Factors Influencing the Perceptions of English Major Students in Using ChatGPT to Improve Writing Skills

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Abstract: **This research is a study on English major students' responses to their perception of writing enhancement using ChatGPT and its determining factors. The present discourse has shed light on what higher education learners know about, and have experienced with AI-centered tools in access to quality writing skills. The Approach: They surveyed 286 students about how they viewed the utility, constraints and potential integration of ChatGPT within their learning processes. In the exploration, teens valued ChatGPT as a support complement and called for teacher guidance and consistent rundown prompts. But the use is of it in-class activities and some academic integrity problems have been there. The authors conclude that although ChatGPT is likely to offer pedagogical affordances, the design of the tool reminds us of how its technical specifications do not obviate our ethical (pedagogical) responsibility within academic contexts.**

Keywords: **ChatGPT, Writing skills, English majors students, Perceptions, Educational technology.**

1. Introduction

Artificial Intelligence (AI) integration has received great attention in educational practices lately, as it made a big splash with its contribution to language learning and writing skills. The cutting-edge language model ChatGPT by OpenAI is one such revolutionary improvement, bridging this gap and allowing students to have live suggestions for writing along with some interactive collaboration. Naturally, this leads to tech-driven gains for English major students who often find themselves engaged in writing-intensive coursework. It is critical in using ChatGPT to know how writing goes with these students and try not contradict the normal teaching system. Drawing on the data, it is critical to understand whether English major students use ChatGPT favorably in developing writing performance or not and seek answers.

2. Literature Review

A. Definition of terms

1) Artificial Intelligence (AI) and its use in language learning and teaching

The use of Artificial Intelligence (AI) has been increasingly growing to transform educational practices. Based on Cheng

and Day (2014), AI could be seen as a form of computational creativity that represents technological advancements. Another perspective is given by Karsenti (2019) who sees AI as being intelligent machines carrying out tasks like those performed by the human brain. AI, also known as Machine Intelligence (Mehrotra, 2019), mimics processes of human mind which are akin to (Joshi, 2019) that aspire for computerized technologies achieving human-like intelligence as per Kaur & Gill (2019). According to Baker and Smith (2019), AI can be described as computer systems performing mental activities similar to those of human brains. The adoption of AI in education brings about new opportunities and challenges (Ouyang & Jiao, 2022).

Many studies have been conducted to analyze the potential of AI in language teaching and learning, indicating that it can indeed improve educational outcomes. Ghali et al. (2018) for example looked at Intelligent Tutoring System, which increased understanding of grammar through personalized training and prompt feedbacks. Similarly, Dewi et al. (2021) assessed linguistic platforms like Duolingo and Grammarly, highlighting their positive contribution towards teaching English as a second language. Fitria (2021) also made Grammarly to be the focus on how it improves writing skills by giving detailed analysis and recommendations for improvement. Moreover, Toncic (2020), Chaudhry and Kazim (2021), etc., underlined that artificial intelligence further reduces teacher's workload while also facilitating individualized approach of students.

2) Chatbots

Consequently, with AI, chatbots are understood as the computer programs designed to interact with humans (Oxford Dictionary Online, 2020). They use keywords matching algorithms (Weizenbaum, 1966) or natural language processing (Brennan, 2006) to mimic the human conversation. Today's chatbots incorporate advanced logistic regression and various other models to provide an engaging and prompt response (Shi, Zeng, & Li, 2021). They are gaining more acceptance regarding the provision of interpretative learning experiences through the creation of fun and stimulating learning spaces (Kim, Haarmann, Palmer, & Turkle, 2019; Wu, Kao, & Peng, 2020).

In language learning the use of chatbots has been

demonstrated has having these benefits. Fryer and Carpenter (2006) pointed their effectiveness in terms of developing a relaxed learning climate, enhancing students' interest, and explaining outcomes. Shawar (2017) applied the case of chatbots as language tools where the students were able to practice the language without feeling pressured and even if they did, the number of opportunities available to practice were numerous. Kim (2019) and Lu et al. (2006) showed that the use of a chatbot positively impacted grammar and conversation fluency while at the same time, decreasing stress and increasing confidence. Ayedoun et al. (2015) and Tai and Chen (2020) showed that chatbots is beneficial in building up the learners' communication confidence and decreasing the anxiety level of learners studying English on-line.

3) The use of chatbots in language learning and teaching

That is why scholarship has provided empirical evidence that chatbots can help in language acquisition to a certain extent. Shawar and Atwell (2007) defined chatbots as AI-based systems of NLIs, useful in helping achieving various learning goals. Fryer and Carpenter (2006)'s and Shawar (2017)'s research also reveled that the use of chatbot increases motivation and offers constructive feedback to the learners in language learning. Kim (2019) and Ayedoun and others (2015) also noted on enhancing grammatical accuracy and peer chat communication while Tai and Chen (2020) observed on boosts in the learners' communication self- efficacy.

4) Teachers' and Students' perspectives on chatbot integration

Teachers and learners have a central role to perform when using chatbots in the learning process. Kiptonui, Too & Mukwa (2018) established that teachers' attitude towards chatbots was largely positive acknowledging how the technology made a difference and subjects enjoyable. Chuah and Kabilan (2021) identified instructors' attitudes as positive regarding chatbots due to their potential for increasing the interactivity, instructors' presence, and the participants' intellectual involvement. Yang and Chen (2023) revealed that despite the overall willingness of the participants pre-service teachers stated reluctance due to their lack of acquaintance with the technology.

Finally, students also differ as to the chatbots. Concerning the motivational and enjoyable aspects, Underwood (2017) and Tai and Chen (2020) showed that learners enjoy AI interactions. On the other hand, Cakmak (2022) pointed out some of the negative perception of chatter as conversation partners.

5) Concerns and limitations

As elaborated above, the implementation of chatbots in the educational process has some advantages Nevertheless, there are some issues with the integration of the above modes. Privacy issues come up as chatbots gather and process information from a user's particularly those that are sensitive (Ruane et al., 2019; Liden & Nilros, 2020). It is noteworthy that Dincer (2018) and Liden and Nilros (2020) also stressed the importance of professional development to foster teachers' use of chatbots as instruction tools. Infrastructure and cost issues are also reported to limit the ability of organisations to sustain and refresh their chatbots (Rahman et al., 2017).

6) ChatGPT

OpenAI has developed a version of chatbot that is more advanced than the previous ones in the sense that this new version implies deep learning and is based on the large language model from the Generative Pre-trained Transformer or GPT found by Radford et al. (2018). In addition, it gives contextually relevant and logically nonredundant answers with suitable coverage of a number of textual sources. Some of the features of ChatGPT are now discussed, namely: guideline fine-tuning, bootstrapped reinforcement learning, and adversarial conversation initialization (Greyling, 2022; Lee et al., 2018). According to the recent literature, it seems to have an effect on language learning by giving feedback as well as on writing, and research and writing support (Shahriar & Hayawi, 2023, Kasneci et al., 2023).

7) Ethical considerations and limitations of ChatGPT

The application of the ChatGPT has certain ethical issues related to bias which is inherited from the training data (Kasneci et al., 2023; Rettberg, 2022); and influence on the university integrity (Eke, 2023; Cassidy, 2023). Concerns on privacy and data protection represent other noteworthy areas (Dwivedi et al., Submitted; Kasneci et al., Submitted). To properly incorporate the technology of ChatGPT in the educational environments, these ethical concerns must be weighed against the advantages it poses.

8) Review of previous related studies

Some of the findings hinted at by prior research on ChatGPT and similar AI tools include the following mixed perceptions. Read et al.'s (2023) work also revealed that the given set of respondents possessed positive attitudes toward the effects of ChatGPT on motivation and learning outcomes among students. As described by Firat (2023), while showing potential for generating lessons tailored to the student, ethical issues were pointed out. On the other hand, Iqbal et al. (2022) certainly cited resistance from the faculty members resulting from concerns about dishonesty and privacy.

Thus, the relevance of using AI applications such as ChatGPT in education has been increasing, whereas the positive and negative aspects of implementing AI tools are multifaceted. More studies must be conducted as to how these tools may be assimilated into language learning and the approaches to teach writing specifically without violating certain ethical issues and practicalities.

3. Methodology

A. Research Setting

The research was carried out among the English major students at Nguyen Tat Thanh University in Vietnam to determine the factors that lead to the perception of students to use ChatGPT in improvement of writing skills. This study was conducted between 1st of June, 2024 and 30th of June, 2024. Due to the fact that the university has various learning contexts across the years been taught, Distribution of the questionnaires was done in class to enhance a general population with regard to the timetable of the students.

B. Research Participants

The concern of the study focused on the first year up to fourth year English major students in Nguyen Tat Thanh University.

Thus, the total number of questionnaires administered was 300 and the number of completed and effectively analyzable questionnaires was 286. Such a sampling technique was used to ensure that different attitudes to ChatGPT could be obtained from the students studying in different year levels of the English major program.

C. Research Instruments

Hence, a structured survey questionnaire was integral in the administration of the research. The questionnaire comprised of 10 questions that were formulated in a way that would help to determine the advantages and disadvantages of employing ChatGPT in writing teaching. The questions centered on the different areas such as; how helpful was ChatGPT in enhancing writing skill, ease in using ChatGPT, and any difficulties that may have been encountered by the students. The items measuring the responses were Likert scales having strengths of agreement from Disagree Strongly (1) to Agree Strongly (5). The survey was designed to answer questions about the parameters important in changing the students' perception about ChatGPT, which was written considering the teaching-learning context of English.

D. Data Collection and Data Analysis

The paper-based questionnaires were administered during normal class meetings in June of year 2024. The student samples were allowed sufficient time to fill the questionnaires and the completed set of questionnaires were Собачеn collected within the shortest time possible to enhance the rate of responding students.

Collected data were documented and analyzed by using Statistical Package of Social Science (SPSS 20) while; Microsoft Excel was used for the preliminary data sorting. Therefore, the mean score and standard deviations were performed for each item of the survey to report students' perception. Further analyses were also conducted to determine if the effects of academic year and prior exposure to AI tools had an impact on the participants' disposition. Thus, the purpose of the analysis was the key advantages and disadvantages of ChatGPT in the context of the writing instruction to reveal its usefulness and limitations.

The study results were applied to evaluate the extent to the degree to which ChatGPT's features could address students'

need in writing and to offer recommendations about the ways AI tools might be incorporated into the English major courses optimally.

4. Results and Discussion

A. Results

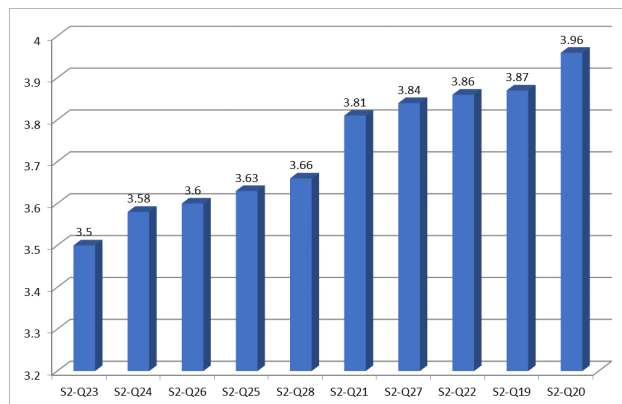After conducting the survey, we have a data table about the mean value as shown in table 1.

Fig. 1. Mean values of factors influencing the perceptions of English major students in using ChatGPT to improve writing skills

Students should be aware of the limitations of ChatGPT and consistently evaluate the quality of its responses to their questions or requirements.

Mean = 3.87, Std. Deviation = 0.846

The findings reveal that students know fairly well about the weaknesses of ChatGPT and the need to assess the quality of the answers provided constantly. Thus, the significant average results indicate that students understand that ChatGPT is not free from mistakes and is necessary to check the data obtained from the tool. This awareness is a positive sign because the students learn the use of AI with a critical perspective regarding the requirement to double-check and verify their content generated by the AI.

It is crucial for students to know how to provide specific prompts that work well with ChatGPT.

Mean = 3.96, Std. Deviation = 0.771

We decided to consider only those items related to the application of ChatGPT and received the highest mean score,

Table 1

Mean values and standard deviations of factors influencing the perceptions of English major students in using ChatGPT to improve writing skills

Code	Contents	Mean	Std. Deviation
S2-Q19	19. Students should be aware of the limitations of ChatGPT and consistently evaluate the quality of its responses to their questions or requirements.	3.87	0.846
S2-Q20	20. It is crucial for students to know how to provide specific prompts that work well with ChatGPT.	3.96	0.771
S2-Q21	21. Students should recognize that ChatGPT serves as a supplementary tool for their learning.	3.81	0.89
S2-Q22	22. Teachers should provide guidance to students on how to properly utilize ChatGPT.	3.86	0.877
S2-Q23	23. Teachers should allow students to utilize ChatGPT during classroom activities.	3.5	0.882
S2-Q24	24. In my viewpoint, teachers should actively encourage students to utilize ChatGPT during the revision and editing phases.	3.58	0.841
S2-Q25	25. Teachers should mandate students to submit rough drafts or outlines alongside their final papers to maintain academic integrity.	3.63	0.964
S2-Q26	26. Teachers should notify students that AI content detectors such as GPTZero, PercentHuman, and Originality AI will be used to review their submitted work.	3.6	1.02
S2-Q27	27. Teachers should construct activities that necessitate the utilization of critical thinking and problem-solving abilities by students.	3.84	0.88
S2-Q28	28. I am optimistic that I will be able to learn how to use ChatGPT effectively in language acquisition.	3.66	0.914

indicating that students strongly agree with the statement that it is crucial to develop focused and concrete prompts to enhance the tool's performance. Another factor that must be taken into consideration while designing an AI conversation is the possibility to give precise and elaborate instructions to the program to receive suitable and correct answers. This result implies that students need to be trained on how to engage with these technologies such that the engineering of prompt is pivotal in unlocking the potentials of ChatGPT.

Students should recognize that ChatGPT serves as a supplementary tool for their learning.

Mean = 3.81, Std. Deviation = 0.89

All the students concur to the point that while utilizing ChatGPT the concept must be more of supplement than substitution. The mean score also reveals an understanding by the students of the fact that although ChatGPTcan help them with their learning, it cannot fully replace conventional methods of learning and help from tutors. Such a balanced approach allows implementing the AI tools into the learning environment successfully.

Teachers should provide guidance to students on how to properly utilize ChatGPT.

Mean = 3.86, Std. Deviation = 0.877

Some of the major concerns of the students relate to proper utilization of the ChatGPT tool and this they rely on the teachers to guide them. This result seems to suggest that teachers should play an active role in a process of adopting AI tools in learning. Kuh 1993, Schooles 1998 among the results have highlighted the importance of educator guidance in making and approaching the use of technologies especially to the internet and other computer based systems such as Chat GPT useful and to an extent, ethical. As seen with the high mean score, students are likely to avail of structured training as to the proper application of AI in learning.

Teachers should allow students to utilize ChatGPT during classroom activities.

Mean = 3.5, Std. Deviation = 0.882

This item has the lowest mean score among the survey questions, which may refer to some hesitations or difficulties connected with the use of ChatGPT in classroom practices. There is fairly good consensus, but it appears there may be issues or questions about how best to incorporate AI into the examples the class exercises involve. This fact indicates the necessity of an appropriate approach to eliminate possible difficulties and to facilitate the use of ChatGPT in class and, at the same time, contribute to a positive impact on students.

Teachers should actively encourage students to utilize ChatGPT during the revision and editing phases.

Mean = 3.58, Std. Deviation = 0.841

Students can confirm that the writer should encourage the use of ChatGPT while revising and editing the work. Thus, the mean score represents a positive attitude toward the possibilities of using ChatGPT for enhancing and fine-tuning their work. As shown in the two phases of writing, waking up students' awareness and encouraging their usage of AI tools can improve their critical evaluation and thus learning achievements.

Teachers should mandate students to submit rough drafts or outlines alongside their final papers to maintain academic integrity.

Mean = 3.63, Std. Deviation = 0.964

On this regard, students have acknowledged the need to submit rough drafts or outlines alongside their papers to discourage acts of cheating. This result suggests that the participants acknowledge the necessity to assign some amount of importance to phenomenon of transparency and accountability in the given type of writing. Through demanding drafts and outlines, the educators would be able to guarantee that the learners are not just copying the content from the Internet and what they are submitting as their work is their own understanding of the specific topic.

Teachers should notify students that AI content detectors such as GPTZero, PercentHuman, and Originality AI will be used to review their submitted work.

Mean = 3.6, Std. Deviation = 1.02

On the topic of advisement regarding the usage of content detectors for reviewing work done by students, students concur that the teacher ought to explain to them about this matter. This awareness assists in preventing plagiarism and makes students to come up with their work independently despite the pressure that they undergo. The mean score indicates that there is acceptable level of tolerance among the students regarding these measures as well as the rationale for utilizing technology for maintaining academic integrity.

Teachers should construct activities that necessitate the utilization of critical thinking and problem-solving abilities by students.

Mean = 3.84, Std. Deviation = 0.88

Students rank very highly those tasks which can be solved with the help of such cognitive skills as analysis, synthesis and sums up. The means correspond to the high level of the respondents' belief in the significance of designing learning activities that engage their critical thinking to enhance learning. According to this finding, there is a significant role for educators to develop meaningful and challenging activities which engage the students to solve them using AI tools such as ChatGPT along with the critical thinking skills.

I am optimistic that I will be able to learn how to use ChatGPT effectively in language acquisition.

Mean = 3.66, Std. Deviation = 0.914

Students are comparatively positive about their capacity to learn how to use ChatGPT for language learning. Thus, the mean score points to a positive attitude towards the incorporation of AI technology in their learning resources. This optimism indicates the response of the students is positive and is willing to learn new methods and tools for the improvement of their language proficiency, thus they are positive about their ability to incorporate these technologies into the learning process.

B. Discussion

From this research, several factors contained in the hypotheses are identified that affect the Nguyen Tat Thanh University students having an English major towards using

ChatGPT to enhance their writing skills. Thus, when dissecting the data, it will be possible to see the strengths and frailties of these perceptions and how they come into play when determining the students' writing skills.

C. Strengths

1) Awareness of limitations and evaluation of responses

Mean score of the students in terms of their understanding of ChatGPT's limitation and for evaluating the response is 3. 87 To make the assessment comprehensive, by emphasizing on the criticism part, means that the students' critical mind set is strong. This awareness is essential in implementing the AI tool as it makes the students not to over rely on the tool but rather use it as a complementary device. Emphasizing AI weaknesses makes students check the received information and develop critical thinking skills thus improving their criterion for the content.

2) Importance of specific prompts

It shows, therefore, that students perceiving the need for specific cues to get the right response from ChatGPT has been positively acknowledged since the mean score was noted to be the highest at a mean of 3. 96. This understanding is crucial for this process because strategically crafted questions can greatly enhance the quality of the AI output. This skill is beneficial to students' writing in that it assists them in acquiring accurate details to improve their writing as well as accurate feedback in a coherent manner.

3) Supplementary tool recognition

Mean score obtained for this factor was 3, with all students perceiving some degree of overcrowding in the class. 81, students understand that ChatGPT is an additional aid at best while learning and not a means of completely eliminating conventional techniques. This balanced perception is important because the existence of AI does not devalue or eliminate the importance of human teaching and the conventional methods of writing among students. Such integration allows for better focus on the development of writing skills without turning away from the old methods and incorporating aspects of the newest technologies.

4) Guidance from teachers

Percentage for the respondents' attitude towards the usefulness of the text was the mean score of 3. 86 for the importance of teacher guidance reveals that students have the urge of requiring instructional support in using ChatGPT. AI tools should be used by students under the correct guidance that will enable efficiency while at the same time not compromising on the existing ethical values as well as student's integrity. This factor is a strength as it focuses on the use of educators in the implementation of AI in teaching.

5) Critical thinking and problem-solving activities

The mean was 3. 84 also depicts that the students valued the kind of activities that involve problem-solving. It is possible to incorporate such activities to improve cognition and guarantee that the application of ChatGPT does not stop with content production. It can therefore enhance the students' analytical skills and general writing skills as well as.

D. Weaknesses

1) Utilization during classroom activities

The wild mean score of 3. 5 indicates some doubting or difficulties when it comes to utilizing ChatGPT throughout the class activities. This finding may suggest interest in how the AI intervention strengthens the process and impact of learning in real-time. Minimizing these factors could mean that through the planning and implementation of support to intervene where necessary, these likely difficulties could be averted, thus enhancing the students' confidence in the use of AI tools in class.

2) Encouragement for revision and editing

In Raw score the current and mean scores for each graders were as follows: The current mean score was 3. 58, while modifying the extent of agreement a little bit, most people believe that ChatGPT should be promoted when students are revising or editing their papers. This could be seen as a level of acceptance of the tool's effectiveness but at the same time also shows that there is still much to do regarding emphasis on the effectiveness of improving writing through iterative processes. A positive reinforcement of this perception may help produce enhanced writing results owing to the increased focus on reviewing students' work.

3) Submission of rough drafts for academic integrity

50 marks the mean of the study that pilgrims gave to the sights, sculptures, and art forms found in this region. 63 supports turning in the rough drafts to uphold integrity of the work. This encourages compliance with the rule that the instructor wants to see work from the student not work of a group of students or someone else. Still, due to the fact that the result is rather average, there is a possibility that additional stress on this practice should be made. Strengthening this requisition can improve transparency and accountability in writing more.

4) Notification of AI content detectors

The attitude towards learning health system, LHS has a mean score of 3. 6 shows a hypothetical disposition of acceptation regarding the information concerning the utilization of the AI content detectors. This awareness preserves the academic deficit but also shows that students are aware of the need to avoid cases of plagiarism. Improving this practice can also help support the concept of originality in academic projects even more.

5) Optimism in learning to use ChatGPT

The foregoing study has a mean score of 3. 66 indicates the positive attitude of students about the likelihood of being able to learn the effective training of ChatGPT for language acquisition. This is an advantage since this outlook implies that the those involved is ready to adopt new technologies. This optimism to using ChatGPT must be directed and incorporated into the learning process through formal training and support to enable the students learn how to implement ChatGPT comprehensively in their learning schedules.

E. Implications for writing skills in English majors

It can be seen that the overall attitude towards ChatGPT for improving the writing ability in English major students is

relatively positive. Based on the provided strengths of critical awareness, accurate writing of the prompts, and acknowledging ChatGPT as an auxiliary tool, one can state that students are ready and willing to enhance their writing with the help of AI. However, it is equally important to note the areas of relative weakness that have been pinpointed: the authors' reluctance to use classroom, the moderate focus on revision and editing among the most effective practices.

F. Impact on Writing Skills

1) Enhanced critical thinking

The focus on assessing AI responses and critical thinking activates indicates that the level of students' analytical thinking is likely to be enhanced. These are skills that every writer must possess in order to put down well-argued, well thought out pieces of work.

2) Improved feedback mechanisms:

Instructiveness implies that proper crafting of the prompt and proper guidance on the use of ChatGPT means students get better feedback for their writing, thus producing better papers.

3) Balanced Learning Approaches

Accepting ChatGPT as an additional resource also helps students to get skills from the usage of artificial intelligence and from traditional studying that aids in the formation of competent writing skills.

G. Recommendations for Educators

1) Provide structured guidance

Its use must therefore be explained to students and demonstrated as a supplement to normal teaching by the teachers in clear instructions and training on how to use ChatGPT.

2) Encourage critical use

Encourage different actions that involve the assessment of content produced through AI to improve students' analytical capabilities.

3) Integrate AI thoughtfully

Mitigate issues with classroom utilization by paying more attention to where and how AI is implemented in a course and addressing students' needs for support.

4) Emphasize revision and integrity

It is suggested that students use ChatGPT during the revision phases while ensuring that they keep practicing on the guidelines of academic integrity such as submitting drafts.

5. Conclusion

Truly, this research established the following factors influencing the perception of students in English major about the use of ChatGPT to improve their writing skills. The areas of strength are students' understanding of ChatGPT's demerits, the need to provide specific questions to the chatbot, and acknowledging ChatGPT as a helpful assistant. Also concerning the perceived benefits, the requirement of the teacher's assistance as well as the activities fostering the students' critical thinking and problem-solving skills were named. On the other hand, the opportunities include the implementation of ChatGPT in learning activities, the implementation of anti-Plagiarism measures, and directions for proper use of AI. With an aim of filling these weaknesses while at the same time build on some of the domain-strengthening strengths, the use of ChatGPT could go a long way in improving the writing skills of the English major students.

Thus, the investigation offered insights into using ChatGPT in enhancing the writ of English and outlined actionable plans for more efficient application. However, there are limitations in the sample size and respondent type and the study was conducted be limited to one university, which may limit the generalization of the study results. The future research should extend and involved a wider and more diverse group of participants and should examine more practice and more extended-term effects of using ChatGPT in the learning of writing.

References

[1] Ali, J., Shamsan, M., A., A., Hezam, T. & Mohammed A. A. Q. (2023). Impact of ChatGPT on learning motivation: Teachers and students' voices. *Journal of English Studies in Arabia Felix, 2*(1), 41–49.

[2] Ayedoun, E.; Hayashi, Y.; Seta, K. (2015). A conversational agent to encourage willingness to communicate in the context of English as a foreign language. *Procedia Computer Science, 60*(1), 1433-1442.

[3] Baker T., Smith L., Anissa N. (2019). *Educ-AI-tion rebooted? Exploring the future of artificial intelligence in schools and colleges.* Retrieved from https://www.nesta.org.uk/report/education-rebooted/

[4] Cakmak, F. (2022). Chatbot-human interaction and its effects on EFL students' L2 speaking performance and speaking anxiety. *Novitas-ROYAL (Research on Youth and Language), 16(2),* 113-131.

[5] Cassidy, C. (2023, January 10). *Australian universities to return to 'pen and paper 'exams after students caught using AI to write essays. [The Guardian news].* Retrieved from https://www.theguardian.com/Australianews/2023/jan/10/universities-to-return-topen-and-paper-exams-after-students-caught-using-ai-towrite-essays

[6] Chaudhry , M. A., & Kazim, E. (2022). Artificial Intelligence in Education (AIEd): a high-level academic. *AI and Ethics, 2,* 157-165.

[7] Cheng, S. M., & Day, M.-Y. (2014). Technologies and Applications of Artificial Intelligence. Proceedings of 19th International Conference (pp. 21-23). Taipei, Taiwan.

[8] Chuah, K. M., & Kabilan, M. K. (2021). Teachers' Views on the Use of Chatbots to Support. *International Journal of Emerging Technologies in Learning, 16*(20), 223-237.

[9] Dewi, H. K., Putri, R. E., Rahim, N. A., Wardani, T. I., & Pandin, M. G. R., Dr., M.Si., M.Phi., M.Psi., Psi. (2021). *The use of AI (artificial intelligence) in English learning among university student: case study in English Department, Universitas Airlangga.*

[10] Dwivedi, Y K. (2023). So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management, 71.*

[11] Eke, D. O. (2023). ChatGPT and the rise of generative AI: Threat to academic integrity? *Journal of Responsible Technology, 13.*

[12] Firat, M. (2023). What ChatGPT means for universities: Perceptions of scholars and students. *Journal of Applied Learning & Teaching, 6*(1), 1-7.

[13] Fitria, T. N. (2021). Grammarly" as AI-powered English Writing Assistant. *Journal of English language literature and teaching, 5*(1), 65-78.

[14] Fryer, L., & Carpenter, R. (2006). Bots as Language Learning Tools. *Language Learning & Technology, 10(3),* 8-14.

[15] Ghali, M. A., Ayyad , A. A., Abu-Naser, S. S., & Abu , M. (2018). An Intelligent Tutoring System for Teaching English Grammar. *International Journal of Academic Engineering Research, 2*(2), 1-6.

[16] Greyling, C. (2022, September 1). The Large Language Model Landscape. *Medium.* Retrieved from https://cobusgreyling.medium.com/the-large-language-model-landscape-9da7ee17710b

[17] Iqbal, N., Ahmed, H., & Azhar, K. A. (2022). Exploring teachers' attitudes towards using ChatGPT. *Global Journal for Management and Administrative Sciences, 5*(4), 97-111.

[18] Joshi, A. V. (2019). *Machine Learning and Artificial Intelligence.* Springer Nature.

[19] Karsenti, T. (2019). Artificial intelligence in education: The urgent need to prepare teachers for tomorrow's schools. *Formation et Profession, 27*(1), 105.

[20] Kasneci, E., SeBler, K., Kuchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Gunnemann, S., & Hullermeier, E. (2023). *ChatGPT for good? On opportunities and challenges of large language models for education.*

[21] Kaur, D. J., & Gill, N. S. (2019). *Artificial intelligence and deep learning for decision makers: A growth hacker s guide to cutting edge technologies.* BPB Publications.

[22] Kim, N. Y., Cha, Y., & Kim, H. S. (2019). Future English learning: Chatbots and artificial intelligence. *Multimedia-Assisted Language Learning, 22*(3), 32-53.

[23] Kiptonui, B. P., Too, J. K., & Mukwa, C. W. (2018). Teacher Attitude towards Use of Chatbots in. *Universal Journal of Educational Research, 6(7),* 1586-1597.

[24] Lidén, A., & Nilros, K. (2020). *Perceived benefits and limitations of chatbots in higher education.* Kalmar: Linnaeus University. Retrieved from https://www.diva-portal.org/smash/get/diva2:1442044/FULLTEXT01.pdf

[25] Lu, C.H., Chiou, G.-F., Day, M.Y., Ong, C.S., & Hsu W.L. (2006). Using instant messaging to provide an intelligent learning environment. Proceedings of the Intelligent Tutoring Systems (ITS) 2006 Lecture Notes in Computer Science, 4053, pp. 575-583.

[26] Mehrotra, D. D. (2019). *Basics of artificial intelligence & machine Learning.* Notion Press.

[27] Ouyang, Fan & Jiao, Pengcheng. (2021). Artificial Intelligence in Education: The Three Paradigms. *Computers and Education: Artificial Intelligence*, *2*(100020).

[28] Oxford dictionary online. (2020). Retrieved from https://www.oxfordlearnersdictionaries.com/definition/english/chatbot?q=chatbot

[29] Radford, A., Narasimhan, K., Salimans, T., & Sutskever, I. (2018). *Improving language understanding by generative pre-training.* Retrieved from https://www.cs.ubc.ca/~amuham01/LING530/papers/radford2018improving.pdf

[30] Rahman, A., Al Mamun, A., & Islam, A. (2017). Programming challenges of chatbot: Current and future prospective. Proceedings of the 2017 IEEE Region 10 Humanitarian Technology Conference (R10-HTC), (pp.75-78). Dhaka, Bangladesh.

[31] Rettberg, J. W. (2022, January 28). ChatGPT is multilingual but monocultural, and it's learning your values [Blog post]. Retrieved from https://jilltxt.net/right-now-chatgpt-is-multilingual-but-monocultural-butits-learning-your-values/

[32] Ruane, E., Birhane, A., & Ventresque, A. (2019). Conversational ai: Social and ethical considerations. Proceedings of the AICS - 27th AIAI Irish Conference on Artificial Intelligence and Cognitive Science (pp. 104-115). Galway, Ireland.

[33] Shahriar, S., & Hayawi, K. (2023). *Lets have a chat! A conversation with ChatGPT: Technology, applications, and limitations.*

[34] Shawar, B. A., & Atwell, E. (2007). Chatbots: Are they Really Useful? *LDV-Forum 2007, 22*(1), 29-49.

[35] Shi, N., Zeng, Q., & Lee, R. (2020). Language Chatbot - The Design and Implementation of English Language Transfer. *Computer Science and Technology,* 305-323.

[36] Tai, T. Y., & Chen, H. H. J. (2020). The impact of Google Assistant on adolescent EFL learners' willingness to communicate. *Interactive Learning Environments, 31(3)* 1-18.

[37] Toncic, J. (2020). Teachers, AI Grammar Checkers, and the Newest Literacies: Emending Writing Pedagogy. *Digital Culture & Education, 12*(1).

[38] Underwood, J. (2017). Exploring AI language assistants with primary EFL students. In K. Borthwick, L. Bradley & S. Thouesny (Eds), *CALL in a climate of change: adapting to turbulent global conditions - short papers from EUROCALL 2017*, pp. 317-321.

[39] Wu, E. H.-K., Lin, C.-H., Ou, Y.-Y., Liu, C.-Z., Wang, W.-K., & Chao, C. Y (2020), Advantages and constraints of a hybrid model k-12 e-learning assistant chatbot. *IEEE Access, 8,* 77788-77801.

[40] Yang, T.-C., & Chen, J.-H. (2023). Pre-service teachers' perceptions and intentions regarding the use of chatbots through statistical and lag sequential analysis. *Computers and Education: Artificial Intelligence.*