whether Chat GPT Should Be Banned by Academia from the Perspective of Education and Teaching." n.d.
- YULIANTO, Tumas, İkrar PRAMUDYA, and İsnandar SLAMET. "Effects of the 21st Century Learning Model and Problem-Based Models on Higher Order Thinking Skill." *International Journal of Educational Research Review* 4 (2019): 749–55. <https://doi.org/10.24331/ijere.629084>.
- Zhai, Xiaoming. "ChatGPT User Experience: Implications for Education." *SSRN Electronic Journal*, 2023. <https://doi.org/10.2139/ssrn.4312418>.