

Students' Attitudes Towards Chatbots in Enhancing English Speaking Skills

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Abstract

The study explores EFL Libyan students attitude towards' using applications of AI- tools Chatbots in enhancing speaking proficiency. A qualitative research design was employed. Semi – structured interviews were employed with eight EFL Libyan students at Faculty of Arts, English language Department, Dernah University. The findings of study indicated that artificial intelligence (AI) chatbots have a positive influence in enhancing speaking skills. Furthermore, Chatbots promote learning autonomy and self-directed learning.

Keywords

Chatbots -
Artificial
intelligence (AI)
- Speaking Skills
- EFL Libyan
students- Derna
University

اتجاهات الطلاب نحو استخدام روبوتات الدردشة في تعزيز مهارات التحدث باللغة الإنجليزية

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الكلمات المفتاحية

روبوتات الدردشة.
الذكاء الاصطناعي (AI).
مهارات التحدث.
الطلاب الليبيون دارسو
اللغة الإنجليزية كلغة
أجنبية.

الملخص

تسعى الدراسة الى معرفة اتجاهات طلاب اللغة الانجليزية كلغة اجنبية نحو استخدام تطبيقات الذكاء الاصطناعي روبوتات الدردشة في تعزيز كفاءة مهارة المحادثة. اختيار تصميم منهج البحث النوعي باستخدام المقابلات مع عدد تسع طلاب من قسم اللغة الانجليزية بكلية الآداب جامعة درنة. وأشارت نتائج الدراسة الى ان روبوتات المحادثة بالذكاء الاصطناعي (AI) لها تأثير ايجابي في تحسين مهارة التحدث وتعزيز الاستقلالية في التعلم والتعلم الذاتي الموجه.

constraints traditional classroom instruction (Zhu et al., 2023). Voice-based- chatbots have significantly transformed oral learning experience by simulating in-person dialogue and integrated paralinguistic cues (Koc &Savas, 2025).

Traditional teaching methods of speaking skills endure with numerous challenges, including limited oral practice time, difficulty in catering individualized feedback to all students, diverse levels of proficiency among students (Shaibooob and Hablaja, 2024). English as a Foreign Language (EFL) learners have faced challenges such as limited authentic speaking practices, large class size, and restricted time (Sari et al., 2022). In spite of implementing chatbots, the integration of chatbots into English speaking courses remains limited in higher educational context in Libya. AI chatbots is still early stages Fawiza (2024). This study aims to explore Libyan EFL students' attitudes toward using chatbots as educational tools to enhance speaking skills.

Objectives

1- To explore Libyan EFL students'

Introduction

Artificial intelligence (AI) has rapidly integrated in educational context which promote new avenues for language acquisition and communication practice. Among AI-driven innovations, AI chatbots have gained increasing attention as effective tools for promoting English language learning. Chatbots provide authentic communicative interactions practice and individualized feedback. AI-powered chatbots create dynamic learning environment that enhance speaking skills (Nunez, 2025).

In recent year, artificial intelligence platforms have been widely implemented to develop oral communication abilities by multiple communication learning modalities, corrective feedback, and exercises (Ericsson et al., 2023). Many universities have adopted chatbots as strategies to promote learning language and to facilitate real-time interaction, self-directed learning, and meaningful communicative exercises (Zou, 2024). In educational contexts, Chatbots support personalized learning, sustain learners' engagement, and authentic communication practice beyond temporal

Chatbots in Language Education

Chatbots are AI-Powered conversational system designed to simulate human dialogue through texts or voice interaction. In educational setting, Chatbots function as devices of learning used for practicing, tutoring, and providing corrective feedback. (Guo et al., 2023). Chatbots system support dynamic interaction by catering context-communication that refine real life dialogue (Wang, 2025). Kartal (2024) states that students who interact with AI chatbots have demonstrated higher engagement and motivated to speak because students' exposure to diverse communicative conditions.

In language learning context, AI-powered chatbots have offered repetitive, flexible, interactive oral practice particularly provide unlimited resources. Chatbots has transformed how learners acquire language skills (Yin et al., 2021). Anjarani et al. (2024) & Shuhaimi et al. (2025) highlighted that AI-based chatbots display a crucial role in promoting language learning, by providing effective, accessible, and individualized instruction. Zhao et al. (2023) & Rahimi et al. (2025) emphasized that AI enhance learning by creating adaptive

attitudes towards using chatbots in enhancing learning English language skills.

2- To identify the perceived benefits of utilizing chatbots for speaking skills improvement.

Problem statement

One of the most persistent challenges faced by EFL learners is developing effective speaking skills, primarily limited access to authentic oral communication opportunities (Tian et al., 2023 & Rahman et al., 2022). In the Libyan context, several studies have revealed that university graduated students often display low level of proficiency in speaking skills. Language teaching instruction in Libya largely depends on traditional methods, teacher-centered approaches that provide time constraints for oral practice (Elkut et al., 2025; Zargoun, 2024). Mohamed (2023) identified many barriers including high students -teacher ratio, limited interaction time, insufficient oral practice opportunities.

The study seeks to explore Libyan university students' attitudes towards using AI-assisted chatbots as effective, motivated, and acceptable tools for enhancing English speaking skills.

Literature Review

Amin (2023) found that chatbots encourage self-regulated and offer real-time practice opportunities. Annamalia et al. (2023) found that students who consistently engaging with chatbots significantly improve their speaking flow, accuracy, and lexical range over time.

In line with these findings, Fathi et al, (2024) demonstrated that AI chatbots – assisted speaking activities improved students' oral sub-skills, and increased motivation. The study employed mixed method approach. Utilization exploratory designed with 33 EFL students at university level. Therefore, the participants have a positive perspective toward using AI-assisted speaking as educational tools which reduces anxiety and provides effective interaction to enhance willingness to communicate.

Moreover, Reis (2024) conducted qualitative study investigated students' perspectives towards chatbots in fostering speaking proficiency. The study participants were ten undergraduate EFL students. The findings revealed that chatbots develop English language competencies. Furthermore, chatbots improve students enhance the

environment which support students' needs.

AI- Chatbots in Learning English Speaking Skills

Numerous studies indicated that the potential of using chatbots in teaching speaking skill due to their auxiliary role of chatbots (Tajik, 2024). Chatbots incorporating machine learning technology offer immediate contextualized feedback, reduce pressure, and promote interactive learning (Reis, 2024). Alzahran (2022) demonstrated that voice -based -chatbots substantially enhanced oral proficiency, fluency, pronunciation, and vocabulary compared to traditional methods.

Employing chatbots as speaking activities reduce oral communication anxiety and sustain learner engagement (Cakmak, 2022). Baidoo-Anu & Ansah (2023) stated that chatbots-enhanced task has positively affect speaking proficiency by increasing interaction between learners and chatbots system. Moreover, Mohamed (2024) highlighted that chatbots improve students' speaking proficiency and self-assurance.

Budianto & Arifani (2022) reported that voice -based chatbots mainly promote students' performance competence factors also increase their motivation to speak.

constructivist principles by promoting interaction, motivation, and communication among learners (Qinghua & Satar, 2020). Huang et al. (2022) found that chatbot-mediated speaking skills practice promotes personalized learning, and experiential engagement, reinforcing learning process.

Interaction Theory

Interaction theory, a fundamental concept in second language acquisition (SLA), suggests that language improvement occurs through authentic interaction, negotiation meaning, and feedback (Long, 1996). Specifically, interaction theory supports the learner refines inter-language through interaction, receives input and produces output, modifies language via feedback. Consequently, many studies mentioned the relevance of the theory in technology –assisted learning. conversation- based – tools such as chatbots enhance learning by fostering corrective feedback, repeat oral practice, and reduced anxiety. From cognitive aspect, interaction with chatbots facilitates lexical and syntactic improvement through real-time practice and modified output feedback (Yuan, 2023). Moreover, chatbots-facilitated speaking practice promotes pragmatic competence and communicative interaction, which are

clarity of their utterances and increase their precision. Chatbots bolster students with diverse oral practice allow them to receive constructive feedback, provide human-like interaction, and foster personalized learning.

Subsequently, Ding et al. (2025) examined the effects of chatbots on EFL learners speaking skill. A qualitative method was implemented as phase in the study. The findings of the study indicated that chatbots boost students' motivation, confidence, engagement, and low anxiety. Moreover, chatbots enhance students' speech fluidity grammar, and support self-regulation.

Theoretical Facet

Constructivist Theory

Constructive theory premises that knowledge is constructed through interaction, engagement, reflection (Piaget, 1973). Constructivist emphasizes that learning process occurs actively through experience and participation (Piaget, 1976). Park (2022) highlighted that Constructivist principles align with technology -based-learning by supporting learner autonomy and engagement, and interaction.

Chatbots as interactive tools, embody

Instrument

The study employed a semi-structure interview, which was designed to provide a structure and flexibility, thus allowing participants to elaborate on their views (Kallio et al., 2016). The interview protocol consisted of three main sections:

- 1- Attitudes towards chatbots
- 2- The role of Chatbots in enhancing English speaking skills
- 3- Learning motivation

An audio recording device was used to record all participants responses to ensure accuracy in transcription and to preserve the authenticity of their verbatim statements.

Data Collection

Before starting the interview, the researcher provided a brief explanation of what chatbots are to ensure all participants understood the topic and to confirm that they had used chatbots in educational contexts. Individual interviews were implemented in English, each lasting approximately 15-20 minutes. The sessions were audio –recorded with permission from respondents.

Data Analysis

The study analysis followed Braun and Clarke's (2006) thematic analysis

crucial components in speaking proficiency (Wu et al., 2023).

Methodology

Research Design

The study adopted small- scale exploratory design. This approach is appropriate for gaining insights into perceptions and attitudes. Exploratory small-scale studies typically rely on interviews, focus groups, and pilot surveys which allows for flexibility of findings (Hunter, 2019). This design was employed to explore EFL Libyan students' attitudes towards the use of chatbots in enhancing English speaking skills. The study was conducted in English Department at Derna university, Libya. Importantly, the university has not officially adopted chatbots in its educational settings.

Participants

The study participants consisted of eight students enrolled Department of English at Faculty of Art, Derna university. The participants were selected through a non-random method, specifically a purposive sampling technique, to ensure that participants possessed knowledge of using chatbots and relevant experience in English language learning. The participants of the study were males and females.

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Students B: "My first impression is that chatbots are useful and easy".

Students C: "It's a useful and easy way to practice speaking anytime. I felt comfortable and not afraid to make mistakes".

Student D: "A positive impression. It's actually very useful and helps improve the language noticeably"

Student G: "my first impression of using chatbots for English speaking skills is that it feels easy and stress-free. I can practice anytime without worrying about making mistakes".

Student H: "my impression is that using chatbots is interesting and different. It like talking to a real person but more relaxed".

As students mentioned, chatbots support a criticism-free atmosphere for learning new vocabulary and practicing sentences. The dominant theme identified here was "Low-pressure and relaxed."

Students E: "My first impression was good due to I love practicing English in a natural way and ChatGPT makes it easier to speak freely".

Chatbots in Enhancing English Speaking Skill

2- Comfortable speaking with a chatbots compared to speaking with teachers

framework, which consist of identifying and interpreting patterns with textual data that represent the participants' attitudes. The process involved several stages: transcribing interviews verbatim, familiarization with the data, generating initial codes, searching for themes, reviewing and refining themes, and defining and naming the themes to accurately represent participants' attitudes. To maintain reliability and validity, the interview items were reviewed by English language experts at the university.

Results

Attitudes Toward Chatbots

1- Impression of using chatbots as individual assistance for English speaking skills

Students broadly showed a positive impression of utilizing chatbots as personalized tools for enhancing English speaking skills, citing their ease of use, accessibility, and the ability to practice without fear of making mistakes. Furthermore, chatbots offer extremely supportive interaction.

Students A: "A good impression, but don't rely on it too much".

time thus, I feel comfortable”.

Students H: *“I do not always feel more comfortable than with classmates or teachers, because speaking with real people gives more natural practice. But with chatbots, I can practice without pressure.”.*

3- Chatbots improve speaking skills

Students cited various areas where their speaking skills were enhanced. Chatbots specifically improved their fluency and confidence (SC, D, E, G).

student C: *“It improved my fluency and confidence. I also learned to form better sentences and use more vocabulary”.*

Student D: *“Through chatting and speaking, especially with consistency”.*

Student E: *“Using it daily has made me improve in speaking”.*

Students G: *“chatbots has helped me improve my speaking skills by giving me chances to practice conversations and learn new expressions”.*

Students emphasized the importance of sustained repeated practice. Some students highlighted that chatbots foster their vocabulary and provide grammar correction; moreover, most students noted development in their pronunciation. Students assured that chatbots correct their mistakes and provide

Most students prefer using chatbots over teachers because chatbots are absent of judgment and stress. Furthermore, they decrease the fear of making mistakes.

Students B: *“Yes, I feel more comfortable because I don't feel shy about mistakes”.*

Students C: *“Yes, because there's no pressure or fear of being judged. I can speak freely and learn at my own pace”.*

Student F: *“Yes, I feel more comfortable talking to a robot without being embarrassed by my mistakes”.*

Student G: *“yes, I feel more comfortable speaking with chatbots compared to classmates or teachers because there is no judgment, and I can take my time to answer”.*

Moreover, chatbots offered accessible access and comfort; however, the interaction is valuable due to the real oral conversation that occurs between the AI and the user.

Students A: *“No, because it's a robot programmed to please you, unlike a human, who will be a true test of your confidence and tact”.*

Students D: *“Yes, I respond to it more than to human interaction. I feel more confidence”.*

Students E: *“For real, I prefer speaking face to face with people, but I use Chatbot for practice because I can make practice any*

Student G: “I think chatbots gives helpful corrections sometimes, especially with grammar and vocabulary, but it is not the same as real teacher”.

Student H: “yes, chatbots provide feedback, but it is sometimes basic. Still, it helps me notice my mistakes in grammar and word choice”.

While other students developed their pronunciation, participants assured that chatbots correct mistakes and provide expressions, which helps to build sentence formation and broaden vocabulary use.

Student A: “Yes, it's useful. It's programmed for this purpose. It helps you pronounce words and master them, and it helps you learn grammar”.

Student C: “Sometimes. Some give useful feedback, but not all are accurate. Still, it's helpful overall”

Student D: “Yes, when you ask it about a specific language skill, it gives you a clear and comprehensive answer to every question”.

Student E: “Yes, it provides useful corrections and also explains grammar and language clearly”.

Learning Motivation

5- Utilizing chatbots make students more motivated to practice speaking English language

Chatbots motivate students to practice speaking regularly. Specifically, chatbots

appropriate expressions, which helps to build sentence formation and enables broader vocabulary use.

Student A: “It helped me improve my pronunciation of some words using repetition to correctly pronounce words”.

Student B: “It helped me learn new words, fix grammar, and build confidence”.

Student C: “It improved my fluency and confidence. I also learned to form better sentences and use more vocabulary”.

Student D: “Through chatting and speaking, especially with consistency”.

Student E: “Using it daily has made me improve in speaking”.

Student F: “It only helped me improve by giving me more words to use and correcting my grammar mistakes”.

Student H: “chatbots help me by correcting my sentences and teaching me how to say things in better way”.

4- Chatbots provide help corrections or feedback

Emphasizing the value of sustained practice, some students highlight the enhancement of their vocabulary and grammar correction.

Student B: “Yes, it gives helpful and polite corrections in grammar”.

Student F: “Yes, because it provides accurate and useful correction when speaking”.

best to take a friend along to improve it. The most important factor in learning any language is face-to-face conversation

Discussion

The study provides essential insights into Libyan EFL students' attitudes toward chatbots in enhancing English speaking skills. The findings indicate that AI voice chatbots effectively promote fluency and confidence among EFL students. Furthermore, chatbots enhanced linguistic factors and also increase students' motivation. These study result align with Annamalia, (2024) and Fathi (2024), who demonstrated that AI- voice- chatbots enhance students' fluency, accuracy, pronunciation and vocabulary. Likewise, Alzahran (2022) and Ding (2025) found that chatbots –mediated- learning enhance EFL students in linguistic competence fluency, accuracy, pronunciation and affective factors (motivation, self-confidence, and reduction anxiety). Finally, Reis (2024) underscored that voice based chatbots facilities authentic, personalized, immediate corrective practice, which ultimately improves communicative competence.

enhance students' motivation to speak the English language consistently by allowing them to practice without the fear of making mistakes or feeling embarrassment.

Student B: Yes, because it makes me practice more often

Student C: Yes. It's always available, so it helps me stay consistent with practice

Student E: Yes, it motivates me since I can practice anytime and learn new vocabulary as well as it can explain by different ways to get the information thoroughly

Student F: Yes, it is motivated me; because it is available at all times and with ease.

Student G: "using Chabot makes me more motivated to practice regularly because it is always available, and I do not feel embarrassed when I make mistakes".

Ultimately, chatbots are effective in motivating students, even though face-to-face instruction might be more motivating.

Student H: "chatbots do motivate me, but not all time. Sometimes I feel less serious because I know it is not a real person".

Chatbots offered accessible access and comfort; however, human interaction is still valuable because real conversation is more natural.

Student A: "Depending on your time with a robot, your English will improve, but it's

technology provides opportunities for refined oral communication practice and immediate corrective feedback, which significantly contribute to enhancing students' self-confidence, motivation, and linguistic competence. Chatbots also support self-correction and autonomous language learning. The incorporation of AI chatbots in language learning aligns with both Interaction and Constructivist theories. Constructivist theory highlights the importance of knowledge construction through individualized and authentic communication practice. Interaction theory asserts a pivotal role of corrective feedback and negotiation of meaning in second language acquisition. Therefore, the integration of AI chatbots into English speaking instruction in higher education is complementary to traditional pedagogical methods, as chatbots can support autonomous learning, boost motivation, and provide authentic language contexts.

The study contributes to the evolving field of chatbots-assisted language learning, especially within the context of English as foreign language (EFL) education. The study findings support the pedagogical

Constructivist theory perspective, AI-chatbots interaction enables students to construct linguistic knowledge via autonomous, experiential learning in authentic contexts. Chatbots support learner autonomy, promote reflection, and provide a supportive environment for ongoing practice. Furthermore, according to Interaction theory, chatbots offer opportunities for negotiating meaning, corrective feedback, and real-time language modification, which are central principles in Second Language Acquisition. The combination of Constructivist and Interactionism principles highlights that chatbots-mediated speaking practice promotes both cognitive and social dynamics of language learning.

Conclusion

The study explored Libyan EFL students' attitudes toward using AI chatbots in enhancing English speaking skills. The findings revealed a positive attitude toward chatbots-assisted learning. Chatbots offer accessibility, immediacy, provide supportive, and low-pressure atmosphere for oral practice. The integration of AI

results cannot evaluate the so-called long-term influence of utilizing chatbots on enhancing speaking skills.

Future research should involve a larger group across different educational institutions to support the external validity of the results. Furthermore, adopting experimental approach could provide stronger evidence on chatbots and speaking skills development. Employing a longitudinal design to examine the sustained influence of AI chatbots on oral proficiency and engagement over time.

Reference

1. Alzahrani, A. (2022). A systematic review of artificial intelligence in education in the arab world. *Revista Amazonia Investiga.* 11. 293-305. [10.34069/AI/2022.54.06.28](https://doi.org/10.34069/AI/2022.54.06.28).
2. Amin, M. Y. M. (2023). AI and Chat GPT in Language Teaching: Enhancing EFL Classroom Support and Transforming Assessment Techniques. *International Journal of Higher Education Pedagogies*, 4(4), 1–15. <https://doi.org/10.33422/ijhep.v4i4.554>
3. Anjarani, S., Furqon, M., & Rakhmawati, F. (2024). ChatGPT to

value of AI-chatbots as innovative educational tools for enhancing speaking skills. Specifically, chatbots-based learning can foster meaningful engagement, provide feedback, and create opportunities for self-directed learning-principles that align with Interaction Theory and Constructivist Theory. The study provides insights for policymakers and curriculum designers in higher education, suggesting that digital tools like chatbots can be effectively integrated as complementary instructional strategies to enhance students' English-speaking skills. Moreover, AI -chatbots should be integrated as a blended learning approach that support oral practice and personalized feedback. Furthermore, academic institutions can adopt chatbots-mediated instruction as a technology- enhanced learning strategy.

Limitation

The study was limited by its small sample size and focus on a specific academic context, which may affect the generalizability of the findings to other educational settings. The study was undertaken over short period of time. The

students' L2 speaking performance and speaking anxiety. *Novitas-ROYAL (Research on Youth and Language)*, 16(2), 113–131.

9. Ding, D., & Yusof, M. B. (2025). Investigating the role of AI-powered conversation bots in enhancing L2 speaking skills and reducing speaking anxiety: a mixed methods study. *Humanities and Social Sciences Communications*, 12(1), 1-16.

10. Elkut, K.S & Ben Zayed, M & Aburawi, A.M. (2025). Challenges of Learners of English Language in Speaking Skill.

11. Ericsson, E., Hashemi, S. S., & Lundin, J. (2023). Fun and frustrating: Students' perspectives on practising speaking English with virtual humans. *Cogent Education*, 10(1). <https://doi.org/10.1080/2331186x.2023.2170088>

12. Fathi, J., Rahimi, M., & Derakhshan, A. (2024). Improving EFL learners' speaking skills and willingness to communicate via artificial intelligence-mediated interactions. *System*, 121, 103254. <https://doi.org/10.1016/j.system.2024.103254>

13. Fawzi., M & Lafi, A, (2024). Application of Artificial Intelligence

Foster Students' engagement in writing Class: An Intervention study. *Voices of English Language Education Society*, 8(3).

<https://doi.org/10.29408/veles.v8i3.27687>

4. Annamalai N. "How Malaysian lecturers view Mooc and its challenges." *J. Nusan. St. (JONUS)*, vol. 4, no. 2, pp. 144-167, 2019.

5. Baidoo-Anu, D., & Ansah, L. O. (2023). Education in the Era of Generative Artificial Intelligence (AI): Understanding the potential benefits of ChatGPT in promoting teaching and learning. *Journal of AI*, 7(1), 52–62. <https://doi.org/10.61969/jai.1337500>

6. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.

7. Budianto, L., Arifani, Y., Wardhono, A., & Poedjiastutie, D. (2023). The TPACK level of in-service EFL teacher online professional training: The perspectives of teachers, students, and trainers. *Journal of Digital Learning in Teacher Education*, 39(2), 87–101. <https://doi.org/10.1080/21532974.2023.2167024>

8. Çakmak, F. (2022). Chatbot-human interaction and its effects on EFL

nursing, 72(12), 2954-2965.

18. Koç FŞ, Savaş P. The use of artificially intelligent chatbots in English language learning: A systematic meta-synthesis study of articles published between 2010 and 2024. *ReCALL*. 2025;37(1):4-21. doi:10.1017/S0958344024000168

19. Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. C. Ritchie, & T. K. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413-468). New York: Academic Press.

20. Mohamed, A. M. (2024). Exploring the potential of an AI-based Chatbot (ChatGPT) in enhancing English as a Foreign Language (EFL) teaching: perceptions of EFL Faculty Members. *Education and Information Technologies*, 29(3), 3195-3217.

21. Mohamed, D. H. (2022). Obstacles Faced by Students in Speaking English Language. *IJRDO-Journal of Educational Research*

22. Nuñez, A. A. C., Nuñez, M. S. C., Pachay, J. F. Z. P. Z., & Bosquez, A. M. C. B. C. (2025). Using ChatGPT Voice to Improve Speaking Skills in English Language Learners. *Ciencia Latina Revista Científica Multidisciplinar*, 9(1), 7143-7161.

Technologies in Developing Libyan Universities. *African Journal of Advanced Pure and Applied Sciences (AJAPAS)*, 524-536. Retrieved from <https://aaasjournals.com/index.php/ajapas/article/view/820>

14. Guo K., Zhong Y., Li D., Kai S. (2023). Investigating students' engagement in chatbot-supported classroom debates. *Interactive Learning Environments*, 32(9), 4917-4933.

<https://doi.org/10.1080/10494820.2023.220718>

15. Huang, W., Hew, K. F., & Fryer, L. K. (2022). Chatbots for language learning—Are they really useful? A systematic review of chatbot-supported language learning. *Journal*

16. Hunter, D., McCallum, J. and Howes, D. (2019) Defining Exploratory-Descriptive Qualitative (EDQ) research and considering its application to healthcare. *Journal of Nursing and Health Care*, 4(1),

17. Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of advanced*

00368-3

28. Rahman, M. M., Bhattacharya, S., & Islam, M. N. (2022). Automatic speech recognition for EFL pronunciation training: A review of recent trends. *Computer Assisted Language Learning*, 35(7), 535–1554.

<https://doi.org/10.1080/0958221.2020.1854312>

29. Reis, O. (2024). Artificial Intelligence as a tool to practice and improve speaking and listening skills in English.

30. Reis-Andersson, J. (2024). AI Generative in Brazil's Public Schools: The Teachers' Perspective. In *Proceedings of the International Conference on AI Research*. Academic Conferences and publishing limited.

31. Sari , P. N. I. (2022). The use of role-play technique with conversation scripts-based video shooting activity to improve speaking skills of the seventh grade students of SMP Wisata Sannur in academic year 2021\ 2022 GRADE STUDENTS OF SMP (Doctoral dissertation, Universitas Mahasaraswati Denpasar).

32. Shaibooob, A., Hablaja, S. (2024). Obstacles Facing English Language Students in Speaking at the Faculty of

23. Park, H. (2022) Effects of virtual reality-based English learning on Korean university students' speaking ability. *Multimedia Assisted Language Learning*, 25(4): 93–119.

24. Piaget, J. 1976. *Autobiographie* [Autobiography]. In: G. Busino. (ed.), *Les sciences sociales avec et après Jean Piaget* [The Social Sciences with and after Jean Piaget]. *Cahiers Vilfredo Pareto. Revue européenne des sciences sociales* (Geneva), Vol. 14, Nos. 38/39, pp. 1–43.

25. Piaget, J., & Duckworth, E. (1973). Piaget Takes a Teacher's look. *Learning*, 2(2), 22-7.

26. Qinghua, Y. & Satar, M. (2020). English as a foreign language learner interaction with chatbots: Negotiation for meaning. *International Online Journal of Education and Teaching (IOJET)*, 7(2), 390-410. <http://iojet.org/index.php/IOJET/article/view/707>

27. Rahimi, A.R., Mosalli, Z. (2025) Language learners' surface, deep, and organizing approaches to ChatGPT-assisted language learning: What contextual, individual, and ChatGPT-related factors contribute?. *Smart Learn. Environ.* **12**, 16. <https://doi.org/10.1186/s40561-025-00000-0>

positive psychology and intrinsic motivation. European Journal of Education, 60(1), e70054. DOI: 10.1111/ejed.70054

37. Wu, C. H., Lam, H. Y., Kong, A. & Wong, W. L. H. (2023) The design and evaluation of a digital learning-based English chatbot as an online self-learning method. International Journal of Engineering Business Management, 15: 1–22.

38. Yin, X., Gao, L., & Lee, C. (2022). Enhancing EFL learners' speaking skills through AI chatbot-based conversation: A quasi-experimental study. *Interactive Learning Environments*. Advance online publication.

<https://doi.org/10.1080/10494820.2022.2062648>

39. Yuan, Y. (2023) An empirical study of the efficacy of AI chatbots for English as a foreign language learning in primary education. *Interactive Learning Environments*. Advance online publication.

<https://doi.org/10.1080/10494820.2023.2282112>

40. Zargoun, E, Z., (2024). Investigating Problems and Difficulties of Speaking English among Undergraduates in Msllata

Education in Nalut. International Journal of Language and Linguistics, 12(1), 32-46. <https://doi.org/10.11648/j.ijll.20241201.15>

33. Shuhaimer, A., Kuhail, M. A., & Salman, S. (2024). ChatGPT in higher education - A Student's perspective. *Computers in Human Behavior Reports*, 17, 100565. <https://doi.org/10.1016/j.chbr.2024.100565>

34. Tajik, E., & Tajik, F. (2024). A comprehensive examination of the potential application of Chat GPT in higher education institutions. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4699304>

35. Tian, W., Ge, J., Zhao, Y., & Zheng, X. (2024,). *AI chatbots in Chinese higher education: Adoption, perception, and influence among graduate students—An integrated analysis utilizing UTAUT and ECM models*. *Frontiers in Psychology*, 15. <https://doi.org/10.3389/fpsyg.2024.1268549>

36. Wang, C., Li, X., & Zou, B. (2025). Revisiting integrated model of technology acceptance among the generative ai-powered foreign language speaking practice: Through the lens of

College. *Bani Waleed University Journal of Humanities and Applied Sciences*, 9(1), 747-769. <https://doi.org/10.58916/jhas.v9i1.233>

41. Zhao, R., Yunus, M., & Rafiq, R. (2023). The impact of the use of ChatGPT in enhancing students' engagement and learning outcomes in higher education: A review. *International Journal of Academic Research in Business and Social Sciences*, 13(12), 3734-3744. <http://dx.doi.org/10.6007/IJARBSS/v13-i12/20258>.

42. Zhu M, Calabrese G, Wong RWK, Mayor T. Identification of newly translated thermo-sensitive proteins using pulse SILAC mass spectrometry and the GAL promoter system. *STAR Protoc*. 2023 Mar 17;4(1):102059. doi: 10.1016/j.xpro.2023.102059. Epub 2023 Jan 24. PMID: 36853680; PMCID: PMC9881406.

43. Zou, Z. (2024). *Exploring the impact of using chatbots on teacher-student relationships in today's higher education*. [Volume(Issue)],. [https://doi.org/\[DOI\]](https://doi.org/[DOI])