



## Transformation of AI-Enabled Collaborative Pedagogy in TEFL for Sport Education Students

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### Abstract

TEFL Learning Methodology for Non speaker original will experience Lots difficulties. Native speakers do not every moment can accompany in the learning process. Therefore that, help like AI becomes offer interesting as A choice in effort make it easier For study.

**Objectives.** This For examine how AI plays a role in This TEFL Methodology learning.

**Materials and Methods.** The techniques used is literature review with analysis using PRISMA. Keywords used "artificial intelligence" and "English language learning" were searched in WOS, and 69 articles were obtained. Next restricted only open access and obtained 30 articles.

**Results.** This reviewed based on contents with read abstract and it turns out only 25 matching articles left with theme. Based on analysis conducted it turns out this AI has help good lecturer and student in Study teaches TEFL Methodology and has accepted by society academic. AI helps in understanding reading, vocabulary, grammar correction, writing correction, searching literature or in a way direct give bait back. Many things positive has achieved with learning utilization of AI based on studies literature confirmed. However thus there is also an issue negative about ethics, privacy and fear to dependence in long term that will turn off creativity.

**Conclusions.** AI has capable of facilitate student in TEFL Methodology learning that targets skills, reading, writing, listening, and communicating. AI can push TEFL Methodology learning in transformative and adaptive especially those related to with approaches collaborative that prioritizes interaction dynamic in practice

**Keywords:** **AI-enabled pedagogy, Collaborative learning, TEFL, Sport education student, Technology-enhanced language learning (TELL).**

### Introduction

Intelligence artificial intelligence (AI) usually in form applications that are created with Language programming (M. Dahria 2020) . The facts state that that AI provides opportunities and challenges in learning language (Arabic) (Hidayat, Rahardyanto, and Hardjita 2020) , and has become A choice (Henderi, Maimunah, and Andrian 2011) . It has been proven that AI has implemented in a way wide including English learning in college tall (Hong 2025) . In its use, AI is capable of overcome difficult processes and improve

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experience Study student become more dynamic (Baskara 2024) . Condition This furthermore massively AI can shift role man in the world of work , so that required mastery language , literacy based technology (Polii 2020) .

AI provides interactive learning (Zulrahman and Syahputra 2023) , and allows system For answer questions and solve task as if is expert in the field certain (Cheema et al., 2023) . HE can too used for paraphrase, evaluation spelling or Q&A and grammar (Rumaisa et al. 2021) . Students succeed make a written text Language English with more Good in TEFL Methodology learning with AI if ability function Language natural too Good (Prastiwi and Pujiawati 2019) . This is describe that IA is facilities that make things easier For activity Study teach especially TEFL Methodology.

This AI in a way constructive potential change digital language teaching English , to adaptive and more things responsive (Dewi and Sulistyawati 2024) . In this case This for example , Chatbot which is one of the intelligence artificial can used For learning Language (Annisa, Puspita, and Magdalena 2022) . Chatbots can used For learning Language Javanese and can be set in three levels of language (Abilowo, Santoni, and Muliawati 2020)

These studies give position where IA and various applications in it give convenience to academics For learning and teaching TEFL Methodology. TEFL Methodology learning at least consists of from reading , writing , listening , and communicating . Experience study TEFL Methodology from individual as lecturer sometimes become problem individually . Based on study previously also stated that learners Language England also has level anxiety alone Perception students , language English difficult understood Good That pronunciation , writing or translation so that student in learning This tend worried (Nw, Al, and Baru 2024) . In fact anxiety rises when enter in class Language English (Pakpahan 2022) . Learners experience anxiety level medium in learning Language English (Beatrix and Hastuti 2022) . For that , in TEFL Methodology realm elaborated For find and mix techniques contextual - implementative learning .

Source anxiety in Study Language English for students among them from factor lecturer yourself and the material (Sari and Ningsih 2022) . Other causes are not Certain with ability self alone , afraid getting negative feedback and being afraid compared , (Fitriani, Julia, and Gusrayani 2022) , trust low self-esteem , fear of mistakes, and feelings worried (Syahfutra and Wibowo 2019) , doubtful ability self Alone as well as feel embarrassed , so that lower ability communicate in Language English (Saragih et al. 2019)

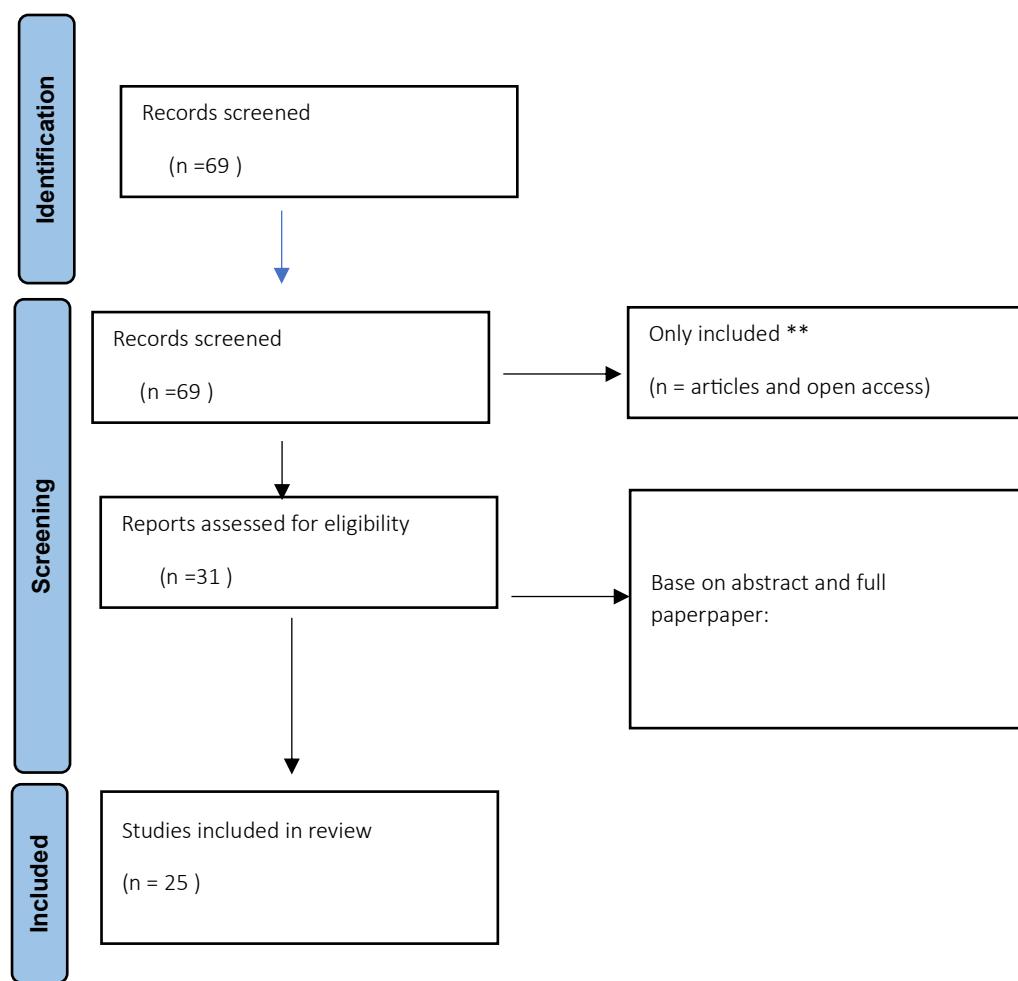
In terms of material, difficulty understanding topics, vocabulary, linguistic structures, and culture are a group of subjects that cause increased anxiety (Yulita and Saijao 2022).

Anxiety due to lack of vocabulary mastery (Azis Pulungan 2021). Speaking in English in class carries its own level of anxiety and is not easy for students (Dini Deswarni 2015). Independent study at home is not an option for learning English, as minimal interaction via Zoom is required (Rini, Noorman, and Nafisah 2021).

Need supplies ability creative , thinking critical and innovative in learning 4.0 (Wahyuni 2019) . AI is likely become choices . Various study possibility has done to this AI development in learning Language English . This study aim For see how far AI has come researched and explored in transformation adaptive and constructive pedagogy and how perception users in perspective TEFL learning Methodology, which is experience No as speaker original .

## **Materials and Methods**

This study try for explore performance collaborative transformation pedagogy AI- based in TEFL learning methodology. The research style applied is Literature Review research with analysis using PRISMA. Search article results study conducted on Web of Science (WOS), with keyword search " "Artificial Intelligence " and "English language learning". Found 69 articles , next restricted only to open access articles , 31 articles were obtained . Stage last done reading abstract and full paper. Based on reading articles This results the end of being declared eligible for analyzed is 25 articles . Next to 25 articles the served in table 1, reviewed more continue and then grouped based on themes found.



## Results

Based on searches conducted 25 matching articles found with objective writing . In details served in table 1.

Table 1. Research results intelligence artificial intelligence ( AI) against students studying TEFL Methodology, search on WOS

Author and title	Method	Results/ conclusions
Artificial Intelligence in Language Learning: What Are We Afraid of (Viktorivna et al. 2022)	Survey questionnaire conducted in 2021 to students Language English in Ukrainian Universities	Use of IA for student , activate creativity and spontaneity
Developing an AI-Based Learning System for L2 Learners' Authentic and Ubiquitous Learning in English Language (Jia et al. 2022)	Development with 20 samples For testing	Can not avoided use of AI in learning Language English has done

Research on Papua, a digital tool with artificial intelligence in favor of learning and linguistic attitudes towards the learning of the English language in students of Spanish language as L1 (Peña-Acuña and Crismán-Pérez 2022)	quasi-experimental approach in which 128 students	Learning Language with use intelligence artificial ability more verbal effective the result
Construction and Computation of the College English Teaching Path in the Artificial Intelligence Teaching Environment (S. Liu 2022)	development	Learning with This own opportunity big influential positive to results and their use
Assessing the Usability of ChatGPT for Formal English Language Learning (Shaikh et al. 2023)	Survey	ChatGPT is effective For learning writing , vocabulary , conversation and grammar
Development research on an AI English learning support system to facilitate learner-generated-context-based learning (D. Lee, Kim, and Sung 2023)	development	AI can facilitate learning Language English
The impact of digital technologies on the effectiveness of English language learning by medical students (Levitskaia 2023)	Experiment to student medical English learning	The use of AI in learning Language English for students medical own high success
the Impact of Artificial Intelligence in Foreign Language Learning Using Learning Management Systems: a Systematic Literature Review (Oluwafemi Ayotunde, Jamil, and Cavus 2023)	literature articles 2001-2021	Integrated AI with proven LMS effective to ability writing , reading , speaking Language English
Ai in English Language Learning: Saudi Learners' Perspectives and Usage (Alqaed 2024)	Survey of EFL learners among 68 undergraduate students majoring in English Language English	AI provides swearing come back positive and direct in learning Language English
Unveiling the Dynamic Mechanisms of Generative AI in English Language Learning: A Hybrid Study Based on fsQCA and System Dynamics (Zhang and Dong 2024)	The survey utilizes sample of 33 English at the Institute Harbin Technology	AI provides experience Study adaptive in learning in the classes Language era of intelligence artificial
Integration of AI into the Distance Learning Environment: Enhancing Soft English in Ukraine	Survey of students studying English in Ukraine	Student welcome positive learning Language with using AI

## Skills (Borkovska et al. 2024)

Beyond Traditional Language Learning: EFL Student Views on ChatGPT in Saudi Arabia (Alharthi 2024)	Survey of students at three Western universities in Saudi Arabia	View positive against ChatGPT in learning discuss English	student accept
Co-creating stories with generative AI: Reflections from undergraduate students of a storytelling service-learning subject in Hong Kong (Cheung and Shi 2024)	qualitative from semi-structured interviews to students at the institution Hong Kong tertiary	The use of AI provides awareness linguistics for learning English as No Language mother (second language)	
AI and English language teaching: Affordances and challenges (Crompton et al. 2024)	Review method PRISMA systematic	AI has support teaching and learning Language with studies that show that AI can support skills special Language	
Enhancing English Language Education Through Big Data Analytics and Generative AI (Jianhua Liu 2024)	Survey student	With utilization intelligence artificial give room inclusive and personnel to student Study English	
Revolutionizing Language Learning: How ChatGPT and AI are changing the Way We Learn Languages (Solak 2024)	Phenomenologic al design	ChatGPT and AI have used in schools For learning English and very useful	
An AI-Driven Approach for Advancing English Learning in Educational Information Systems Using Machine Learning (Peng and Wang 2025)	experiment	Learning Language English AI- based shows optimal results with WEB or Android based	
Optimizing AI-Driven EdTech Solutions for Enhanced English Learning: A TOPSIS Approach (Yang, Li, and Wang 2025)	Study evaluation learning Language English	With using AI students can more in a way special possible occurrence adjustment need in learning English	
Interactive Application with Virtual Reality and Artificial Intelligence for Improving Pronunciation in English Learning (Caiza, Villafuerte, and Guanuche 2025)	Experiment to use of 400 samples , students Study language English	IA in learning Language English proven positive increase results learning , bait back and accepted by participants educate	
Exploring the Efficacy	questionnaire	ChatGPT	successful

of Chatgpt in Enhancing Specialized Communication Skills in English Language Learning (Pondelíková and Luprichová 2025)	survey on Google Forms	increase acquisition vocabulary , structure syntax and communication and in general general improve skills speaking in a way special ability communication
Exploring the Efficacy of Chatgpt in Enhancing Specialized Communication Skills in English Language Learning (Pondelíková and Luprichová 2025)	Descriptive exploration	Learning with AI generating skills to translation writing , listening
Motivation and achievement in EFL: the power of instructional approach (Jingdan Liu, Hamid, and Bao 2025)	Experiment learning English with AI	Learning with AI generating skills to translation writing , listening
Generative AI as a Cognitive Co-Pilot in English Language Learning in Higher Education (Zaim et al. 2025)	277 students using structured interviews For measure aspect quantitative and qualitative	Student has relying on GenAI in For perfecting grammar , accuracy translation , search for ideas. There are concern will existence dependency and implications ethical
Factors influencing the acceptance and use of ChatGPT among English as a foreign language learners in Saudi Arabia (Alotaibi, Sonbul, and El-Dakhs 2025)	Survey of 184 student	AI facilitates give convenience as supporters (EFL) (Alotaibi, Sonbul, and El-Dakhs 2025)
English as a foreign language (EFL) secondary school students' use of artificial intelligent (AI) tools for developing writing skills: unveiling practices and perceptions (Alghasab 2025)	use approach method mixture with 69 students fill in questionnaires and 35 of them participate in semi- structured interviews	There is perception doubt impact term long in the use of AI for (EFL), in particular real AI provides convenience in Study Language

Transformative learning with AI has accepted in learning Language for English as foreign language (EFL). this AI No can avoided Again (Jia et al. 2022) has used (Solak 2024) , as A facility (KA Lee and Lim 2023) , with proof give linguistic awareness (Cheung and Shi 2024) , providing room inclusive and personnel to students who study Language (Crompton et al. 2024; Jianhua Liu 2024; Yang, Li, and Wang 2025) give convenience as supporters (EFL) (Alotaibi, Sonbul, and El-Dakhs 2025) . With method give bait positive in a way direct (Alqaed 2024) (Caiza, Villafuerte, and Guanuche 2025) , experience adaptive learning

(Zhang and Dong 2024) and evidence show reach high success (Levitskaia 2023; Peng and Wang 2025)

Results achieved in TEFL learning methodology

Learning with This own opportunity big and influential positive to results and their utilization (S. Liu 2022) . Increasing creativity and spontaneity student (Viktorivna et al. 2022) , accepted in a way positive by students (Alharthi 2024; Borkovska et al. 2024) . increase skills speaking in a way specifically on aspects ability communication (Peña-Acuña and Crismán-Pérez 2022; Pondelíková and Luprichová 2025) writing , listening (Jingdan Liu, Hamid, and Bao 2025) , grammar , accuracy translation , and idea search (Zaim et al. 2025) . Effective For learning writing , vocabulary , conversation and grammar (Shaikh et al. 2023) , against ability writing , reading , speaking Language English (Oluwafemi Ayotunde, Jamil, and Cavus 2023)

There is perception doubt impact term long in the use of AI for TEFL Methodology, in particular real AI provides convenience in Study Language (Alghasab 2025) addiction and implications decline ethical (Zaim et al. 2025) .

## **Discussion**

The fact is that AI has accepted as A means For teach or learning TEFL Methodology. Perceived lecturers positive against ChatGPT is used For look for information , ideas, learning independent (Kusumaningrum et al. 2023) , student give response positive to use of AI for interest write (Ahmad et al. 2022) . Its use used For look for reference (Subargo et al. 2023) , helps student in speaking English like speaking , writing , and reading (Akbarani 2024) . AI makes things easier in practice communication , searching citations , articles or book (Grammatical Learning Competence et al. 2023) , proven increase learn TEFL Methodology with provide instructions , bait come back practice speaking (Akbarani 2024)

In reality this AI give choice in learning Language (HALITOGLU 2020) , proven increase intensity and difficulty Study so that increase ability acquisition Language (Su et al. 2021) , One of the factor the positive is capable give bait come back positive in a way direct in Study Language (Li 2022) . Application such as Virtual Writing Tutor (VWT) can help in ability write (Rika Perdana et al. 2023) . More carry on based on conclusion study stated that AI can used For writing , grammar correction (Fansury et al. 2024) detect writing for interest Study Language (Nur Manab, Mandyartha, and Rizki 2021) .

It is stated in a way empirical ChatGPT provides opportunity important For learning Arabic ( Simon 2023) . AI provides evaluation in a manner direct and improve quality Study

student (Wang et al., 2022) . In practice , the use of AI also depends from level intelligence and knowledge student (Wu 2024) . Generation Z is very familiar with technology moreover intelligence artificial , because in TEFL Methodology learning can reach very effective use For facilitate repair results Study speaking (Astawa and Permana 2020) .

Although from corner view usability and acceptance are very good , intelligence artificial This Already accepted , some results study state need existence alertness (Alghasab 2025) relation with addiction and implications decline ethical (Zaim et al. 2025) . The use of AI in totalitarian will suspected will existence gap dangerous with effect negative (Watanabe 2023) . It turns out not 100% intelligence either artificial This finish problem study TEFL Methodology. As ChatGPT example is available limitations like limited understanding , no capable do work creative , answer No always right , still Not yet Can differentiate between facts and opinions (Suharmawan 2023) . Important For confirmed the use of AI is used in a manner ethical and responsible , at least there is issue about related privacy , data security , bias, and ethics . (Lydia, P. Vidhyavathi, and P. Malathi 2023) . Its use need consideration to mark ethics and standards privacy (Ramadhan et al. 2023) On the side negative , thing This can limit creativity and originality , causing disappearance voice personal , and give rise to consideration decline ethical (Ningrum 2023) and studies following This state that AI is not in accordance For junior high school students and above young Again (Yoon 2019)

## **Conclusion**

AI has many varieties such as ChatGPT, capable of facilitate student in TEFL Methodology learning that targets skills ; reading , writing , listening , and communicating . AI can push TEFL Methodology learning in transformative and adaptive especially those related to with approaches collaborative that prioritizes interaction dynamic in practice . AI provides facility convenience For learning with give bait back , example and approaching correction appropriate including voice For exercise communication . However thus , AI with all its type used in the world of education, especially TEFL methodology, also not denied existence the anxiety that is expressed existence impact negative term long and necessary noticed issue decline ethics, privacy and creativity that may will happen as consequence dependency and addiction must indicate in a way clear the results obtained , the advantages and disadvantages, as well as possibility development furthermore.

## **Conflict of interest**

There no have any conflicts of interest.

## References

Abilowo, Krisanto, Mayanda Mega Santoni, and Anita Muliawati. 2020. "Chatbot Design as Basic Javanese Language Learning Using Artificial Intelligence Markup Language." *Informatik: Journal of Computer Science* 16(3): 139.

Ahmad, Arimuliani, Fauzul Etfita, Sri Wahyuni, and Estika Satriani. 2022. "English Text Writing Training with the Assistance of Artificial Intelligence at SMKS Budi Dharma Dumai." *ABDINE: Journal of Community Service* 2(2): 233–41.

Akbarani, Rizqi. 2024. "Use of Artificial Intelligence in English Language Teaching." *International Journal of English Learning and Applied Linguistics (IJEELAL)* 4(1): 14–23.

Alghasab, Maha B. 2025. "English as a Foreign Language (EFL) Secondary School Students' Use of Artificial Intelligent (AI) Tools for Developing Writing Skills: Unveiling Practices and Perceptions." *Cogent Education* 12(1).

Alharthi, Saleh Mosleh. 2024. "Beyond Traditional Language Learning: EFL Student Views on ChatGPT in Saudi Arabia." *Arab World English Journal* 2024-July: 15–35.

Alotaibi, Hind M., Suhad S. Sonbul, and Dina A. El-Dakhs. 2025. "Factors Influencing the Acceptance and Use of ChatGPT among English as a Foreign Language Learners in Saudi Arabia." *Humanities and Social Sciences Communications* 12(1).

Alqaed, Mai Abdullah. 2024. "Ai in English Language Learning: Saudi Learners' Perspectives and Usage." *Advanced Education* 2024(25): 125–42.

Annisa, Miftah Nurul, Dayu Retno Puspita, and Ina Magdalena. 2022. "Analysis of Elementary School Students' English Pronunciation Errors." *Journal of Educational Review and Research* 5(1): 38.

Astawa, Ni Luh Putu Ning Septyarini Putri, and Putu Trisna Hady Permana. 2020. "Learning Media with Artificial Intelligence in English Language Learning for Generation-Z." *Journal of Socio-Humanitarian Sciences* 4(2): 756–67.

Azis Pulungan, Farhan. 2021. "A Study of Students' Problems in Learning Speaking English At the Second Grade of Junior High School." *Bogor English Student and Teacher (BEST) CONFERENCE 2021* : 37–43.

Baskara, FX. Risang. 2024. "ChatGPT and Personalized Learning: Reshaping Pedagogical Approaches in the VUCA Age." *Educative Journal: Journal of Educational Studies* 8(2): 167.

Beatrix, Reynatal, and Rahmah Hastuti. 2022. "Anxiety in Learning Foreign Languages in High School Students in Toraja." *Malahayati Journal of Psychology* 4(2).

Borkovska, Inna, Hanna Kolosova, Iryna Kozubska, and Inna Antonenko. 2024. "Integration of AI into the Distance Learning Environment: Enhancing Soft Skills." *Arab World English Journal* 2024-April(Special Issue on ChatGPT): 56–72.

Caiza, Gustavo, Carlos Villafuerte, and Adriana Guanuche. 2025. "Interactive Application with Virtual Reality and Artificial Intelligence for Improving Pronunciation in English Learning." *Applied Sciences (Switzerland)* 15(17).

Cheema, Sikander Singh, Er Lal Chand, and Bhagwant Singh. 2023. "Artificial Intelligence in Machine Learning." In *Factories of the Future: Technological Advancements in the Manufacturing Industry* , , 161–94.

Cheung, Lok Ming Eric, and Huiwen Shi. 2024. "Co-Creating Stories with Generative AI: Reflections from Undergraduate Students of a Storytelling Service-Learning Subject in Hong Kong." *Australian Review of Applied Linguistics* 47(3): 259–83.

Crompton, Helen, Adam Edmett, Neenaz Ichaporia, and Diane Burke. 2024. "AI and English Language Teaching: Affordances and Challenges." *British Journal of Educational Technology* 55(6): 2503–29.

Dewi, Nurmala, and Meiva Eka Sri Sulistyawati. 2024. "Utilization of Adaptive Learning

Technology in English for the Digital Generation: A Comprehensive Analysis." *Intelektum* 4(2): 71–76.

Dini Deswarni. 2015. "A Study On Student's Anxiety In Speaking English (Survey Study at The Sixth Semester of STAI HubbulwathanDuri)." *Journal of Education* 7.1: 257–69.

Fansury, Andi Hamzah et al. 2024. "Ai Writing Tools Training to Train Writing Skills for Junior High School Students in North Toraja." *Tongkonan: Journal of Community Service* 2(2): 154–66.

Fitriani, Ely, J. Julia, and Diah Gusrayani. 2022. "Case Study: Anxiety in Speaking English as a Foreign Language." *Basicedu Journal* 6(2): 2312–22.

HALITOGLU, Vedat. 2020. "A Flipped-Classroom Model in Teaching Turkish as a Foreign Language." *International Online Journal of Educational Sciences* 12(1).

Henderi, Henderi, Maimunah Maimunah, and Randy Andrian. 2011. "E-Learning Application Design as Artificial Informatics Learning Media." *CCIT Journal* 4(3): 316–30.

Hidayat, Rahmat, Seto Rahardyanto, and Pahlevi Wahyu Hardjita. 2020. "Survey Paper: Challenges and Opportunities of Artificial Intelligence in the Field of Islam, Qur'an and Hadith." *Proceedings of the Conference on the Integration of the Interconnection of Islam and Science* 2: 343–46. <https://sunankalijaga.org/prosiding/index.php/kiiis/article/view/421>.

Hong, Lingkai. 2025. "Research on the Application of Artificial Intelligence Technology in College English Teaching." *Educational Reform and Development* 7(5): 208–13.

Jia, Fenglin, Daner Sun, Qing Ma, and Chee Kit Looi. 2022. "Developing an AI-Based Learning System for L2 Learners' Authentic and Ubiquitous Learning in English Language." *Sustainability (Switzerland)* 14(23).

Grammatical Learning Competence, Improving et al. 2023. "Utilization of Artificial Intelligence (AI) in Improving Grammatical Learning Competence, Translation and Muhadatsah in Higher Education." *Seulanga* 2(2): 93–105. <https://seulanga.kemenag.go.id/index.php/journal/article/view/136>.

Kusumaningrum, Shirly Rizki, Radeni Sukma, Indra Dewi, and Riska Pristiani. 2023. "Lecturers' Perceptions in Indonesia on the Use of Chatgpt in Academic Environments." *Community Development Journal* 4(6): 11898–905.

Lee, Donghwa, Hong Hyeon Kim, and Seok Hyun Sung. 2023. "Development Research on an AI English Learning Support System to Facilitate Learner-Generated-Context-Based Learning." *Educational Technology Research and Development* 71(2): 629–66.

Lee, Kyung A., and Soon Bum Lim. 2023. "Designing a Leveled Conversational Teachable Agent for English Language Learners." *Applied Sciences (Switzerland)* 13(11).

Levitskaia, Anna. 2023. "The Impact of Digital Technologies on the Effectiveness of English Language Learning by Medical Students." *Revista Amazonia Investiga* 12(71): 284–92.

Li, Xing. 2022. "Research on the Application of Computer Artificial Intelligence Technology in Feedback Teaching of English." In *2022 IEEE International Conference on Advances in Electrical Engineering and Computer Applications, AEECA 2022* , , 1023–27.

Liu, Jianhua. 2024. "Enhancing English Language Education Through Big Data Analytics and Generative AI." *Journal of Web Engineering* 23(2): 227–50.

Liu, Jingdan, Hazrul Abdul Hamid, and Xujie Bao. 2025. "Motivation and Achievement in EFL: The Power of Instructional Approach." *Frontiers in Education* 10.

Liu, Shaojie. 2022. "Construction and Computation of the College English Teaching Path in the Artificial Intelligence Teaching Environment." *Computational Intelligence and Neuroscience* 2022.

Lydia, E. Grace, P. Vidhyavathi, and P. Malathi. 2023. "A Study on "Ai in Education: Opportunities and Challenges for Personalized Learning." *Industrial Engineering Journal* 52(05): 750–59.

M. Dahria. 2020. "Artificial Intelligence." *Artificial Intelligence* 5(2): 186–87.

Ningrum, Sulisty. 2023. 2 Borneo Engineering & Advanced Multidisciplinary International Journal (BEAM) *ChatGPT's Impact: The AI Revolution in EFL Writing Full Paper* . <https://beam.pmu.edu.my>.

Nur Manab, Kholilul Rachman, Eka Prakarsa Mandyartha, and Agung Mustika Rizki. 2021. "Design and Construction of a Flask Web-Based Russian Letter Detection System." *Proceedings of the National Seminar on State Defense Informatics* 2: 156–60.

Nw, Istiqomah, SMK Al, and Mamben Baru. 2024. "Students' Anxiety in Learning English (A Case Study at Eleventh Grade Of." In *Proceedings of the Scientific Conference on Education* ,.

Oluwafemi Ayotunde, Oke, Dashty Ismil Jamil, and Nadire Cavus. 2023. "The Impact of Artificial Intelligence in Foreign Language Learning Using Learning Management Systems: A Systematic Literature Review." *Information Technologies and Learning Tools* 95(3): 215–28.

Pakpahan, Emma Martina. 2022. "Anxiety, English Language Ability and Habits." *Journal of Health Technology and Social Sciences* 4(1): 300–306.

Peña-Acuña, Beatriz, and Rafael Crismán-Pérez. 2022. "Research on Papua, a Digital Tool with Artificial Intelligence in Favor of Learning and Linguistic Attitudes towards the Learning of the English Language in Students of Spanish Language as L1." *Frontiers in Psychology* 13.

Peng, Xue, and Yue Wang. 2025. "An AI-Driven Approach for Advancing English Learning in Educational Information Systems Using Machine Learning." *International Journal of Advanced Computer Science and Applications* 16(1): 163–71.

Polii, Jemmi. 2020. "Learning Indonesian Language and Literature in the Era of the Industrial Revolution 4.0." *The Way Journal of Theology and Education* 6(1): 71–94.

Pondelíková, Ivana, and Jana Luprichová. 2025. "Exploring the Efficacy of Chatgpt in Enhancing Specialized Communication Skills in English Language Learning." *Journal of Teaching English for Specific and Academic Purposes* 13(1): 25–40.

Prastiwi, Chyntia Heru Woro, and Nia Pujiawati. 2019. "Combining Artificial Intelligence and Natural Intelligence in Learning English Writing Skills." *Proceedings of the National Postgraduate Seminar (PROSNAMPAS)* : 1–7.

Ramadhan, Fikri Kurnia, Muhammad Irfan Faris, Ikhsan Wahyudi, and Mia Kamayani Sulaeman. 2023. "Utilization of Gpt Chat in the World of Education." *Flash Scientific Journal* 9(1): 25.

Rika Perdana, Purnama et al. 2023. "Utilization of Artificial Intelligence-Virtual Writing Tutor to Improve Teachers' Scientific Writing Skills in Serang Regency, Banten." *Journal of Community Response and Empowerment* 1(1): 10–17. <https://jurnal.untirta.ac.id/index.php/jrkp/article/view/22316>.

Rini, Rini, Safrina S Noorman, and Nia Nafisah. 2021. "Zoom-Storytelling: An Activity to Reduce Students' Speaking Anxiety." *Journal of Educational Research* 21(2): 112–21.

Rumaisa, Fitrah et al. 2021. "Application of Natural Language Processing (NLP) in Education." *Journal of Community Innovation* 1(3): 232–35.

Saragih, Erikson et al. 2019. "An Anxiety Faced By Students in Speaking English." *Handayani Journal* 10(2): 54.

Sari, Mike Nurmalia, and Pretty Elisa Ayu Ningsih. 2022. "An Analysis of Students' Motivation and Anxiety on Learning English At Sma Negeri 6 Kerinci." *Pendekar: Jurnal Pendidikan Berkarakter* 5(3): 181.

Shaikh, Sarang, Sule Yildirim Yayilgan, Blanka Klimova, and Marcel Pikhart. 2023. "Assessing the Usability of ChatGPT for Formal English Language Learning." *European Journal of Investigation in Health, Psychology and Education* 13(9): 1937–

60.

Simon, Anis Shalatin. 2023. "Prospects for Arabic Language Learning in the Era of Generative Artificial Intelligence." *Assuthur: Journal of Arabic Language Education* 2(2): 133–40.

Solak, Ekrem. 2024. "Revolutionizing Language Learning: How ChatGPT and AI Are Changing the Way We Learn Languages." *International Journal of Technology in Education* 7(2): 353–72.

Su, Zheqian, Miao Liu, Bailin Song, and Shulin Lian. 2021. "The Intervention of Internet Technology on Students' English Learning in the Intelligent Era." In *ACM International Conference Proceedings Series*, 775–80.

Subargo, Yopi Lutfi, Prakrisno Satrio, Hayani, and Septia Rizqi Nur Abni. 2023. "Argumentation Activation Through Provocative-Interaxial Learning Model With Optimization of ChatGPT Artificial Intelligence in Indonesian Language Class of Airlangga University Students." *GHANCARAN: Journal of Indonesian Language and Literature Education*.

Suharmawan, Wahid. 2023. "Utilization of GPT Chat in the World of Education." *Education Journal: Journal of Educational Research and Development* 7(2): 158–66.

Syahfutra, Wandi, and Prasetyo Agung Wibowo. 2019. "Speaking Anxiety in Speaking Learning in English Language Education Study Program Students." *Journal of Education Informatic Technology and Science (JeITS)* 1(2): 175–84.

Viktorivna, Kushmar Lesia, Vornachev Andrii Oleksandrovych, Korobova Iryna Oleksandrivna, and Kaida Nadia Oleksandrivna. 2022. "Artificial Intelligence in Language Learning: What Are We Afraid Of." *Arab World English Journal* 2022-July: 262–73.

Wahyuni, S. 2019. "Project-Based Learning: Learning Innovation in the Era of the Industrial Revolution 4.0." *Proceedings of the PBSI UPY National Seminar 2019* 1(1).

Wang, Ping, Jun Cong, and Shi Liu. 2022. "Exploring and Constructing an Effective Evaluation Model of Network Teaching From the Perspective of Emotion Regulation." *International Journal of Neuropsychopharmacology* 25(Supplement\_1): A51–A51.

Watanabe, Alice. 2023. "Exploring Totalitarian Elements of Artificial Intelligence in Higher Education With Hannah Arendt." *International Journal of Technoethics* 14(1).

Wu, Lin. 2024. "Students' Foreign Language Learning Adaptability and Mental Health Supported by Artificial Intelligence." *Journal of Autism and Developmental Disorders* 54(10): 3921–32.

Yang, Liu, Lu Li, and Li Wang. 2025. "Optimizing AI-Driven EdTech Solutions for Enhanced English Learning: A TOPSIS Approach." *IEEE Access* 13: 79479–502.

Yoon, Seo Young. 2019. "Student Readiness for AI Instruction: Perspectives on AI in University EFL Classrooms." *Multimedia-Assisted Language Learning* 22(4): 134–60. [http://journal.kamall.or.kr/wp-content/uploads/2019/12/Yoon\\_22\\_4\\_06.pdf](http://journal.kamall.or.kr/wp-content/uploads/2019/12/Yoon_22_4_06.pdf) <http://www.kamall.or.kr>.

Yulita, Delti, and Maria Fatima Saijao. 2022. "Socialization of Recognition and Handling of Reading Anxiety Problems in English for Students of SMAN 1 Kefamenanu." *Journal of Science and Humanities Service* 1(1): 10–17.

Zaim, Muhammad et al. 2025. "Generative AI as a Cognitive Co-Pilot in English Language Learning in Higher Education." *Education Sciences* 15(6).

Zhang, Yang, and Changqi Dong. 2024. "Unveiling the Dynamic Mechanisms of Generative AI in English Language Learning: A Hybrid Study Based on FsQCA and System Dynamics." *Behavioral Sciences* 14(11).

Zulrahman, Muhammad Febrilian, and Hermawan Syahputra. 2023. "Utilization of Artificial Intelligence Markup Language (AIML) and Latent Semantic Analysis (LSA) in

---

Developing E-Education Chatbots.” *INTECOMS: Journal of Information Technology and Computer Science* 6(1): 36–43.