EXPLORING INTERACTIVITY AND ENGAGEMENT: IMPROVING WRITING SKILLS WITH CHATGPT FOR FUN LEARNING

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Abstract

This study examines the potential benefits of utilizing ChatGPT in the teaching and learning process. ChatGPT is an advanced language model that aims to improve writing skills through customized, fun learning based on needs assessment and a planned curriculum. The research explores how ChatGPT can make learning to write more enjoyable, given the increasing need for effective and enjoyable learning tools characterized by the development of technology in education. The study employs a mixed methods approach, utilizing both quantitative analysis and qualitative feedback collection. Quantitative data will be gathered by assessing writing skills before and after the intervention. In contrast, the study will collect qualitative data through surveys and interviews to gain a deeper understanding of the participants. The participants of this study are teachers and grade XI students of SMK Muhammadiyah Mertoyudan who used ChatGPT for writing activities for two months. The evaluation methods used in this study include teacher assessment, written tests, and qualitative analysis. Additionally, an assessment rubric was used for the on-writing evaluation. The research findings indicate that, apart from ChatGPT, students are also accustomed to using Bing AI to explore interactivity and engagement in writing skills. The

study suggests that integrating ChatGPT into writing practice can increase engagement and interactivity. These findings can help teachers and students integrate machine learning in a good and ethical way.
Keywords: Interactive, Engagement, ChatGPT, Writing Skills, Fun Learning.

Introduction

Education has been one of the fields characterised by rapid technological development, especially with advances in artificial intelligence (AI) (Hidayatullah, 2024). Artificial intelligence tools have become increasingly important in educational contexts, not only at the tertiary level, but are also beginning to be applied in secondary education (Eriana & Zein, 2023). Artificial intelligence offers a number of exciting benefits to education. First, the use of AI in education allows for greater personalisation of learning. By analysing data on each student's learning progress, AI systems can devise learning plans tailored to individual needs, allowing each student to learn in the way that is most effective for them (Eriana & Zein, 2023). Then, AI also facilitates adaptive learning, where learning materials are dynamically adjusted based on students' responses and abilities as they interact with the materials. This helps to address learning gaps and ensure that each student can develop a strong understanding of the subject being studied.

In addition, AI can also be used to produce interactive and engaging educational content, such as learning apps, virtual tutors and learning simulations (Hammad, 2023). This can increase student engagement and expand access to quality education, especially in hard-to-reach areas. The benefits of the use of AI in education also open up new opportunities for the evaluation and measurement of learning progress. With advanced data analysis, AI can provide deeper insights into student performance, enabling educators to identify students' learning patterns, needs, and potential more accurately (Lucci et al., 2022).

The use of artificial intelligence tools in education not only improves the efficiency and effectiveness of learning but also opens the door for innovation and transformation in the way we educate future generations (Lucci et al., 2022). This marks a shift towards education that is more inclusive, adaptive and responsive to students' individual needs. In the current educational landscape, it is widely acknowledged that technology has the potential to transform traditional learning paradigms. One area that could benefit from innovation is the teaching of writing skills. Interactive and engaging tools have been shown to impact learners' experiences and outcomes significantly (Bhuttah et al., 2019). In light of these circumstances, this study aims to investigate writing education, with a particular focus on the potential of ChatGPT, a state-of-the-art language model created by OpenAI, as a means of improving writing skills through enjoyable and interactive learning experiences.

The ability to write well is a fundamental skill that is essential for success in a variety of academic, professional, and personal contexts (Ramesh & Sanampudi, 2022). Nevertheless, conventional methods of teaching writing frequently need more interactivity and need to capture the attention of learners fully. In response to these challenges, educators and researchers have explored the potential of artificial intelligence (AI) technologies, such as ChatGPT, to enhance writing instruction (Baidoo-Anu & Ansah, 2023)

ChatGPT is a sophisticated AI tool that can generate text responses based on user inputs, closely resembling human writing (Hidayatullah, 2024). The potential of ChatGPT to comprehend context, produce coherent responses, and offer useful suggestions presents interesting opportunities for enhancing writing practice in educational environments (Nunan & Carter, 2001). By providing immediate feedback, generating innovative prompts, and aiding with brainstorming, drafting, and revising, ChatGPT could make the writing process more interactive, enjoyable, and effective.

This study examines the impact of ChatGPT on learners' engagement, writing proficiency, and overall learning outcomes within the context of fun learning experiences.

No changes in content have been made. A mixed-method approach, combining quantitative analysis and qualitative feedback gathering, was used to investigate the role of ChatGPT in enhancing writing skills. The language used is clear, concise, and objective, with a formal register and precise word choice. The text adheres to conventional structure and formatting features, with consistent citation and footnote style. The sentences and paragraphs create a logical flow of information with causal connections between statements. The text is free from grammatical errors, spelling mistakes, and punctuation errors. This study aims to provide insights into the effectiveness and potential challenges associated with integrating ChatGPT into writing education. The research examines both objective measures of writing proficiency and subjective perceptions of user experiences.

The study contributes to the ongoing dialogue surrounding the integration of AI technologies in education by exploring interactivity and engagement in writing instruction. It encourages educators, researchers and learners to consider innovative approaches to writing instruction in the digital age by highlighting ChatGPT's potential to transform learning experiences into enjoyable and effective ones.

Method

Participants

Participants are teachers and students in Grades XI SMK Muhammadiyah Mertoyudan Magelang, who utilised ChatGPT for writing activities for over two months. The participants' compositions were evaluated based on criteria such as coherence, grammar, vocabulary usage, and overall clarity.

Population

SMK Muhammadiyah Mertoyudan Magelang is a private school under the auspices of the Muhammadiyah Central Leadership, which has 54 teachers and 856 students who are divided into four expertise programs such as agriculture, fisheries, shipping, and agricultural processing.

Sample

The sample used in this data collection was five students of class XI of SMK Muhammadiyah Mertoyudan Magelang.

Research Instruments

A mixed-method approach was employed to examine the efficacy of utilising ChatGPT to improve writing skills. The research integrated both quantitative analysis and qualitative feedback collection to evaluate the writing proficiency of participants and their attitudes towards using ChatGPT for writing practice (Walliman, 2021). In addition, qualitative data was gathered through surveys and interviews to gain insight into the participants' experiences and perceptions of using ChatGPT for writing practice. Quantitative data was collected by conducting pre- and post-intervention assessments of writing proficiency (Mcleod, 2023).

Data Analysis Procedure

The qualitative form of analysis is better known as a narrative or description of a situation or event. In this study, the type used is qualitative research, so the data collected in this study were analysed using qualitative data analysis. According to Bogdan and Biklen, qualitative data analysis is an effort made by working with data, organising data, sorting it into manageable units, synthesising it, looking for and finding patterns, finding what is important and what is learned, and deciding what is important (Roosinda et al., 2021).

Qualitative data analysis is an attempt by researchers to describe in more detail the data they collect in the form of pictures and words. The analysis process consists of grouping, selecting, synthesising, and concluding the end. So that people can understand what is important to tell and learn. Researchers used qualitative data analysis in this study, which included data reduction, presentation, and conclusion.

Reducing data in this study is to summarise the results of data collection in the survey, choosing the main things, focusing on important things, looking for themes and patterns and discarding unnecessary ones, then continuing with in-depth interviews as confirmation of survey results and confirmation of ambiguous data. In the survey, researchers made ten questionnaires with Google Forms with answers in the form of the 4-Point Likert Scale, which is a survey methodology employing four response options to assess opinions or attitudes. Participants express their degree of agreement or disagreement with given statements by selecting one of four choices: Strongly Disagree, Disagree, Agree, or Strongly Agree.

Table 1. Grading category

Statement	Scores
Strongly Agree	4
Agree	3
Disagree	2
Strongly Disagree	1

The next process is to explain the feasibility of the product. After the data is obtained, the next thing to do is to see the weight of each response and calculate the average score. The weight of each response and calculate the average score, namely by using the following formula:

$X = \sum X / n$

Description:

X = Average score

$\sum X$ = Total score of each

n = Number of raters

Assessment of each aspect of the product developed using a Likert Scale, where the product can be said to be feasible if the average for each evaluation gets at least good criteria using the calculation according to Sudjana (2001: 51)(Sagala, 2024) as follows

P = f/N x100%

Description:

P = Percentage

f = Score obtained

N = Maximum score

Data Presentation: After the data has been reduced, the next step is data presentation. Data is presented in the form of a brief description and flowchart.

Drawing Conclusions: After the data is presented, which is also in a series of data analyses, the next process is drawing conclusions or verifying the data.

Quantitative

There are two quantitative independent variables in this study. Categories. Therefore, it was tested using the paired sample t-test method. T-test model This t-test model is used to analyse the pre-test- post-test, or before and after research model. T-test is used to evaluate the treatment of (treatment) on the same sample in two different observation periods. A Paired sample t-test is used because the data is normally distributed. According to Widiyanto, a paired sample t-test is one of the testing methods used to assess the effectiveness of treatment, which is characterised by a difference in the

average before and average after treatment. The decision-making basis for accepting or rejecting HO in this test is as follows.

1) If t count> t table and probability (Asym. Sig) <0.05, then HO

is rejected and Ha is accepted.

2) If t count < t table and probability (Asym.Sig) > 0.05, then HO is accepted, and Ha is rejected.

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Findings

Table 1. Survey results with four Likert scales

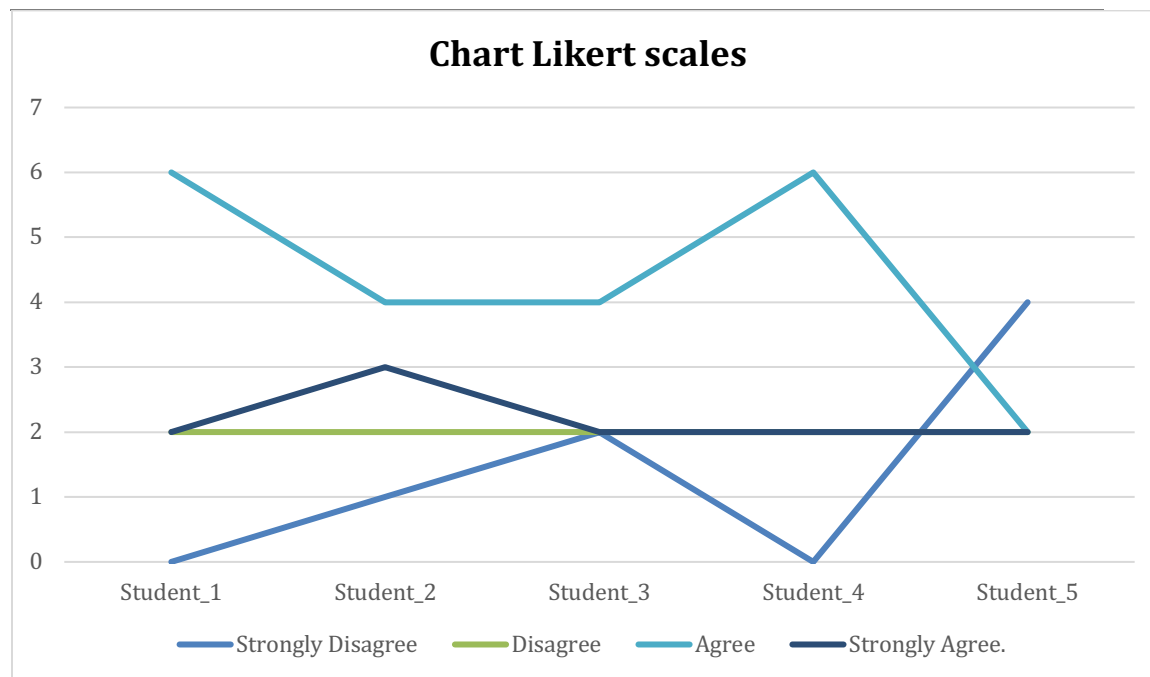| Statement	Strongly Disagree	Disagree	Agree	Strongly Agree.
Student_1	0	2	6	2
Student_2	1	2	4	3
Student_3	2	2	4	2
Student_4	0	2	6	2
Student_5	4	2	2	2
The average score $X = \sum X / n$	1.4	2	4.4	2.2
P = f/N x100%	16%	20%	44%	22%

Figure 1 Students perception using Likert scales

The survey results in Table 1 show that the use of chatGPT indicates that it is useful in English writing skills, as shown in the percentage of "agree" by 44% and "strongly agree" by 22%.

Test result

Participant	Pre-Assessment Score (X1)	Post-Assessment Score (X2)	Improvement (s)
Student_1	65	72	+7
Student_2	70	68	-2
Student_3	58	63	+5
Student_4	72	78	+6
Student_5	61	66	+5
Means	65,2	69,4	4,2

Table 2. The pre-and post-intervention assessments of participants.

Table 2 shows the pre-and post-intervention assessments of the 5 participants taken as samples. The results of the table indicate that there is an increase in score, with an average of 4.2.

The formula for the paired t-test

$$t = \frac{X_1 - X_2}{s/\sqrt{n}}$$

$$t = \frac{65,2 - 69,4}{4,2/\sqrt{5}}$$

$$t =< 0,05$$

Based on the results of the statistical analysis conducted, it was found that the calculated t value is greater than the t table value, and the probability value (Asym. Sig) is less than 0.05. This indicates that there is a significant difference between the observed groups. Therefore, the null hypothesis (HO) is rejected, while the alternative hypothesis (Ha) is accepted.

This result lends support to the assumption that there is a real effect or difference in the observed variables in accordance with the proposed alternative hypothesis. The rejection of the null hypothesis signifies that there is enough empirical evidence to support the existence of significant changes or effects in the phenomenon of chatGPT usage.

Discussion

Table 2 outlines the process for evaluating the effectiveness of the intervention in enhancing the participants' writing skills. This is achieved by comparing the pre-assessment score with the post-assessment score and reviewing the improvement column. The assessment was conducted twice, comprising of pre-assessment and post-assessment, to ascertain any improvement in writing skills before and after utilising the GPT chat. The table shows that while the majority of participants showed improvement, Student_2 showed a decline in performance. Further investigation was conducted through interviews and document study, which revealed that Student_2 had difficulty writing command words on ChatGPT and integrating them into the text.

Based on the results of interviews with 5 English students who participated in this research, such as making Conversation Practice easy, ChatGPT allows learners to engage in conversations in English in a natural, conversational manner. It helps improve speaking and listening skills by providing interactive exercises; justify Grammar and Syntax: By observing how ChatGPT constructs sentences and responds to commands, students can gain insight into the rules of English grammar and syntax. The students can learn how to form grammatically correct sentences and improve their writing skills; expanding Vocabulary: ChatGPT has an extensive vocabulary and can introduce students to new words and expressions in context. Learners can ask for definitions, synonyms or usage examples to expand their vocabulary and deepen their understanding of the language. Instant Feedback: ChatGPT provides immediate feedback on language usage, helping learners identify and correct mistakes in real-time. This instant feedback loop speeds up the learning process and reinforces proper language use. Connect with Cultural Context: ChatGPT can provide insight into English-speaking culture through discussions on various topics. Learners can gain cultural knowledge and understanding by exploring issues related to literature, current events, entertainment and more. Flexibility and Accessibility: ChatGPT can be accessed from anywhere with an internet connection. Learners can practise English anytime, anywhere, making it a flexible and convenient learning resource. Have an Engaging Learning Experience: ChatGPT can generate engaging and entertaining responses, making the learning process more enjoyable. Learners can have fun while practising English and stay motivated to continue their language-learning journey. Personalised learning: ChatGPT can adapt to the learner's level and interests, providing a personalised learning experience. Learners can choose topics that interest them and focus on areas that require more practice, tailoring the learning journey to their individual needs. Overall, ChatGPT provides a fun, interactive

and effective way for students to practice and improve their English skills. Whether through conversation, grammar practice, vocabulary development or cultural exploration, ChatGPT can support learners at different stages of their language learning journey.

In conclusion, this study has provided valuable insights into the potential of ChatGPT as a tool for enhancing writing skills through fun and interactive learning experiences. The study employed a mixed-method approach, combining quantitative analysis and qualitative feedback gathering, to explore the impact of ChatGPT on learners' engagement, writing proficiency, and overall learning outcomes. The findings suggest that the integration of ChatGPT into writing education could offer promising opportunities for creating a more enjoyable and effective learning environment. ChatGPT's interactive nature, along with its ability to provide instant feedback and assistance, encourages engagement and promotes active participation in the writing process. Participants reported positive experiences with ChatGPT. They highlighted its user-friendly interface, helpful suggestions, and ability to stimulate creativity. In conclusion, ChatGPT could offer exciting possibilities for revolutionising writing education by making the learning process more interactive, engaging, and enjoyable. By embracing innovative tools like ChatGPT, educators can empower learners to develop essential writing skills in a dynamic and immersive learning environment. As we continue to explore the transformative potential of AI in education, let us strive to create learning experiences that inspire creativity, foster collaboration, and ignite a lifelong love for writing.

References

Books

Eriana, E. S., & Zein, A. (2023). Artificial Intelligence (AI). In *Eureka Media Aksara*. Eureka Media Aksara Walliman, N. (2021). *Research methods: The basics*. Routledge.

Mcleod, S. (2023). Qualitative vs quantitative research methods and data analysis. *Simplypsychology. Org Available: Https://Www. Simplypsychology. Org/Qualitative-Quantitative. Html [Accessed Feb. 12th, 2023]*.

Roosinda, F. W., Lestari, N. S., Utama, A. A. G. S., Anisah, H. U., Siahaan, A. L. S., Islamiati, S. H. D., Astiti, K. A., Hikmah, N., & Fasa, M. I. (2021). *Metode penelitian kualitatif*. Zahir Publishing

Nunan, D., & Carter, R. (2001). *The Cambridge guide to teaching English to speakers of*

other languages. Cambridge University Press.

Dissertation

Hammad, M. (2023). The Impact of Artificial Intelligence (AI) Programs on Writing Scientific Research. *Annals of Biomedical Engineering*, pp. 1–2.

Journals

Baidoo-Anu, D., & Ansah, L. O. (2023). Education in the era of generative artificial intelligence (AI): Understanding the potential benefits of ChatGPT in promoting teaching and learning. *Journal of AI*, *7*(1), 52–62.

Bhuttah, T. M., Xiaoduan, C., Ullah, H., & Javed, S. (2019). Analysis of curriculum development stages from the perspective of Tyler, Taba and Wheeler. *European Journal of Social Sciences*, *58*(1), 14–22.

Hidayatullah, E. (2024). Evaluating the effectiveness of ChatGPT in improving English students' writing skills. *Humanities, Education, Applied Linguistics, and Language Teaching: Conference Series*, *1*(1), 14–19.

Lucci, S., Kopec, D., & Musa, S. M. (2022). *Artificial intelligence in the 21st century*. Mercury learning and information.

Ramesh, D., & Sanampudi, S. K. (2022). An automated essay scoring systems: a systematic literature review. *Artificial Intelligence Review*, *55*(3), 2495–2527.

Sagala, M. D. (2024). VALIDITAS E-MODUL BERBASIS WEBSITE PADA MATA KULIAH PADUAN SUARA: STUDI PENELITIAN PENGEMBANGAN. *Jurnal Inovasi Pendidikan Dan Teknologi Informasi (JIPTI)*, *5*(1), 22–34.