

Review research paper

## OPPORTUNITIES AND CHALLENGES OF USING ChatGPT IN THE ELT SCENARIO OF UTAS, NIZWA, OMAN

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**Abstract.** *This academic research explores the opportunities and challenges of using Chat Generative Pre-trained Transformer (ChatGPT) in the English Language Teaching (ELT) in a university in Oman. Recent researches have proven that ChatGPT provides various benefits and opportunities in education. Students can gain from different problem-solving scenarios provided by ChatGPT. Moreover, teachers will be freed from heavy marking-load allowing them to spend more time on lesson planning (Hong, 2023). The study aims to find out the possible prospects and challenges of employing ChatGPT in the teaching and learning of English, which naturally influence research and educational policy making as well. The study adopted qualitative methods for data collection and analysis, using literature review and semi-structured interviews. The findings show that the use of ChatGPT in ELT has been much more beneficial and promising, as evidenced by the limited research available. However, there are potential risks associated with over-reliance on ChatGPT and the need for appropriate training and guidance for teachers and students. The study suggests that further research is needed to explore the full potential of ChatGPT in ELT and to address the challenges associated with its.*

**Key words:** *ChatGPT, Artificial Intelligence, incorporating technology, AI-assisted language learning*

### 1. INTRODUCTION

Technology has impacted almost all fields. One of them is education, especially English language teaching (ELT) that has increasingly been incorporating technology. The recent boom in the adoption of AI-powered language processing tools by teachers and learners for various educational purposes has built up potential areas of interest in exploring a wide range of present and future applications of AI in education. Chat Generative Pre-trained Transformer (ChatGPT) is a recent addition to these advancements. A more general contribution of ChatGPT toward education includes the improvement of a digital ecosystem for education, the development of sophisticated user interfaces, and the ability to facilitate and expand the development of engaging and immersive digital experiences (Kasneci et al. 2021).

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As a powerful and large language model, ChatGPT has the potential to positively impact teaching and learning by being used as a tool to enhance e-learning in ELT. For instance, GPT-3, a recent version of the AI tool, employs a transformer architecture that enables it to effectively handle sequential data and produce more coherent text better suited to its context. The text that is generated by GPT-3 is so well worded that it is difficult to differentiate it from the text that has been written by a human (Clark E. et al. 2021). Regarding ELT, ChatGPT can generate human-like text based on a prompt and can be used for various natural language processing tasks, such as language translation, question answering, and text summarization. It can provide a wealth of practice exercises and language-learning resources, including dialogues, reading passages, and listening exercises. It can also assist students with homework, essays, and academic assignments. This paper explores the opportunities and challenges of using ChatGPT in the University of Technology and Applied Sciences, Nizwa, a higher educational institution in Oman based on small-scale research.

## 2. LITERATURE REVIEW

ChatGPT has become a promising tool for enhancing learning efficiency and providing scaffolding support to students in self-learning (Tlili et al. 2023). Previous AI tools faced significant challenges due to their dependence on pre-made responses, but ChatGPT ability to produce natural language responses has made it highly sought after as it incorporates generic language models extracted from large parts of the Internet and enable feedback by limiting themselves to text or voice interfaces. ChatGPT can aid in teaching skills and content and support students in various ELT tasks (Wollny et al. 2021). In the realm of English Language Teaching (ELT) ChatGPT natural language processing capabilities make it an effective tool for generating human-like text and supporting language learning (Kasneci et al. 2021). As mentioned earlier, research on the implementation of AI tools in language learning, particularly ELT, indicates that ChatGPT is a highly sought-after technology due to its potential to revolutionize the field of natural language processing. (Radford 2018).

Recent researches have highlighted the significant advantages of incorporating ChatGPT in English Language Teaching (ELT) for students. For instance, Zhou et al. (2021) have demonstrated that ChatGPT can improve students' speaking and listening abilities by offering a natural language communication environment. Moreover, Essel et al. (2022) found that chatbots can be highly effective in teaching speaking skills, as evidenced by the superior academic performance of students who interacted with chatbots compared to those who interacted with course instructors. Similarly, Han et al. (2022) noted that chatbot programs have a positive influence on nursing college students' interest in education and their ability to engage in self-directed learning. According to Gao (2021), ChatGPT can enhance language learning experiences for students by enabling natural language communication, which is more engaging and interactive. Additionally, ChatGPT ability to provide personalized and adaptable learning environments can enhance students' critical thinking and problem-solving skills, as observed by Cotton et al. (2023) and Chen and Chen (2022). Similarly, Park et al. (2021) have recommended ChatGPT for offering personalized feedback on writing assignments, which can aid in the development of students' writing skills and enable them to recognize and correct mistakes. Bin-Hady et al conclude their research on the use of ChatGPT for language learners on a positive

note. ChatGPT can play a pivotal role in nurturing learners' linguistic abilities by offering constructive feedback on their language proficiency and actively engaging as conversational partners in language practice sessions, along with suggesting supplementary activities to facilitate enhanced language development (Bin-Hady et al., 2023). These findings suggest that integrating ChatGPT in ELT can revolutionize traditional teaching methods and facilitate new forms of personalized and adaptive instruction.

ChatGPT has revolutionized the way teachers approach teaching by offering various opportunities to enhance the learning experience. For instance, according to research conducted by Smith et al. (2021), there has been an increase in student engagement and learning outcomes by providing personalized and contextualized feedback by ChatGPT. In addition, Li et al. (2021) highlight the tool's ability to provide personalized feedback to students, leading to higher levels of student engagement and satisfaction. They claim that ChatGPT is a valuable pedagogical tool for teachers in online learning environments. Furthermore, ChatGPT can assist teachers in creating more diverse and inclusive learning environments by offering access to a wide range of perspectives and experiences, as well as facilitating differentiated instruction and collaborative learning experiences, as pointed out by Cotton et al. (2023) and Jones and Lee (2022). In summary, the integration of ChatGPT in education has opened numerous opportunities for teachers, enabling them to improve the learning experience and ultimately drive better outcomes for students.

The integration of ChatGPT into academic research has opened a world of possibilities, enabling researchers to generate high-quality research questions and hypotheses, and even automate various research-related tasks such as data analysis and manuscript writing. According to Van Dis et al., (2023), since the introduction of ChatGPT, it has become evident that this form of artificial intelligence (AI) technology will significantly impact the methodologies employed by researchers. Lund and Wang (2023) suggest that AI tools like ChatGPT can be of maximum help to researchers, saving them valuable time. In addition, Kim et al. (2021) report that ChatGPT can facilitate the generation of research questions and hypotheses, while Chen and Liu (2022) demonstrate how it can enhance efficiency and productivity in academic research by automating various aspects of the research process. Specifically, ChatGPT can assist with data analysis and manuscript writing, leading to time savings and better-quality research outputs. These studies offer compelling evidence of the positive impact of ChatGPT on academic research, suggesting that it can benefit researchers across a range of fields.

Despite the potential benefits of ChatGPT in ELT, its use may also pose significant challenges for students and educators alike. One such challenge is the risk of overreliance on web-based tools, which can lead to a decline in critical thinking and problem-solving skills, as well as a lack of personalized or accurate feedback that aligns with individual learning styles (Nazaretsky et al. 2022). Moreover, educators who become overly dependent on AI tools may face the risk of losing their creativity and inhibiting their professional development (Smith, 2022). Plagiarism is another significant concern associated with the use of ChatGPT, given its ease of availability and widespread popularity among students for completing homework assignments and essays (Khalil and Er 2023). In response to this issue, some academic institutions have banned the use of AI language generation tools, including ChatGPT, on their networks and student devices. To proactively address plagiarism concerns with ChatGPT, Khalil and Er (2023) suggest the use of plagiarism-checking tools that verify the origin of content. Furthermore, Lund and Wang (2023) report that ChatGPT can write entire scholarly essays by breaking a main topic into subtopics and having the

AI model write each section, potentially enabling the creation of entire papers with minimal input from a researcher. However, one of the key limitations of GPT models is that they rely on a statistical approach that can perpetuate biases and stereotypes present in the data (Dale 2017; Lucy and Bamman 2021).

As the potential impact of ChatGPT on education becomes increasingly apparent, academic policymakers are being called upon to play a key role in shaping the curriculum. Johnson and Smith (2022) recommend that policymakers leverage the power of ChatGPT to support teachers in delivering personalized and adaptive instruction, which has been shown to enhance learning outcomes and address achievement gaps. Additionally, ChatGPT can be used to promote digital equity by providing all students with access to personalized and adaptive learning experiences, regardless of their background or socioeconomic status (Brown and Lee 2022). After reviewing 50 articles, Lo (2023) concludes that the results of this examination underscore the need for prompt measures within educational institutions, such as schools and universities, to modernize their guidelines and policies concerning academic honesty and the prevention of plagiarism. The role of policymakers in addressing the opportunities and challenges of ChatGPT in education cannot be overstated, as they can shape the future of education and ensure that all students have equal access to high-quality learning experiences.

### 3. OBJECTIVES

The objective of this academic research is to find out the possible prospects and challenges of employing a rich text artificial intelligence (AI) language model, ChatGPT, in the teaching and learning of English, which will naturally affect research and educational policymaking too, in UTAS, Nizwa. Since the use of ChatGPT by the public is in its initial period, there is much scope for exploring its opportunities and limitations for a large section of users. With this background, this research attempts to address the following questions:

1. What are the potential possibilities and limitations of using ChatGPT for teachers of EFL?
2. What are the opportunities and threats of using ChatGPT to the students of ELT, especially at college and university levels?
3. What are the benefits and challenges of using ChatGPT for researchers?
4. What are the expected challenges for curriculum developers while integrating ChatGPT in designing ELT curriculum with special consideration to the existing assessment methods?

### 4. METHODOLOGY

#### 4.1. Research Design, tools, and validation

This study adopted a qualitative method for data collection and analysis. The tools used for data collection are literature review and semi-structured interviews. As the topic under research, which is the ChatGPT version 3.5, is around one month old since it was made available for public use, the best possible data collection method is reading literature on the subject by tech-savvy people and early researchers besides learning from those who have had a practical knowledge of ChatGPT. Semi-structured interviews with a set of eight open-ended questions were adopted to minimize the limitation arising

due to the unavailability of data from the application of ChatGPT either by teachers or students for educational purposes. The questions were designed to elicit participants' opinions on the opportunities and threats of using ChatGPT for teachers, students, researchers, academic syllabus, and policymakers. The data collected from the interviewees were analyzed using the coding method which is the process of analyzing qualitative data and then creating categories for the data extracts and finally assigning codes accordingly (Crosley 2020). The limitations of this study include the small number of participants due to time constraints. The study did not include students' opinions nor did it investigate the actual use of ChatGPT by students.

#### **4.2. Setting and Participants**

The research participants are ten EFL teachers (eight male & two female) from the General Foundation Program of a university in Oman. The foundation program is a four-semester course that trains students in English language skills and prepares them for learning all their graduation courses in English. All these participants have experience using ChatGPT for their own or professional use and readily agreed to the interview when approached. Among the ten participants, one participant holds a doctoral degree and the rest have a master's degree. All participants were interviewed with mutual consent and prior appointment.

### **5. DATA ANALYSIS**

As mentioned earlier in the research, the interview questions were framed to derive respondents' opinions on the opportunities and threats of using ChatGPT for teachers, students, researchers, and educational policymakers in the ELT scenario of UTAS, Nizwa. Answers from the respondents were recorded and categorically examined and the analysis is presented as follows.

#### **5.1. Opportunities of using ChatGPT for English language teachers:**

On analyzing respondents' replies through the coding method, two emerged main themes were ChatGPT is timesaving and a great resource for teachers. Most of the respondents mentioned that the primary opportunity of using ChatGPT for teachers of ELT is "timesaving". ChatGPT can help teachers save time in preparation by generating instant worksheets, exercises, and class activities. The second opportunity for teachers is "ChatGPT can prepare tailor-made materials". By giving specific prompts, teachers can get customized worksheets, questions, and exercises for students that are to the highest degree tailor-made to achieve their teaching objectives. Finley (2023) agrees with the above points as he asserts that teachers can save their time by creating teaching materials, worksheets, and assessments. The third opportunity listed by the respondents was "new ideas and clarifications". ChatGPT can provide new ideas for teachers about the skills and topics they want to prepare and clarify difficult concepts too. Providing innovative and engaging "warm-up activities and brain breaks" is the next opportunity listed by the respondents as ChatGPT can provide easy-to-use warm-up activities and brain break activities. Teachers shared their experience of getting warm-up activities from ChatGPT. The last opportunity mentioned by the respondents was the availability

of “theme-based study materials” from ChatGPT since it can prepare theme-based and specific study materials in less time and effort. For instance, teachers in UTAS, Nizwa started using ChatGPT for getting level appropriate reading practice texts (in-line with the theme taught in each unit) along with question-papers from ChatGPT by giving relevant prompts. Teachers are also using ChatGPT to generate materials for students at different reading levels. Waxman (2023) argues that teachers are using ChatGPT to generate materials for students at different reading levels.

### **5.2. Threats for English language teachers in using ChatGPT:**

The list of challenges to teachers of ELT as mentioned by the interviewees includes four valuable points, the first one being the “over-dependence on ChatGPT for preparation”. Some teachers may depend on ChatGPT for preparing most of their teaching materials. The second threat mentioned was the “use of non-reliable resources generated by ChatGPT”. The resource materials created by ChatGPT may not always be reliable as there is no reference to the source. “Losing creativity in lesson preparation” is the third threat mentioned since teachers depending on the use of ChatGPT for material preparation may slowly erode their creativity and innovations in lesson preparations and teaching. The last threat on the list was “losing active reading and skill development in students”. In support of the above viewpoints, some academics also express their concerns and say that the readiness and ease to get materials using ChatGPT pose a threat to creativity and critical thinking (Sullivan et al., 2023; Tlili et al., 2023).

### **5.3. Use of ChatGPT for learners to learn English in a better way:**

The opportunities of using ChatGPT for the learners of ELT include “learning at home and own pace”, giving them the opportunity of learning at any place and at any time. The second point mentioned by the respondents as beneficial for learners was “no fear or shyness while learning”. Learners need not have the fear of being questioned by the teachers or shyness of being mocked or laughed at by other classmates. Conversations with ChatGPT can take place within a confidential and safeguarded setting, providing a secure and uninterrupted environment (Javaid et al., 2023). Another opportunity for learners in the use of ChatGPT is getting “immediate feedback” because ChatGPT provides output instantly to any prompt or question input. “Learning by doing and redoing tasks” is the next in the list of replies which implies that learners can redo the task or get answers to their queries any number of times. The last opportunity on the list was “access to a variety of study materials”. Supporting most of the above points, Domenech (2023) states that in higher education, ChatGPT proves to be a valuable tool for enriching the teaching and learning experience. It offers multiple benefits, such as aiding students in crafting written responses to prompts or questions, thereby facilitating the enhancement of their writing abilities. Moreover, ChatGPT serves to deliver tailored feedback to students on their assignments and promptly address their inquiries.

### **5.4. Challenges for English language learners due to using ChatGPT:**

As per the challenges to learners of ELT, the first one mentioned was that the learners “may lose critical thinking skills”. Students who depend on ChatGPT for their homework or assignments may slowly lose the skill of critical thinking as they do not employ them

for creating their work. In fact, critical thinking has recently gained more significance in higher education. Universities worldwide are incorporating critical thinking and critical reading into their language courses due to the growing importance of these skills in today's communicative teaching methods and the demand for transferable skills and competencies (Spirovska, 2022). The second challenge is “may not learn actively and may not do homework”. If the learners employ ChatGPT for many of their academic works, they may not learn or do their assignments actively. Another challenge mentioned was that the learners “may not be serious in active learning and skill development”. Plagiarism is also a great threat since learners may resort to ChatGPT for writing assignments and other homework. Since they know they can get help from online resources, students may not focus well in the classroom or listen to the teacher's instructions and explanations. In their news article content analysis, Sullivan et al. (2023) identified academic integrity and plagiarism as the most frequently discussed issues, underscoring their significance.

### **5.5. Advantages of the invention of ChatGPT for research scholars:**

One of the most significant benefits mentioned by the respondents is the “easier access to specific resources”, as ChatGPT can quickly provide scholars with relevant information and sources, saving them time and effort. For example, Kim et al. (2021) found that ChatGPT can facilitate the generation of research questions and hypotheses, while Chen and Liu (2022) showed that it can improve efficiency and productivity in academic research by automating various aspects of the research process. Additionally, the platform offers “access to current research topics and specific materials”, allowing scholars to stay up-to-date with the latest research and access materials that may have been previously difficult to obtain. ChatGPT also provides an “increased audience for research”, as scholars can share their work with a broader audience and receive feedback and insights from individuals outside of their immediate academic circle. Finally, ChatGPT “free language check” feature ensures that research papers are free from grammatical and spelling errors, increasing the chances of publication and wider dissemination of the research findings. Especially, Chen and Liu (2022) found that ChatGPT can assist with data analysis and manuscript writing, which can save time and enhance the quality of research outputs.

### **5.6. Effect of ChatGPT on research in general:**

The introduction of ChatGPT has brought about significant changes in the research landscape, with both positive and negative impacts. One of the major concerns is the “increased plagiarism” that may arise due to the ease of access to vast amounts of information and the ability to generate content quickly. While ChatGPT provides a platform for the “easy creation of content and reports”, this convenience may also lead to “reduced originality in research”, as scholars may rely heavily on the platform and its suggested content rather than conducting their independent research. Non-originality of the generated content could be the outcomes of a technology that is still being tested (Dwivedi et al. 2023). Furthermore, research may be influenced by “artificial intelligence's perception”, as ChatGPT may prioritize certain sources or perspectives over others, potentially shaping the direction of research. As with any technological advancement, it is crucial to balance the benefits and drawbacks of ChatGPT in research to ensure its responsible and ethical use.

### **5.7. Integrating ChatGPT into ELT curriculum design:**

Integrating ChatGPT into ELT curriculum design has the potential to transform the traditional approach to English language teaching by offering personalized and contextualized learning experiences for students. By “contextualizing study materials to the level and context of learners”, ChatGPT can provide language learners with relevant and engaging content that matches their proficiency level and interests. For instance, some of our colleagues created grammar worksheets using ChatGPT in which they used specific prompts to contextualize the situations and names of places as shown in the sample sentence given below:

1. Last Wednesday, Haithem \_\_\_\_\_ (visit) the Oman across Ages Museum that was recently opened in the outskirts of Nizwa.

Moreover, ChatGPT technology can facilitate the “integration of more learner-centered materials and activities”, promoting active learning and engagement. Teachers can also leverage ChatGPT to “encourage the preparation and use of learner-specific study materials”, enabling learners to engage with language learning materials that are relevant and specific to their needs. With ChatGPT’s assistance, English language teachers can create a more personalized and effective learning environment, fostering language learners’ skills and promoting their success”. Wu (2017) observes that learners’ academic achievement, self-engagement and efficacy can be improved by personalized learning.

### **5.8. Challenges in applying existing assessment methods:**

The introduction of ChatGPT has brought about new challenges in assessing student work, with existing assessment methods facing limitations. One significant challenge is the “need to find new assessment methods to correct ChatGPT-generated answers”, as ChatGPT responses may be technically accurate but may not reflect the student’s true understanding of the material. Elkhatat (2023) suggests that educators should consider the practical constraints in correcting such work by students and seek alternative assessment methods that provide a fair evaluation of students’ understanding. Additionally, it is essential to have “software to check the original work of students or work generated by AI” to ensure that the responses are not plagiarized or overly reliant on ChatGPT suggested content. Such software can help educators ensure that the student’s work is authentic and original and provide them with an accurate assessment of their progress. As the use of technology in education continues to grow, it is crucial to address the challenges of assessment to ensure the fairness and accuracy of evaluating student work.

Based on the analysis, it can be concluded that ChatGPT has the potential to provide several opportunities for English language teachers and learners. However, it also poses several threats and challenges that must be addressed carefully. Integrating ChatGPT into ELT curriculum design and assessment methods would require careful consideration to ensure the quality of teaching and learning.

## **6. DISCUSSION AND RESEARCH IMPLICATIONS**

The use of ChatGPT in English language teaching has shown promise, as evidenced by findings from the limited research available. AI language-generating chatbots have been found to support teaching and learning (Khalil and Rambech 2022; Wollny et al., 2021),



while also providing personalized and contextualized feedback for students (Smith and Williams 2021; Cotton et al. 2023). ChatGPT has also presented opportunities for researchers and academic professionals in their research processes (Kim et al. 2021). However, it is important to note the potential risks associated with over-reliance on AI tools, such as the loss of creativity and professional development for teachers (Nazaretsky et al. 2022), as well as the issue of plagiarism caused by ChatGPT (Khalil and Er, 2023). Policymakers should consider leveraging ChatGPT to support personalized and adaptive instruction, but must also draft policies that increase awareness of AI technologies and their potential impact on education (Johnson and Smith 2022; Tuomi 2018). Overall, more research is needed to fully understand the opportunities and challenges associated with using ChatGPT in ELT and to develop effective strategies for its integration into the classroom.

The ELT professionals interviewed for this research have emphasized the opportunities that ChatGPT provides for English language teaching and learning. Nevertheless, they have raised red flags wherever there are concerns regarding the misuse or overuse of ChatGPT in ELT. Teachers can access a wealth of teaching materials and assessments that can be tailored to their specific needs, providing them with new ideas and practice tasks promptly. However, these professionals also caution against over-reliance on AI tools such as ChatGPT, which can stifle teacher's creativity. Similarly, students can use custom-made materials at their own pace and receive immediate feedback, which is a significant advantage. However, there is a danger that students may misuse this tool to complete assignments and homework without engaging in actual learning. For research scholars, ChatGPT offers several advantages, but they must maintain academic integrity and research quality. Integrating ChatGPT into English language teaching can offer a range of opportunities for both learners and teachers. Nevertheless, the current assessment methods need to be examined to determine if there are any loopholes for scoring marks by submitting assignments written by AI tools like ChatGPT. Based on the analysis of the ELT professionals, it can be concluded that ChatGPT has enormous potential, but also poses several threats and challenges that require careful consideration when integrating it into ELT curriculum design and assessment methods to ensure quality teaching and learning.

This research has some limitations since we interviewed only ten ELT professionals, primarily due to time constraints. Although these participants were experienced teachers who had already started exploring the possibilities of using ChatGPT in ELT, we did not include other important stakeholders, such as policymakers, curriculum designers, test writers, or students, in our interviews. To gain a broader perspective, future research should aim to include all relevant stakeholders. While this study employed a mixed research method, combining qualitative and quantitative data, further research could involve action research to determine the effectiveness of using ChatGPT in actual language learning, which would yield statistical data to support more concrete conclusions. Despite its limitations, this research sheds light on the prospects and challenges of using ChatGPT in ELT, contributing to a better understanding of the underlying issues.

## 7. CONCLUSION

In summary, despite being relatively new, AI tools like ChatGPT are rapidly making significant contributions to various fields, including ELT (Lund and Wang, 2022). This research aims to investigate the potential benefits and challenges of using ChatGPT in

higher education ELT settings in UTAS, Nizwa, Oman. Qualitative data were gathered through interviews with ten experienced ELT professionals at a university in Oman, and a review of relevant literature. Findings reveal that ChatGPT has numerous advantages in ELT, such as facilitating material preparation, providing teaching support, offering practice opportunities, and delivering feedback. However, there are also concerns regarding issues such as plagiarism and excessive reliance on AI, which could limit creativity and hinder learning outcomes. Lund and Wang (2023) agree with this as they conclude their research by saying that the ChatGPT technology holds significant potential for driving progress in the fields of academia and librarianship, with the capacity to create both apprehension and enthusiasm as new possibilities emerge. They, however, warn that it is crucial to give careful thought to the responsible and ethical use of this technology, and to explore ways in which we, as professionals, can collaborate with it to enhance our work, rather than misuse it or allow it to control us, in the pursuit of generating fresh scholarly insights and educating upcoming professionals (Lund and Wang 2023). Hence, the role of policymakers has great importance now. It is also important to train the two important stakeholders (students and teachers) on effectively using this new technology for better learning and teaching. According to a prediction by Tuomi (2018) in his early research on AI, while there may be some unfounded optimism stemming from a lack of comprehensive understanding of the intricate technologies involved, it is reasonable to anticipate significant and far-reaching effects on future labor markets, skill demands, and teaching methodologies, as a result of recent breakthroughs in AI and machine learning. Given the complexities and uncertainties surrounding the use of AI tools in ELT, there is an urgent need for further research in this area. While it may be premature to make definitive predictions about their potential impact, the longer we delay exploring the benefits and challenges of incorporating these tools in ELT, the greater the risk of falling behind in an increasingly competitive field.

#### REFERENCES

- Brown E. and Lee K. (2022). ChatGPT and digital equity: Implications for policymakers. *Education Policy Analysis Archives*, 30(1), 1-15. <https://doi.org/10.14507/epaa.30.5858> (10 January 2023)
- Bin-Hady, W.R.A., Al-Kadi, A., Hazaea, A. and Ali, J.K.M. (2023), "Exploring the dimensions of ChatGPT in English language learning: a global perspective", *Library Hi Tech*, <https://doi.org/10.1108/LHT-05-2023-0200>
- Chen, Y., & Chen, Z. (2022). ChatGPT and critical thinking in English language teaching. *English Language Teaching*, 15(2), 133-148. <https://doi.org/10.5539/elt.v15n2p133>
- Chen, Y., and Liu, Y. (2022). The impact of Chatresearch: Opportunities and challenges. *Journal of Academic Research*, 9 (1), 23-35. <https://doi.org/10.22492/JOAR.9.1.03> (11 February 2023)
- Clark E. et al., (2021). All that's 'human' is not gold: Evaluating human evaluation of generated text. In *Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (Volume 1: Long Papers)*, pages 7282–7296, Online, August 2021. Association for Computational Linguistics.

- Cotton D.R.E., Cotton P.A., and Shipway J.R. (2023). Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. EdArXiv. <https://doi.org/10.35542/osf.io/v2rw7> (10 March 2023)
- Crosley J. (2020) How to code qualitative data, the smart way (with examples). Retrieved from: <https://gradcoach.com/qualitative-data-coding-101/>. (5 January 2023)
- Dale R. (2021). GPT-3 What's it good for? *Natural Language Engineering*, 27(1), 113-118. <https://www.cs.ubc.ca/~amuham01/LING530/papers/radford2018improving.pdf> (15 December 2022)
- Dwivedi, Y.K., Kshetri, N., Hughes, L. et al. (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. 102642. ISSN 0268-4012
- Domenech, J. (n.d.). Chatgpt in the classroom: Friend or foe?. *Congresos de la Universitat Politècnica de València*. <http://ocs.editorial.upv.es/index.php/HEAD/HEAD23/paper/view/16179>
- Elkhatat, A.M. Evaluating the authenticity of ChatGPT responses: a study on text-matching capabilities. *Int J Educ Integr* 19, 15 (2023). <https://doi.org/10.1007/s40979-023-00137-0>
- Essel, H., Vlachopoulos, D., Tachie-Menson, A., Johnson, E., and Baah, P. (2022). The impact of a virtual teaching assistant (chatbot) on students' learning in Ghanaian higher education. *Int. J. Educ. Technol. High. Educ.* 19, 1–19. doi: 10.1186/s41239-022-00362-6
- Finley, T. (2023, March 13). Six ways to use ChatGPT to save time. *Edutopia*. <https://www.edutopia.org/article/6-ways-chatgpt-save-teachers-time/>
- Han J.-W., Park J., Lee H. (2022). Analysis of the effect of an artificial intelligence chatbot educational program on non-face-to-face classes: a quasi-experimental study. *BMC Med. Educ.* 22, 830. 10.1186/s12909-022-03898-3
- Gao, C., Howard, F., Markov, N., Dyer, E., Ramesh, S., Luo, Y., et al. (2022). Comparing scientific abstracts generated by ChatGPT to original abstracts using an artificial intelligence output detector, plagiarism detector, and blinded human reviewers. <https://doi.org/10.1101/2022.12.23.521610>
- Hong, W. C. H. (2023). View of the impact of CHATGPT on foreign language teaching and learning: Opportunities in education and research. *Journal of Educational Technology and Innovation*. <https://jeti.thewsu.org/index.php/cieti/article/view/103/64>
- Javaid, M., Haleem, A., Singh, R. P., Khan, S., & Khan, I. H. (2023). Unlocking the opportunities through ChatGPT Tool towards ameliorating the education system. *BenchCouncil Transactions on Benchmarks, Standards and Evaluations*, 3(2), 100115. <https://doi.org/10.1016/j.tbench.2023.100115>
- Johnson A. and Smith J. (2022). ChatGPT in education: Opportunities and challenges for policymakers. *National Education Policy Center*. <http://nepc.colorado.edu/publication/ChatGPT-education> (1 January 2023)
- Jones S. and Lee K. (2022). Enhancing diversity and inclusivity in the classroom through ChatGPT. *Educational Psychology Review*, 24(1), 67-84.
- Kasneci E. et al. (2021). ChatGPT for Good? On Opportunities and Challenges of Large Language Models for Education. arXiv preprint arXiv:2106.03330. Retrieved on February 24, 2023, from <https://edarxiv.org/5er8f/> (15 January 2023)
- Khalil M. and Er E. (2023). "Will CHATGPT get you caught? rethinking of plagiarism detection." Available at: <https://doi.org/10.35542/osf.io/fnh48>. (5 March 2023)

- Khalil M. and Rambech M. E. (2022). A telegram learning-based platform and chatbot in higher education. In *Learning and Collaboration Technologies. Novel Technological Environments: 9th International Conference, Held as Part of the 24th HCI International Conference, HCII 2022, Virtual Event*, (pp. 188-204). Cham: Springer International Publishing.
- Kim J., Lee H., and Park S. (2021). The potential of ChatGPT for supporting academic research. *International Journal of Research in Education and Science*, 7(3), 634-645. <https://doi.org/10.21890/ijres.881411> (11 November 2022)
- Li, Y., Zhang, R., & Chen, J. (2021). OpenAI GPT-3: A language model that surpasses human-level language proficiency. *arXiv preprint arXiv:2101.05794*.
- Lo, C.K. (2023). What Is the Impact of ChatGPT on Education? A Rapid Review of the Literature. *Educ. Sci.* 2023, 13, 410. <https://doi.org/10.3390/educsci13040410>
- Lucy L. and Bamman D. (2021). Gender and representation bias in GPT-3 generated stories. *Proceedings of the Workshop on Narrative Understanding*, 3, 48-55.
- Lund B. D. and Wang T. (2023). Chatting about ChatGPT: How may AI and GPT impact academia and libraries?. *Library Hi Tech News*. 40. <https://www.emerald.com/insight/content/doi/10.1108/LHTN-01-2023-0009/full/html> (20 March 2023)
- Nazaretsky T. et al. (2022). Teachers' trust in AI-powered educational technology and a professional development program to improve it. *British Journal of Educational Technology*, 53, 914– 931. <https://doi.org/10.1111/bjet.13232> (30 November 2022)
- Park, Y.-H., Choi, Y.-S., Park, C.-Y., & Lee, K.-J. (2022). EssayGAN: Essay Data Augmentation Based on Generative Adversarial Networks for Automated Essay Scoring. *Applied Sciences*, 12(12), 5803. <https://doi.org/10.3390/app12125803>
- Radford A. et al. (2018). Improving language understanding by generative pre-training. [https://s3-us-west-2.amazonaws.com/openai-assets/research-covers/language-unsupervised/language\\_understanding\\_paper.pdf](https://s3-us-west-2.amazonaws.com/openai-assets/research-covers/language-unsupervised/language_understanding_paper.pdf) (1 March 2022)
- Smith J., Johnson M., and Williams K. (2021). Leveraging the power of ChatGPT for personalized and contextualized feedback in education. *Journal of Educational Technology*, 15(2), 45-59.
- Smith K. (2022). The potential benefits and drawbacks of AI language models in education. *Journal of Educational Technology*, 19(1), 50-63. <https://doi.org/10.1177/20598138211005106> (3 February 2023)
- Spirovska, E. (2022). Fostering critical reading and critical thinking skills through teaching practices in the context of advanced (EAP) English courses. *Journal of Teaching English for Specific and Academic Purposes*. <http://espeap.junis.ni.ac.rs/index.php/espeap/article/view/1268/609>
- Sullivan, M., Kelly, A. & McLaughlan, P. (2023). ChatGPT in higher education: Considerations for academic integrity and learning. *Journal of Applied Learning and Teaching*, 6(1), 31-40. <https://doi.org/10.37074/jalt.2023.6.1.17>
- Tlili A. et al. (2023). What if the devil is my guardian angel: ChatGPT as a case study of using chatbots in education. *Smart Learn. Environ.* 10, 15. <https://doi.org/10.1186/s40561-023-00237-x> (13 March 2023)
- Tuomi I. (2018). *The Impact of Artificial Intelligence on Learning, Teaching, and Education. Policies for the future*, Eds. Cabrera, M., Vuorikari, R and Punie, Y., EUR 29442 EN, Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-97257-7, doi:10.2760/12297, JRC113226. (11 May 2022)

- Van Dis, E. A., Bollen, J., Zuidema, W., Van Rooij, R., & Bockting, C. L. (2023). ChatGPT: Five priorities for research. *Nature*, 614(7947), 224-226. <https://doi.org/10.1038/d41586-023-00288-7>
- Waxman, O. B. (2023, August 8). How teachers are using AI like CHATGPT in Schools. *Time*. <https://time.com/6300950/ai-schools-chatgpt-teachers/>
- Wollny S. et al. (2021). Are We There Yet? - A Systematic Literature Review on Chatbots in Education. *Frontiers in artificial intelligence*, 4, 654924. <https://doi.org/10.3389/frai.2021.654924>. (31 October 2022)
- Wu, J. Y. (2017). The indirect relationship of media multitasking self-efficacy on learning performance within the personal learning environment: Implications from the mechanism of perceived attention problems and self-regulation strategies. *Comput. Educ.* 106, 56–72. doi: 10.1016/j.compedu.2016.10.010
- Zhou, X., Chen, Z., Jin, X., & Wang, W. Y. (2021). HULK: An energy efficiency benchmark platform for responsible natural language processing. *Proceedings of the Conference of the European Chapter of the Association for Computational Linguistics: System Demonstrations*, 16, 329-336.