

# The Impact of Artificial Intelligence on the Future of English Language Teaching and Learning at Omani Universities

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**Abstract:-** This qualitative study examined the impact of artificial intelligence on the future of teaching English language and learning at Omani universities. AI has recently brought rapid changes in English language teaching and learning by advanced AI applications and technologies. The teaching experiences, learning practices and outcomes have associated with AI learning implications in English classrooms. The study explores the new future roles of teachers in AI-driven English classrooms, the future benefits of AI applications such as Chatbot and tutoring system. The future effectiveness of AI causes the learning autonomy, personalized learning and effective learning engagement. The findings revealed the benefits of AI on the future of English language teaching and learning, the challenges and the new shapes of teachers' roles and learners when teaching and learning process in English education occurs.

**Keywords:** artificial intelligence (AI), English language.

## 1. Introduction

All individuals have affected due to the industrial revolution and this has recently created globalization and caused creative and innovative transformations. Therefore, technology is a vital and common factor that transferred knowledge and information through contents, texting, visions and sounds (Rahayu & Pujiyono, 2017). Technology has been improved in order to develop education of teaching and learning. It is considered as one part of computational creativity that sheds light towards the developments. The rapid technologies have created various changes in education and its fields related to English language in teaching and learning and this has brought the greater and wider communication that has associated with AI (Cheng & Day, 2014).

Artificial intelligence was defined first by Jone McCathy and it means the sciences of machines that stimulate as humans' mind in which it creates the abilities that are similar to humans especially smart computing programs (McCarthy, Minsky, Rochester, & Shanno, 2006). Machine intelligence has been considered as another name for artificial intelligence (AI) (Mehrotra, 2019). The aim of artificial intelligence is to produce computer programing and systems that act like humans and think like them. (Campesato, 2020). Moreover, AI are computing systems that simulates human intelligence and teaching and learning process (Sindermann et al., 2021). Learners can learn and teachers teach the language by using AI applications and these applications can enhance the learning and teaching process (Xiaohong & Yanzheng, 2021).

The rapid developed of technology has changed learning and teaching in the classrooms including English education. One area where technology has shown significant changes is language specifically in teaching and learning English as a second language. To master the English language, learners have to achieve the proficiency in all its various skills, listening, reading, writing and speaking (Grabe & Stoller, 2002). Artificial Intelligence (AI) includes various technical tools that have been integrated in the English language and it has recently offered innovative and creative ways to engage learners and enhance their language acquisition, abilities skills and proficiency in the English language teaching and learning (Lesia, Andrii, Iryna, & Nadia 2022).

AI applications are a part of computer-assisted language learning and teaching English language. The growth of AI and technology has developed the future of learning, teaching process and abilities (Li, 2020). It has supported

the teaching and learning effectiveness (Mukhallafi, 2020). With the rapid development of massive data and knowledge processing, artificial intelligence (AI) has provided different developments to language teaching and learning and has become more innovative (Zhu, 2017). The teaching and learning environment is easily accessible to the learners and teachers (Marr, 2018). According to Gawate (2019), AI will be in the future a very significant part of the supplementary support system for English language learners and teachers. "Artificial intelligence also will be acting like a vital tool for supporting English teaching and learning and this part of AI will lead to global competency, and language proficiency, personalized materials and adaptive educational systems. Artificial intelligence (AI) will enhance English teaching and learning proficiency, contents and arrangements. It has improved instructional strategies and evaluation methodologies through intelligent processing (Wang, 2019). Education has been found as the most effective fields that has seen a massive increase of AI application and recently the powerful AI applications are launched on the websites, providing the teachers and learners with effective opportunities to do complex tasks and activities (Fitria, 2021; Yin et al., 2022). This study aims at exploring the impact of AI on the future of English language teaching and learning at Omani universities using a quantitative approach. Omani Universities are one of these significant educational and academic institutions that are applying and using AI in their English courses.

## 2. Study Questions

The study questions are as follows:

- What is the future impact of AI on the future of English language teaching and learning?
- What are the future benefits of AI in English classrooms?
- What are the challenges of applying AI in the future of English classrooms?
- What are the AI applications integrated in teaching and learning in the future English classrooms ?

## 3. Study Objective

This study aims at:

- Analyzing the future impact of AI on the future of English language teaching and learning.
- Identifying the future benefits of AI in English classrooms.
- Identifying the future challenges of applying AI in the English classrooms.
- Identifying technologies integrated with AI implications in the future English classrooms.

## 4. The Sample

The sample of this study has been selected randomly from various Omani universities in Sultanate of Oman and 50 teachers from Omani English departments have been chosen randomly with specific characteristics of experienced teachers who have already used AI in English language. This approach includes selecting these participants based on some specific traits or qualities that are related to the study point and aims (Robinson, 2014).

### 4.1 AI Integration in English Language

In recent globalized world, the English language has become the most significant field in which learners are seeking for the proficiency and developing skills either in academic, professional and personal parts locally and internationally. As the need of English language has grown in the global, the researches have investigated some new and innovative and creative approaches to advance the English language widely. Additionally, the use of AI is valued and has added such development in this field (Sari, 2023). English language has been considered as one of the most used languages for many purposes for instance works, marketing, tourism, business for communications locally and internationally in the globe (Lan et al., 2020).

Artificial intelligence (AI) has played a crucial and vital role in English language and teaching. Artificial intelligence (AI) has become an integral factor in many various aspects and part and English language is one of

these significant part in educational institutions centers and universities. AI has a vital role in enhancing and fostering the learning and teaching English process in which it eases the education by some applications and Chatbots powered by AI are enhancing learners English skills such as speaking, listening and other smart applications can support writing and reading. As AI continues to be developed, it is shaping the future of teaching and learning English, contributing to educational development and making efficient teaching and learning by new developed programs (Lesia, Andrii, Iryna, & Nadia 2022).

The role of artificial intelligence (AI) in teaching and learning is notable and one of these parts is personalized, adaptive learning and effective engagement in the educational process. The impact of AI in learning and teaching has included utilizing English widely and open updated resources, information, and materials for the purpose of solving complex problems, satisfying learners needs, and achieving specific goals and practices (Jonassen, Spector, Driscoll, Merrill, Van, & Driscoll, 2008). These interactive technical tools make teaching and learning English more engaging, fostering, increasing engagement and motivating the learning and teaching process (Gikas & Grant, 2013).

#### **4.2 AI Future Benefits in English language**

AI in English language teaching tools and applications have increased the teaching and learning practices. One of these major benefits is learning autonomy, personalized and adaptive learning (Chen ,2018). Also, Davis (2020) in his study pointed out that AI has already increased the teaching and learning effectiveness. Even the role of the teachers has been changed in AI-driven English classrooms and they have become a guider and facilitator at the same time and their roles are different in recent technical age. AI applications and tools have benefited and supported both teachers and learners in English classrooms in some ways and raised the teachers and learners' capacities in the teaching and learning in AI-driven classrooms. The applications have created inclusive and wide opportunities to practice the language skills and enhance the learners' abilities to develop their skills in various aspects such as speaking, reading, writing and listening. The materials of learning and teaching resources can be obtained by AI applications in which it supports providing and developing English Language materials and resources widely and specifically including videos, interactive materials and up – to – date access to the materials and resources.

In the language assessment filed, Brown (2020) has appointed the use of automated scoring system, speech recognition technology and natural language processing in which they can provide the teachers with effective evaluation that has supported the teaching and learning to foster the proficiency of the English language in all various skills and it is suggested that automated scoring systems, speech recognition technology, and natural language processing can provide efficient and consistent teaching and learning . On the other side, AI applications have fostered language teaching and learning and in the recent times, some studies are approving that AI applications can enhance language-specific skills, for example, reading skills (Xu et al., 2019), and as well as practice all various English language skills on a machine (Kim, 2019) and also giving the correction of the pronunciation (Noviyanti, 2020). Moreover, AI proved teachers with automatic marking, can provide effective feedback, flexible and adaptive teaching, learning and teaching experiences, smart tutoring and intelligent prediction systems (Pokrivčáková, 2019).

According to Munir et al (2022), AI software can foster the teachers to adapt materials that suit the level of the learners and provide suitable activities to improve the learners skills and teaching process. As a result, this gives the teachers a clear vision on the needs of their learners and teachers during their educational journey and save their time and efforts and provide the instructors with easy ways in lessons' planning and administrative duties like grading and marking or evaluating.

Chon et al. (2021) investigated in their study that, the learners can use AI translation tool—Google Translate and study English writing. This enables the learners to get wide range of lexical items and practice. Also, it will give chances for the teachers to get the wide exercises and improve learners' different lexical resources that are available in the AI translation tools and as a result the learners can produce their sentences and write them correctly. The online smart AI translation tools support applications are tailored to fulfill the learners needs and English language teachers especially those who are non native speakers. Furthermore, AI tools, applications and

platforms allow the learning changes by accessing the translated materials especially for the completed articles that require high standard of English vocabulary. In the future of AI, the chances to get wider applications are highly recommended in order to create more dynamic educational process effectively, but with a particular balance between using AI applications and natural language processing.

#### 4.3 AI Applications in English Language

The recent studies have revealed that AI applications integrated in English language teaching and learning and they have shown that the applications that have been used so far came out with practical outcomes related to the teaching and learning English language (Johnson, 2019).

According to the study of Rusmiyanto et al (2023), it has revealed that the AI applications tools integrated to the teaching and learning process, is supportive and such tools of speech virtual tutoring enhances the learning vocabulary and pronunciation which are needed in English skills. On the other side Smith (2021) has highlighted the most significant AI tools of tutoring systems and chatbot in which they have given the learners and teachers more adaptive, flexible and personalized learning and created a vital effective atmosphere and interactive environment in leaning and teaching as they allow both teachers and learners to get and open with various, great and useful accessible online smart activities and materials. Li et al. (2020) has shown in his study that effectiveness and power of an AI-powered speech recognition system that is supporting to enhance and improve the learners pronunciation and can get intensive and effective feedback comparing with those who do not use these tools similarly the study of Chen et al. (2018) agreed with the Lie study and emphasized that the learners can benefit from the use of AI applications and improve their speaking fluency and accuracy and similarly they can develop their pronunciation effectively.

From some scholars, professors and teachers' perspectives, technology has been considered as an integral tool of support for teaching and learning English (Rivera Barreto, 2018) and it give the teachers and learners the opportunities with various teaching and learning resources. Also it has increased the learners' motivation and initiative (Larsen-Freeman & Anderson, 2011). Additionally, AI applications make the learning and teaching easier and more applicable (Ahmadi, 2018) and according to Gilakjani (2017), AI applications have provided teachers with new methods of teaching and similarly for the learners. In the future all these applications will be more modern and extended to be used inside and outside the classrooms.

The other usage of AI applications is , the mobile phone devices have supported AI as they have included in the intelligent technical learning and teaching applications which are integrated and available on the smart phones (Luo & Cheng, 2020) and they create more advanced technologies for teaching and learning English with different programs such as intelligent programs of Google Home Voice Assistance ,Amazon Alexa, Apple Siri, Samsung Bixby, Microsoft Cortina and all these mobile-assisted programs are computing programs that mimic the human voice and make it with visual assistance (Vuong et al., 2023).

#### 4.4 AI challenges in English Language

Artificial intelligence (AI) has caused major and long-term usefulness, however the challenges have occurred in the educational system (UNESCO, 2023). Garcia (2019) has appointed the challenges which are created by the integration in AI field and its use, is extended to change the future of teaching and learning in the English language. The ethical considerations are considered one of these challenges associated with the integration of AI in English language teaching and learning and has discussed the privacy's challenges. The private use of information will be affected negatively due to the wide-open resources that never allow for any private details when the teachers and learners work in the AI-driven classrooms.

Besides, some studies have recently highlighted various future challenges in which limited capacities will lead to lack of technologies for instance using limited Chatbots capacity and natural interactions and this create less interaction due to the limited capability of using technical learning and teaching tools. On the other side, the anxiety has been noticed by using AI and have brought weak natural learning and teaching atmosphere (Viktorivna et al., 2022). Moreover, some recent studies have shown some evidences in which that learners can face some challenges when they learn English, due to limited connections and practice outside the classrooms. Also, the

courses of language have provided some insufficient knowledge and learning outcomes in the classrooms (Tokoz-Goktepe, 2014). Moreover, the spelling have created some difficulties since AI tools and applications provide limited capability for this specific areas of language subskills (Ulicheva et al., 2018). Additionally, learners also face making mistakes when practice English and this has created embarrassing situations in front of others specifically teachers and students in the classrooms (Cumming et al., 2018). AI is used by teachers to reduce such challenges when the learners practice English language (Baranwal, 2022; Kannan & Munday, 2018). Nguyen (2021) has suggested that these challenges have to be followed by intensive care and monitoring implementation, and ethical guidelines to ensure the safety and comfort when using the AI applications and tools in English language teaching and learning.

#### **4.5 AI and Future visions**

Instead of relying only on the traditional teaching and learning ways, AI applications have integrated to assist teachers and learners (Mijwil et al., 2023). Some studies have shown the future development and its effects on teaching and learning English. Taylor (2023) has investigated the future effects of AI on the English teaching and learning and anticipated that there will be some dynamic process of future effects such as future cultural and intellectual communication that develop the language and give further advancement in which natural language will take place. AI applications has its future attention, that has been approved by scholars and researchers and the applications will cause more empirical chances. The literature has also approved the effective transformative impact of AI applications in English teaching and learning. AI-powered tools, such as language learning platforms and chatbots, will give more wider shift by offering tailored learning experiences, flexible feedback, and fostering accessibility (Yang, 2020). On the other hand, Mijwil et al. (2023) has investigated that AI applications will create a greater conventional educational methods towards a more dynamic, effective and individualized positive learning and adaptive teaching. However, the ethical considerations are highlighted to avoid the risks of the future of using AI applications that are included in English Language teaching and learning (Langer and Langer 2023). Additionally, Akgun and Greenhow (2021) investigated the awareness of the ethical risks associated with the future use of AI applications. The study of (Munir et al., 2022) have investigated the same future of ethical risks of AI applications in English Language.

### **5. Study Methodology**

In this study, qualitative method was applied to investigate the impact of AI and technology on the future of English Language teaching and learning among learners at Omani universities. The data for this research was collected from a sample of 50 teachers from the English Department at Omani university. The primary data collection instrument among the teachers was interviews were conducted with focus groups and individual. Then, the data was analyzed and gathered and classified in coding and then themes.

### **6. Data Collection**

The data collection has been done via online interviews with the teachers in the English Department at Omani universities. Participants were informed about the research confidential information and details. The data gathered information on various factors, including the benefits of AI use in language learning, AI-driven tools access applications, and challenges faced when using AI in language learning. The data collection process aimed to capture the perspectives of teachers at Omani English departments to measure the integration of AI use in their language learning journeys. The collected responses were subsequently analyzed qualitatively to draw meaningful insights and conclusions regarding the impact of AI and technology on the future of English Language Learning at Omani universities which show the greater increase in the use of AI applications in the future.

### **7. Findings and Discussion**

The results of interviews' data have revealed some interesting findings related to the future of AI and its impact in the English teaching and learning in the classrooms. The participants revealed that the role of teachers will be changed and not be like what the time has witnessed recently " sage on the stage " guide on the side" the teachers will be guiding the learners and give them more useful chances to work and discover the lessons and their related details themselves and the majorities of teachers think that after some times, the teachers will get supported by



robots in the teaching and learning in the classrooms and soon Finland has already started robot "Elyas" and they have got this robot to enhance the teachers, support them in preparing difficult duties of writing words and repeating vocabulary for the learners, drilling, reacting alphabetical letters and sentences corrections and delivering papers in the offices and this is really useful although the robots do not have the feelings and emotions to be expressed in the teaching and learning situations. Also, the classrooms will be more smarter than now as they can get smart applications and AI tools that foster the learners and teachers duties during the class and they give much usefulness since it saves learners and teachers time and efforts.

On the other side, the majority of participants believed that the teachers will watch the learners learning and sure they will guide them effectively with the support of AI application such as Chabot, technical translation smart applications and supportive teaching robots and also will give more accessible resources and wide activities and materials and these AI applications will make the learning easier comparing with the traditional learning and tools. Using these AI will cause usefulness in which learners can be independent and able to have more freedom in learning and it is similar for the teachers, they can get lots of accessible wide resources and materials and they can adapt these resources according to the learners needs and levels, their abilities and levels. However, the participants have shown their interests regarding the future use of AI but at the same times time shown their worries and fears related to the sort of this future and one of these worries is the lack of privacy once the learners and teachers use the AI applications and besides they have shown that the generations will be different as some will be lazy and careless as they will depend on AI fully due to the information and details availability. This will maybe create learners and teachers who are depending on AI rather than using brains and not think out of the box and sure this will affect the creative and innovative thinking and customers the sense of carelessness, irresponsibility, lack of persistence initiative and hard work.

Regarding the future directions of using AI in teaching and learning English, it is a must to determine a specific meaning of AI in English along with appointing future various effective ethical guidelines and principles. Also, the need to get guided rules of applying AI applications in English teaching and learning and more future effective researches are needed to specify how AI are applied in English assessment in order to appoint longer-term effects of using AI in English language. This creates a need to train the teachers and learners on how they can use AI without any gaps with careful ethical considerations of such impact that is anticipated in the future.

Language learning applications powered by AI and machine learning will be working to evaluate learners language effectively, giving tailored feedback for them in the vital learning environment and these AI applications can focus on strengths and weaknesses and provide the teachers and learners with good solutions for English language improvement. The following figure shows the changes that teachers and learners will experience in future of AI technologies in English language:

## 8. Recommendations

- Applying more Omani future researches related to AI and future of English language teaching and learning.
- More training programs should be done for both teachers and learners towards the best use of AI tools in vital learning and teaching environment.
- Applying the positive uses of AI applications in the English classrooms.
- Following some procedures to make ethical guidelines and considerations towards using AI applications in the English language widely.
- Making a balance between using AI applications and natural language processing teaching and learning to avoid neglecting thinking out of the box and adding the creative and innovative thoughts.

## 9. Conclusion

Although AI can provide new technical ways of teaching and learning, the need to help learners is highly recommended in order to support both teachers and learners in goal setting and self-learning (Kim, 2022; Lee et al., 2023). However, still the need to get the traditional learning and teaching tools have not to be neglected but

mixed with smart tools. Some more perspectives from scholars and educators and researchers have approved that AI has been applied in English teaching and learning and it becomes as a very common issue in educational system. However, AI will not replace the teachers and learners duties in the future but it will become as effective tools in supporting teaching and learning process (Crompton & Burke, 2023). In deed, and the role of AI will be more modern however nothing can replace the humans' mind.

## References

- [1] Ahmadi, M. R. (2018). The use of technology in English language learning: A literature review. *International Journal of Research in English Education*, 3(2), 115–125. <https://doi.org/10.29252/ijree.3.2.115>.
- [2] Akgun, S., & Greenhow, C. (2021). Artificial Intelligence in Education: Addressing ethical challenges in K-12 settings. *AI and ethics*, 2(3), 431-440. <https://doi.org/10.1007/s43681-021-00096-7>.
- [3] Baranwal, D. (2022). A systematic review of exploring the potential of teachable agents in English learning. *Pedagogical Research*, 7(1). <https://doi.org/10.29333/pr/11553>.
- [4] Brown, J. D. (2020). The use of artificial intelligence in language assessment. *Annual Review of Applied Linguistics*, 40, 204-221.
- [5] Campesato, O. (2020). *Artificial Intelligence, Machine Learning, and Deep Learning*. StylusPublishing, LLC.
- [6] Chen, Y. (2018). Artificial intelligence in English language education: Promises and challenges. *Journal of Education and Learning*, 7(1), 1-9.
- [7] Chen, C. M., Huang, Y. M., & Kinshuk. (2018). Effects of an intelligent tutoring system on students' learning outcomes and attitudes in the context of English as a foreign language. *Journal of Computer Assisted Learning*, 34(4), 376-393.
- [8] Cheng, S.-M., & Day, M.-Y. (2014). *Technologies and Applications of Artificial Intelligence: 19th International Conference, TAAI 2014, Taipei, Taiwan, November 21-23, 2014, Proceedings*. Springer.
- [9] Chon, Y. V., Shin, D., & Kim, G. E. (2021). Comparing L2 learners' writing against parallel machine-translated texts: Raters' assessment, linguistic complexity and errors. *System*, 96, 102408. <https://doi.org/10.1016/j.system.2020.102408>.
- [10] Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: The state of the field. *International Journal of Educational Technology in Higher Education*, 20, 22 (2023). <https://doi.org/10.1186/s41239-023-00392-8>.
- [11] Cumming, A., Yang, L., Qiu, C., Zhang, L., Ji, X., Wang, J., Wang, Y., Zhan, J., Zhang, F., Xu, C., Cao, R., Yu, L., Chu, M., Liu, M., Cao, M., & Lai, C. (2018). Pupils' practices and abilities for writing from sources in English at universities in China. *Journal of Second Language Writing*, 39, 1–15. <https://doi.org/10.1016/j.jslw.2017.11.001>.
- [12] Davis, B. (2020). The role of artificial intelligence in language learning. *TESL-EJ*, 24(2), 1-10.
- [13] Fitria, T. N. (2021). THE USE OF TECHNOLOGY BASED ON ARTIFICIAL INTELLIGENCE IN ENGLISH TEACHING AND LEARNING). *ELT Echo: The journal of English language teaching in a foreign language context*, 6(2). <https://doi.org/10.24235/eltecho.v6i2.9299>.
- [14] Garcia, R. (2019). Ethical considerations in the use of artificial intelligence in language learning. *Computer Assisted Language Learning*, 32(5-6), 585-605.
- [15] Gawate, S. (2019). Artificial Intelligence (AI) Based Instructional Programs in Teaching Learning of English Language. <https://doi.org/10.33329/ijelr.64.69>.
- [16] Gikas, J., & Grant, M. M. (2013). Mobile computing devices in higher education: Student perspectives on learning with cellphones, smartphones & social media. *The Internet and Higher Education*, 19, 18–26. <https://doi.org/10.1016/j.iheduc.2013.06.002>
- [17] Gilakjani, A. P. (2017). A review of the literature on the integration of technology into the learning and teaching of English language skills. *International Journal of English Linguistics*, 7(5), 95–106. <https://doi.org/10.5539/ijel.v7n5p95>.
- [18] Grabe, W. P., & Stoller, F. L. (2002). *Teaching and researching reading*. Pearson Education. <https://doi.org/10.4324/9781315833743>.

- [19] Johnson, M. (2019). Intelligent tutoring systems in language learning: A review of the state of the art. *CALICO Journal*, 36(3), 281-302.
- [20] Jonassen, D., Spector, M. J., Driscoll, M., Merrill, M. D., Van Merriënboer, J., & Driscoll, M. P. (Eds.). (2008). *Handbook of Research on Educational Communications and Technology* (0 ed.). Routledge. <https://doi.org/10.4324/9780203880869>
- [21] Kim, N.-Y. (2022). AI-integrated mobile-assisted language learning: Is it an effective way of preparing for the TOEIC test in classroom environments? *English Teaching*, 77(3), 79–102. <https://doi.org/10.15858/engtea.77.3.202209.79>.
- [22] Langer, B., & Langer, B. (2023, 24 mayo). Addressing Ethical Considerations When Using AI in K-12 Classrooms - MCIU - Learning Network. MCIU – Learning Network - Learning Network. <https://learn.mciu.org/addressing-ethical-considerations-when-using-ai-in-k-12-classrooms>.
- [23] Lan, P.-S., Liu, M.-C., & Baranwal, D. (2020). Applying contracts and online communities to promote pupil self-regulation in English learning at the primary-school level. *Interactive Learning Environments*, 31(1), 468–479. <https://doi.org/10.1080/10494820.2020.1789674>.
- [24] Larsen-Freeman, D., & Anderson, M. (2011). *Techniques and principles in language teaching* (3rd ed.). Oxford University Press.
- [25] Lee, S. (2022). Artificial intelligence and language assessment: A systematic review of the literature. *Educational Measurement: Issues and Practice*, 41(2), 5-16.
- [26] Lesia Viktorivna, K., Andrii Oleksandrovych, V., Iryna Oleksandrivna, K., & Nadia Oleksandrivna, K. (2022). Artificial Intelligence in Language Learning: What Are We Afraid of. *Arab World English Journal*, 8, 262–273. <https://doi.org/10.24093/awej/call8.18>
- [27] Li, J., Xie, H., Li, D., & Lu, X. (2020). Effects of an AI-based speech recognition system on improving EFL learners' pronunciation. *Computers & Education*, 156, 103952.
- [28] Li, R. (2020). Using Artificial Intelligence in Learning English as a Foreign Language: An Examination of IELTS LIULISHUO as an Online Platform. *Journal of Higher Education Research*, 1. <https://doi.org/10.32629/jher.v1i2.178>
- [29] Luo, M., & Cheng, L. (2020). Exploration of interactive foreign language teaching mode based on artificial intelligence. In *Proceedings of 2020 International Conference on Computer Vision, Image and Deep Learning* (pp. 285–290). IEEE. <https://doi.org/10.1109/CVIDL51233.2020.00-84>.
- [30] Marr, B. (2018, July 25). How Is AI Used In Education—Real World Examples Of Today And A Peek Into Future. *Forbes*. <https://www.forbes.com/sites/bernardmarr/2018/07/25/how-is-ai-used-in-education-real-world-examples-of-today-and-a-peek-into-the-future>.
- [31] McCarthy, J., Minsky, M., Rochester, N. & Shanno, C. (2006). A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence. *AI Magazine*, 27 (4), 12–14.
- [32] Mehrotra, D. D. (2019). *Basics of artificial intelligence & machine learning*. Notion Press.
- [33] Mijwil, M. M., Abdulrhman, S. H., Abttan, R. A., Mijwil, M. M., & Alkhazraji, A. A (2023). Artificial intelligence applications in English language teaching: short survey. *Asian Journal of Applied Sciences*, 10(6). <https://doi.org/10.24203/ajas.v10i6.7111>.
- [34] Mukhallafi, T. R. A. (2020). Using Artificial Intelligence for Developing English Language Teaching/Learning: An Analytical Study from University Students" Perspective. *International Journal of English Linguistics*, 10(6), 40. <https://doi.org/10.5539/ijel.v10n6p40>.
- [35] Munir, H., Vogel, B., & Jacobsson, A. (2022). Artificial Intelligence and Machine Learning Approaches in Digital Education: A Systematic revision. *Information*, 13(4), 203. <https://doi.org/10.3390/info13040203>.
- [36] Nguyen, H. (2021). Ethical considerations in the use of artificial intelligence in language assessment. *Language Testing*, 38(1), 79-101.
- [37] Noviyanti, S. D. (2020). Artificial intelligence (AI)-based pronunciation checker: An alternative for independent learning in pandemic situation. *The Journal of English Language Teaching in Foreign Language Context*, 5(2), 162. <https://www.syekhnurjati.ac.id/jurnal/index.php/eltecho/article/view/7246>.



- [38] Pokrivčáková, S. (2019). Preparing teachers for the application of AI-powered technologies in foreign language education. *Journal of Language and Cultural Education*, 7(3), 135–153. <https://doi.org/10.2478/jolace-2019-0025>.
- [39] Rahayu, S., & Pujiyono, W. (2017). Media Pembelajaran Kecerdasan Buatan Pokok Bahasan Metode Pelacakan Menggunakan Multimedia Pada E-Learning. *JSTIE (Jurnal Sarjana Teknik Informatika) (E-Journal)*, 5(1), 136–145. <https://doi.org/10.12928/jstie.v5i1.10824>.
- [40] Rivera Barreto, A. M. (2018). Motivating English language use by using the benefits of technology. *Gist Education and Learning Research Journal*, 16, 117–140. <https://doi.org/10.26817/16925777.428>.
- [41] Robinson, R. S. (2014). Purposive sampling. En Springer eBooks (pp. 5243-5245). [https://doi.org/10.1007/978-94-007-0753-5\\_2337](https://doi.org/10.1007/978-94-007-0753-5_2337)
- [42] Rusmiyanto, R., Huriati, N., Fitriani, N., Tyas, N. K., Rofi'i, A., & Sari, M. N. (2023). The Role of Artificial Intelligence (AI) In Developing English Language Learner's Communication Skills. *Journal on Education*, 6(1), 750-757.
- [43] Sari, M. N. (2023). STUDENTS' ABILITY AND DIFFICULTIES IN CONSTRUCTING CONDITIONAL SENTENCE TYPE II AT SMAN 10 KERINCI JAMBI. *Dharmas Education Journal (DE\_Journal)*, 4(1), 23-32.
- [44] Sindermann, C., Sha, P., Zhou, M., Wernicke, J., Schmitt, H. S., Li, M., Sariyska, R., Stavrou, M., Becker, B., & Montag, C. (2021). Assessing the attitude towards artificial intelligence: Introduction of a short measure in German, Chinese, and English language. *KI-Künstliche Intelligenz*, 35(1), 109–118. <https://doi.org/10.1007/s13218-020-00689-0>.
- [45] Smith, R. (2021). Chatbots in language learning: A literature review. *Computer Assisted Language Learning*, 34(1), 1-26.
- [46] Tokoz-Goktepe, F. (2014). Speaking problems of 9th grade high school Turkish learners of L2 English and possible reasons for those problems: Exploring the teachers and pupils' perspectives. *Procedia—Social and Behavioral Sciences*, 116, 1875–1879. <https://doi.org/10.1016/j.sbspro.2014.01.487>.
- [47] Ulicheva, A., Harvey, H., Aronoff, M., & Rastle, K. (2018). Skilled readers' sensitivity to meaningful regularities in English writing. *Cognition*, 195, 103810. <https://doi.org/10.1016/j.cognition.2018.09.013>.
- [48] UNESCO (2023). Ministerial roundtable on generative AI in education. <https://www.unesco.org/en/articles/ministerial-roundtable-generative-ai-education>.
- [49] Viktorivna, K. L., Oleksandrovych, V. A., Oleksandrivna, K. I., & Oleksandrivna, K. N. (2022). Artificial intelligence in language learning: What are we afraid of? *Arab World English Journal (AWEJ) Special Issue on CALL*, 8, 262–273. <https://dx.doi.org/10.24093/awej/call8.18>.
- [50] Vuong, Q.-H., La, V.-P., Nguyen, M.-H., Jin, R., La, M.-K., & Le, T.-T. (2023). AI's humanoid appearance can affect human perceptions of its emotional capability: Evidence form self-reported data in the U.S. *International Journal of Human-Computer Interaction*, 1–12. <https://doi.org/10.1080/10447318.2023.2227828>.
- [51] Wang, R. (2019). Research on Artificial Intelligence Promoting English Learning Change. *Proceedings of the 3rd International Conference on Economics and Management, Education, Humanities and Social Sciences (EMEHSS 2019)*.
- [52] *Proceedings of the 3rd International Conference on Economics and Management, Education, Humanities and Social Sciences (EMEHSS 2019)*, Suzhou City, China. <https://doi.org/10.2991/emehss-19.2019.79>.
- [53] Xiaohong, W., & Yanzheng, W. (2021, February). The application of artificial intelligence in modern foreign language learning. In *Proceedings of the 2021 4th International Conference on Big Data and Education* (pp. 34–37). ACM. <https://doi.org/10.1145/3451400.3451406>.
- [54] Xu, Z., Wijekumar, K., Ramirez, G., Hu, X., & Irey, R. (2019). The effectiveness of intelligent tutoring systems on K–12 pupils' reading comprehension: A meta-analysis. *British Journal of Educational Technology*, 50(6), 3119–3137. <https://doi.org/10.1111/bjet.12758>.
- [55] Yang, G. (2020). The application of Artificial intelligence in English teaching. *International Journal of Frontiers in Sociology*, 2(3). <https://doi.org/10.25236/ijfs.2020.020309>

- [56] Yin, H., Khan, S., Alharbi, A., & Nazir, S. (2022). Assessing English teaching linguistic and artificial intelligence for efficient learning using analytical hierarchy process and technique for order of preference by similarity to ideal solution. *Journal of software*. <https://doi.org/10.1002/smr.2462>
- [57] Zhu, D. (2017). Analysis of the Application of Artificial Intelligence in College English Teaching. *Proceedings of the 2017 2nd International Conference on Control, Automation and Artificial Intelligence (CAAI 2017)*. 2017 2nd International Conference on Control, Automation, and Artificial Intelligence (CAAI 2017), Sanya, China. <https://doi.org/10.2991/caai-17.2017.52>.