



## Improving Students' Linguistic Competence through Chatbots

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### Abstract

This study explores chatbots' influence on English linguistic competence and examines students' experiences with chatbots for language development in an educational institution in the UAE. For data collection, the researcher used semi-structured interviews with 30 participants (13 males and 12 females) from different linguistic backgrounds. The findings reveal that chatbots enhance language skills by offering unlimited practice in a judgment-free setting. Further, chatbots give flexible learning schedules that fit UAE cultural contexts and provide personalized feedback. However, students emphasized that chatbots cannot replace human teachers due to limited emotional connection, cultural understanding, and advanced language guidance. Students preferred an approach where chatbots handle practice, basic skills, and assessment while teachers provided cultural context and complex instruction. The study suggests that educational institutions should integrate chatbots as supplementary tools alongside teacher-led instruction. Future research should address how to develop culturally relevant chatbots for UAE contexts. This study contributes to understanding effective technology integration in language education by highlighting both the benefits and limitations of chatbot implementation.

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### Introduction

Chatbots help students converse with computers through natural language tools that give information in ways students can interact and learn (Al-Majali & Qbailat, 2013) <sup>[3]</sup>. Previous research concluded that there are four main features of chatbots: 1) they try to talk like humans do; 2) they send and get messages; 3) they do not have a body we can see; and 4) they are not characters in virtual worlds (Okonkwo & Ade-Ibijola, 2021) <sup>[26]</sup>. According to Ma *et al* (2024), a good chatbot can use deep learning to give teaching advice and help make learning happen more often and by itself. Other researchers (Du & Daniel, 2024) <sup>[11]</sup> said that as technology improves, chatbots will grow into smart teaching helpers and told teachers to start using AI chatbots in their teaching plans.

Chatbots are becoming increasingly common around the world. This attracted the attention of the teachers and educators and encouraged them to implement them in the teaching process. They can also be used to speed up language learning by showing how important they are as talking partners. Zhang *et al* (2023) <sup>[33]</sup> and Hicham *et al* (2025) <sup>[13]</sup> have shown the language learning chances that chatbots offer. For example, chatbots were linked to linguistic competence. Studies have shown that chatbots were able to improve students' language skills significantly. The highly frequent chatting with chatbots can develop students effectively due to the feedback that they receive. Research on educational technologies has a long history, and integrating AI into educational systems has recently raised both interest and worry among educators globally (Ismail, 2025) <sup>[15]</sup>. These chatbots are AI-based algorithms that are considered AI learning applications.

Recent research shows that student's privacy should be protected when using online learning models due to the fear of leaking personal information such as personal information, age, location, passwords, and others (Ismail & Alosi, 2025) <sup>[16]</sup>. With this in mind, there are few studies have studied how chatbots are used to improve students' linguistic competence and how this affects

learners' desire to learn the language (Liu & Reinders, 2024; Li *et al*, 2024) <sup>[22, 21]</sup>. Also, chatbot research in education has mostly used number-based design methods or fairly short tests, as shown in review studies on chatbots. Some chatbots are free and easy to get, so researchers must investigate the best ways to use these important language partners in improving students' linguistic competence. In other words, how using chatbots affects students' thinking, social, and feeling growth (Okonkwo & Ade-Ibijola, 2021) <sup>[26]</sup>

Based on the short preview above, it is important to understand how chatbots can help students develop their linguistic competence and have control over their learning to feel more engaged and connected to make chatbot language learning more personal and interesting. This means that a study looking at real cases can improve our understanding of chatbots in their setting. Students can learn English by talking with chatbots. Here, they will likely try harder, practice more often, and look for ways to get better at the language. Additionally, these chatbot features enable the students to take control of their learning experience and set the goals they believe they can achieve. Therefore, this study aims to fill this research gap by studying students' chatbot experiences for their language competency.

Thus, this study aims to answer the following question:

- How do chatbots contribute to students' linguistic competence development?
- What learning benefits and successes do students experience when using chatbots for language learning?
- What implementation challenges and limitations exist when using chatbots to improve linguistic competence?

### Literature review

AI has changed how we teach and learn languages. One of its application tools, like chatbots, can help students practice their language skills. A chatbot is an AI program and a type of Human-computer Interaction (HCI) model (Bansal & Khan, 2018) <sup>[6]</sup>. The dictionary defines a chatbot as "A computer program designed to simulate conversation with human users, especially over the Internet" (Chatbot [Definition of chatbot in English by Lexico Dictionaries, 2019) <sup>[9]</sup>. It uses Natural Language Processing (NLP) and sentiment analysis to communicate in human language through text or speech with students learning new languages (Khanna *et al*, 2015) <sup>[19]</sup>.

Stöhr *et al* (2024) <sup>[30]</sup> showed three tech benefits of chatbots. The chatbots can work right away, are easy to use, and can be changed to fit needs. It also found five ways to use chatbots in education: as a talking partner, for practice situations, to send information, as a help service, and to suggest learning materials. The study concluded that chatbots can create social feelings among students by letting them talk openly and feel connected. However, the research also found some problems with using chatbots, like tech limits, the fact that they were new to users, and the fact that they made students think harder about using them. The results concluded that students who used the chatbot did better in their studies than those who talked with the teacher. Also, the students who used the chatbot said they felt good about having it as part of their course.

Chatbots can help students to learn better. It can connect their feelings and thinking. When students talk with chatbots to practice language, they feel less nervous than when talking to real people. This makes them more willing to try new words and grammar. This is to say that emotional comfort works

together with thinking skills as learners get quick feedback, practice conversations, and build language skills through repetition. One of the advantages of chatbots is that they do not judge. In this case, students develop good feelings that help them remember language rules. This mix of emotional support and thinking practice helps students' learners feel more confident while improving their language skills. Therefore, chatbots are good tools for learning languages in a friendly way (Ismail & Aljaber, 2025) <sup>[17]</sup>.

Besides copying human conversation and entertaining people, chatbots are helpful in many other areas like education, business and e-commerce, health, and entertainment (Shawar & Atwell, 2007; Okeke, 2025) <sup>[29, 25]</sup>. Getting things done faster is the main reason people use chatbots, though other reasons include fun, social factors, and trying new technology (Brandtzaeg & Følstad, 2017) <sup>[7]</sup>. Also, chatbots have become very common in business because they lower service costs and can help many customers simultaneously. Chatbots are more friendly and appealing to users than fixed content searches like frequently asked questions (FAQs) lists. They give users comfortable and efficient help when talking with them; they provide more engaging answers that directly address user problems (Brandtzaeg & Følstad, 2017; Ranoliya *et al*, 2017) <sup>[8, 28]</sup>.

Vázquez-Cano *et al* (2021) <sup>[31]</sup> studied how helpful a chatbot could be in helping Spanish Language students in distance education universities. The researchers did pre-and-post tests using one group that got the regular teaching and another that used the new method. They compared two ways of teaching: the old way of using written work and the new way of using a chatbot. The group using the chatbot showed much better results than the other group. Using the chatbot helped students improve their punctuation and sentence structure. Also, the students who used the chatbot said it was helpful and interactive for learning, gave more personal feedback, and let them learn whenever they wanted.

Researchers and teachers have seen how chatbots can be used to teach in schools. For example, Okonkwo and Ade-Ibijola (2021) <sup>[26]</sup> studied how chatbots might help foreign language learning. They studied how often and in what ways Negotiation for Meaning (NfM) happens in computer-based learning. The study used two different kinds of chatbots: Tutor Mike, a teaching chatbot, and Mitsuku, a talking chatbot. Eight students learning English were put into two groups based on their English level, and all students talked with both chatbots. The study counted how many NfM cases happened, what stages of NfM occurred, what caused them, how students changed their words, and what students thought about it. The results showed that students with lower English levels got more help from talking with teaching chatbots. On the other hand, students with higher English levels did not like the chatbots much and did not engage well with the teaching chatbot.

Additionally, Kim *et al* (2022) <sup>[20]</sup> made a chatbot named Ellie. It has three main parts: General Talk, Skill Chat, and Task Chats. Students can use General Chat to have quick personal talks with Ellie. Skill Chat helps students practice specific language forms. In Task Chat mode, students can solve different language problems to learn. The study checked if the language level was right, conversations flowed well, and students could complete tasks successfully. The results showed that Ellie could become a good language-learning partner for students learning a second language. Most of the time, users see chatbots as friendly companions

and not just simple helpers (Costa, 2018). Forty per cent (40%) of user requests are more emotional than information-seeking (Xu *et al*, 2017). The growth of Machine Learning and sentiment analysis has given chatbots the ability to respond with emotion to customers (Følstad *et al*, 2018; Pratama & Ariyanti, 2025) <sup>[27]</sup>.

Recently, research found that AI robots are being implemented in several areas in the educational field (working together, learning on mobile devices/through games, distance learning, and emotional learning). However, little attention goes to developing educational robots that use truly human-centered artificial intelligence (HCAI). The study said that to develop HCAI, people must be involved in designing AI robots and chatbots (Adamopoulou & Moussiades, 2020; Daghamin & Daghamin, 2025) <sup>[2, 10]</sup>.

## Methodology

### Research Design

This paper aims to understand the role of chatbots in improving students' language competence skills at an international educational institution. Building on this, the researcher believes that the qualitative research method fits to achieve the goals of this research. Previous work completed by AbuHamda *et al* (2021, p.71) <sup>[1]</sup> stated, "Qualitative and quantitative research methods are the engine behind evidence-outcome research." Additionally, based on our aims, we believe that a case study would be suitable for

giving enough attention to a small group; thus, our results would be a starting point for other research. Additionally, this paper builds on what was previously concluded regarding using chatbots in the classroom. Annamalai *et al* (2023) <sup>[4]</sup> used the Self-Determination Theory to investigate the motivation concept of students in Malaysia. However, other studies mention motivation in chatbot use or apply SDT to language learning in the UAE. Therefore, this study continues what has previously been done in the field to study how chatbots can improve students' language competence in the classroom.

### Participants and the context

We studied students in a General English course at an educational institution in the UAE. Participants are from different countries with different language backgrounds, and English is not their mother tongue. This study was conducted from January to February during the second semester of the educational institution. A total number of 30 participants (13 males and 12 females) were included in the study. These students have basic experience in using technology; thus, they were included in the study. The following table presents an overview of participant demographics for the study "Improving Students' Linguistic Competence through Chatbots," conducted at an educational institution in the UAE.

**Table 1:** Detailed Participant Demographics and Study Context

Category	Details	Examples/Notes
Study Location	Educational institutions in the UAE	Language Learning Centre in Dubai
Course Type	English course	Intermediate level (B1-B2) focusing on all four skills
Time Period	January to February (second semester)	8-week study period with three sessions per week
Total Participants	30 students	Full participation throughout the study period
Gender Distribution	13 males, 12 females*	Total 30 students
Age Range	Young adult to adult learners	Primarily 18-35 years old
Nationality Distribution	Various nationalities	Includes students from the Middle East, South Asia, East Asia, and North Africa
Language Background	Different first languages	Arabic, Urdu, Hindi, Tagalog, Russian
English Proficiency	English is not their mother tongue	Pre-intermediate to intermediate level
Technology Experience	Basic experience in using technology	Familiar with smartphones, basic apps, and internet browsing
Learning Goals	Improving general English skills	For academic purposes, career advancement, and daily communication
Selection Criteria	Basic technology experience is required	Students comfortable with using digital interfaces were selected
Prior Chatbot Experience	Limited to no prior experience with language learning chatbots	Most had used general chatbots (e.g., customer service) but not for language learning
Study Environment	Blended learning approach	Combination of in-class activities and independent chatbot interactions

### Instruments

To achieve the goals of this paper, the researcher believes that semi-structured interviews are the best tool for conducting this study. The interviews were conducted face-to-face and online at the convenience of the participants. This kind of instrument gives the participants the opportunity to speak up about their experience and can help the researcher ask follow-up questions if more information is needed from the participants. Each interview lasted between twenty to thirty minutes. The researcher wrote down the answers and then presented them again to the participants to ensure they agreed with what the researcher wrote down and if they would like to add more information to any point.

The researcher built up the researcher's questions and then sent them to experts in the field for review. These experts suggested a few changes to the questions at this point. The researcher changed the phrasing, deleted some questions, and added others to ensure that these questions could best answer the main study question.

The interview questions are:

- How has using chatbots helped you improve your English? Give examples.
- How could chatbots be made better for language learning?
- Which language skills do chatbots help you with most? (speaking, reading, vocabulary, etc.)

- What problems do you face when using chatbots to learn English?
- How do you change or control your chatbot talks to help you learn better? Give examples.
- How is learning with a chatbot different from regular classroom learning?
- What chatbot features help you learn English best?
- What advice would you give teachers who want to use chatbots in class?

### Data analysis

After collecting the interview answers from 30 students in the General English course at a UAE educational institution, the researcher analyzed what they said about using chatbots for language learning. First, the researcher wrote down all interview answers exactly as the students told them. Then, the researcher read through everything several times to

understand the main ideas. Next, we used ChatGPT to help analyze the interview data. We put our interview texts into ChatGPT and asked it to find common themes. ChatGPT suggested several themes based on what students said. We then compared the themes we found ourselves with the themes suggested by ChatGPT. After this comparison, we decided on three final main themes: "Learning Benefits and Successes," "Implementation Challenges and Limitations," and "Practical Integration Strategies." We selected quotes from different students for each theme to show important points. We made sure to include thoughts from students with different backgrounds and English levels to show many viewpoints.

Table 2 shows the theme development process for the study. The final themes represent a synthesis of both researcher-identified patterns and AI-assisted analysis.

**Table 2:** Comparison of Researcher-Identified Themes and ChatGPT-Generated Themes

Researcher's Initial Themes	ChatGPT-Generated Themes	Final Combined Themes
Benefits of chatbot language practice	Improvement in specific language skills	<b>Learning Benefits and Successes</b>
Enhanced language skill development	Psychological safety in language practice	
Reduced anxiety in language learning	Multimodal learning opportunities	
Multi-format learning experience	Repetition and feedback benefits	
Cultural relevance in language learning	Cultural adaptation in learning content	
Technical limitations	Technical and understanding limitations	<b>Implementation Challenges and Limitations</b>
Lack of human connection	Limited emotional connection	
Artificial interaction experience	Inability to replace human teachers	
Understanding difficulties	Accent and cultural context challenges	
Complexity limitations	Advanced learning limitations	
Motivation challenges	Decreasing engagement over time	
Assessment applications	Effective assessment integration	<b>Practical Integration Strategies</b>
Complementary teaching approach	Blended learning approach	
Flexible learning scheduling	Time management and accessibility	
Cultural adaptation needs	UAE-specific content design	
Personalized learning paths	Adaptive feedback and tracking	

### Ethical Consideration

Before conducting the interview, the researcher gave participants verbal explanations about the study's aims and the purpose of participating. The researcher also told the participants they could withdraw from the study at any point. Also, the educational institution permitted the researcher to conduct the study.

### Findings of the study

#### Learning benefits and successes

The interviews with students showed many good results from using chatbots for English language learning. Students improved all their language skills through their chatbot use. Many students had improved listening skills (Ahmed, Sara, Reem, Mohammed), better speaking (Fatima, Khalid, Aisha, Omar, Layla), better reading (Sara, Yousef, Mohammed, Maryam, Aisha), better writing (Hamad, Noura, Zayed, Hessa, Aisha), and more vocabulary (Fatima, Yousef, Ali, Rashid, Hamad, Noura). These findings agree with what Vázquez-Cano *et al* (2021) [31] found about how chatbots can improve language skills compared to normal teaching methods.

The students explained how chatbots helped them practice speaking better than in the classroom. Layla shared: "Chatbots improve communication skills, especially grammar and writing, because you must wait for your turn to

speak and get corrections in classrooms. You have few chances for one-on-one talks with teachers, but chatbots let us record our speaking." Rashed added, "In UAE schools, we get few chances to have one-on-one talks with teachers, but chatbots let me practice anytime." This benefit of having more practice time supports Kim *et al's* (2022) [20] research showing that chatbots can be good language-learning partners.

The interviews showed how chatbots create a learning place where students can practice without feeling judged. Yousef mentioned there is "no judgment, no feeling embarrassed" when using chatbots, while Layla liked that there is "no negative response when you make errors." This safe environment helped students practice more freely. As Tariq explained, "In my regular English class, I worry about others laughing at my accent, but with the chatbot, I can practice speaking without this fear." This reduced worry matches Costa's (2018) finding that users often see chatbots as friendly helpers rather than just tools.

Students valued how chatbots offer different types of content through text, sound, and pictures. Fatima, Saeed, and Hamad liked the "colourful designs," while Sara mentioned "easy-to-follow text with moving pictures," which created a good learning setting. Sara shared her experience: "The ELSA chatbot helped me get better at speaking by fixing how I say words. For instance, I had trouble saying the word 'Colonel'

correctly, but the chatbot showed me the right way to say it." This way of learning through multiple formats helped students understand and remember information better, supporting Stöhr *et al*'s (2024) <sup>[30]</sup> research on the benefits of chatbot technology in education.

The ability of chatbots to repeat content as many times as needed was very helpful for students. Mohammed explained, "The chatbot never gets tired or annoyed when I make the same mistake many times." Ali mentioned, "There are lots of videos to watch that help train my listening and speaking." Students found the feedback feature to be a "fast and affordable way to get comments on your work" (Hassan), and they said it's "more convenient to take tests and quizzes with chatbots" (Jamal). This matches the findings from Okonkwo and Ade-Ibijola (2021) <sup>[26]</sup> that students with lower English

levels benefit greatly from the patient, repeated practice that chatbots provide.

Students also liked how chatbots adapted to their cultural settings. Maryam noted, "The chatbot respects cultural sensitivities in its examples, which makes learning more comfortable for UAE students." Khaled shared: "The chatbot's ability to explain grammar rules in relation to Arabic language structures helped me understand English patterns more easily. It compared English prepositions to similar concepts in Arabic, which my regular teachers rarely do." This cultural adaptation made learning more relevant and effective for UAE students.

Table 3 summarizes the key learning benefits and successes identified in student interviews about chatbot use for language learning in a UAE educational context.

**Table 3:** Learning Benefits and Successes of Chatbots for Language Learning

Benefit Type	Description	Student Examples	Supporting Research
Improved Language Skills	Students improved in all language areas through chatbot use	• Listening: Ahmed, Sara, Reem, Mohammed • Speaking: Fatima, Khalid, Aisha, Omar, Layla • Reading: Sara, Yousef, Mohammed, Maryam, Aisha • Writing: Hamad, Noura, Zayed, Hessa, Aisha • Vocabulary: Fatima, Yousef, Ali, Rashid, Hamad, Noura	Vázquez-Cano <i>et al</i> (2021) <sup>[31]</sup>
Increased Practice Opportunities	Chatbots provide more chances to practice speaking than in classroom settings	• Layla: "Chatbots let us record our speaking" • Rashed: "Chatbots let me practice anytime"	Kim <i>et al</i> (2022) <sup>[20]</sup>
Judgment-Free Learning Environment	Students can practice without fear of embarrassment.	• Yousef: "No judgment, no feeling embarrassed." • Layla: "No negative response when you make errors." • Tariq: "I can practice speaking without fear of others laughing at my accent"	Costa (2018)
Multi-Format Learning Content	Chatbots provide text, sound, and visual materials	• Fatima, Saeed, Hamad: Liked "colorful designs" • Sara: Appreciated "easy-to-follow text with moving pictures" • Sara: "The ELSA chatbot helped me get better at speaking by fixing how I say words."	Stöhr <i>et al</i> (2024) <sup>[30]</sup>
Unlimited Repetition and Feedback	Chatbots allow repeated practice without frustration.	• Mohammed: "The chatbot never gets tired when I make the same mistake." • Hassan: "Fast and affordable way to get comments." • Jamal: "More convenient to take tests and quizzes with chatbots."	Okonkwo & Ade-Ibijola (2021) <sup>[26]</sup>
Cultural Adaptation	Chatbots provide culturally relevant content	• Maryam: "The chatbot respects cultural sensitivities." • Khaled: "The chatbot's ability to explain grammar rules in relation to Arabic language structures helped me."	Ismail & Aljaber (2025) <sup>[15]</sup>

### Implementation challenges and limitations

Students in our study found several problems when using chatbots for English learning. Many students pointed out that chatbots couldn't understand UAE-specific expressions and cultural contexts. Ahmed explained that "the chatbot could only respond with pre-programmed text." Noura said, "Many Emirati university students might find using chatbots for language learning somewhat tedious over time." This problem matches what Stöhr *et al* (2024) <sup>[30]</sup> found about technical limits being a challenge when using chatbots.

Students felt strongly that chatbots couldn't replace human teachers. Fatima emphasized that "while helpful, chatbots cannot fully replace human teachers" - a view shared by several students (Sara, Ali, Hamad, Noura). Jamal highlighted the mechanical nature of chatbot talks by stating that "the voice sounds artificial without natural intonation. Human teachers in UAE schools know how to maintain engaging conversation flow." This limitation supports the findings of Adamopoulou & Moussiades (2020) <sup>[2]</sup> who stressed the need for human involvement in AI education tools.

Students said that talking with chatbots felt emotionally limited, and they struggled to connect on a personal level.

They couldn't build real relationships since chatbots work on artificial intelligence systems. Several mentioned that chatbot use removes authentic human interaction. Many felt uncomfortable talking with machines because of their programmed responses. Zayed stated, "We're only talking to a computer program and miss the opportunity for authentic conversation practice." Hessa added, "When asking about UAE-specific cultural expressions, the chatbot often couldn't provide appropriate responses."

The interviews revealed technical issues that stopped students from having smooth learning experiences. Some students reported that chatbots sometimes misunderstood their questions or gave wrong information. This problem was worse for students with strong accents. Khalid shared, "Sometimes the chatbot doesn't understand my pronunciation because of my Arabic accent, and this gets frustrating." This finding connects to research by Okonkwo & Ade-Ibijola (2021) <sup>[26]</sup>. The study shows that chatbots have limits in understanding different accents and language variations.

Students also mentioned that chatbots sometimes lacked the depth needed for advanced language learning. While chatbots were good for basic skills, they struggled with complex language tasks. Mohammed explained that "basic questions

and answers work well with chatbots, but deeper discussions are not possible with them. That's why we still need teachers in UAE classrooms to provide more thorough explanations." This limitation reflects the finding from Hong (2023) that chatbots work best when used alongside good teaching methods.

Some students also found it hard to stay motivated with chatbots over time. The initial interest sometimes faded as

they used chatbots longer. Reem noted, "I keep wanting to reach the next level even when it gets harder, but after a few weeks, the exercises started to feel too similar." This challenge speaks to the need for variety and progression in chatbot design to maintain student interest, as shown in research about educational technology motivation.

Table 4 shows the implementation challenges and limitations.

**Table 4:** Implementation Challenges and Limitations of Chatbots for Language Learning

Challenge Type	Description	Student Examples	Supporting Research
Cultural Context Limitations	Chatbots struggle with UAE-specific expressions and cultural contexts	• Ahmed: "The chatbot could only respond with pre-programmed text." • Noura: "Many Emirati university students might find using chatbots for language learning somewhat tedious over time."	Stöhr <i>et al</i> (2024) <sup>[30]</sup> and Guddad (2025) <sup>[12]</sup>
Cannot Replace Human Teachers	Students felt chatbots are helpful but limited compared to human teachers	• Fatima, Sara, Ali, Hamad, Noura: "Chatbots cannot fully replace human teachers" • Jamal: "The voice sounds artificial without natural intonation. Human teachers in UAE schools know how to maintain engaging conversation flow."	Adamopoulou & Moussiades (2020) <sup>[2]</sup>
Limited Emotional Connection	Students couldn't build real relationships with chatbots	• Zayed: "We're only talking to a computer program and miss the opportunity for authentic conversation practice." • Hessa: "When asking about UAE-specific cultural expressions, the chatbot often couldn't provide appropriate responses."	Ismail & Alosli (2025) <sup>[16]</sup>
Technical Understanding Issues	Chatbots sometimes misunderstand questions or give wrong information	• Khalid: "Sometimes the chatbot doesn't understand my pronunciation because of my Arabic accent, and this gets frustrating."	Okonkwo & Ade-Ibijola (2021) <sup>[26]</sup>
Lack of Depth for Advanced Learning	Chatbots were good for basic skills but struggled with complex language tasks.	• Mohammed: "Basic questions and answers work well with chatbots, but deeper discussions are not possible with them. That's why we still need teachers in UAE classrooms."	Hong (2023) <sup>[14]</sup>
Decreasing Motivation Over Time	Initial interest faded as students used chatbots longer	• Reem: "I keep wanting to reach the next level even when it gets harder, but after a few weeks, the exercises started to feel too similar."	Ismail (2025) <sup>[16]</sup>

### Practical integration strategies

Most students stated that chatbots work well for assessment activities. Sara suggested that "teachers should use this tool for giving tests both in classroom settings and as homework assignments." Similarly, Ali believed that "chatbots enhance assessment capabilities and contribute to students' comprehensive understanding of the material." Reem noted that "after completing assessments, students can print results from the applications and submit them to teachers for review." This matches what Mohammed (2025)<sup>[24]</sup> and Essel *et al* (2022) found about chatbots improving student performance on tests.

Students strongly suggested using chatbots alongside traditional teaching, not as a replacement. Mohammed explained that "basic questions and answers work well with chatbots, but deeper discussions aren't possible with them. That's why we still need teachers in UAE classrooms to provide more thorough explanations." Another student recommended that: "learners should use chatbots for practice, but when encountering difficulties, they should seek guidance from their teachers during class time" (Omar). Tariq added, "combining chatbot practice with our Arabic-speaking teachers' explanations helps bridge language gaps that exist in UAE English classrooms." This blended approach supports what AbuHamda *et al* (2021)<sup>[1]</sup> found about using both traditional and technology-based teaching methods.

Hassan suggested, "In Abu Dhabi schools, chatbots could be used during independent study periods while teachers focus on cultural and contextual aspects of language that are specific to Emirati students." Maryam mentioned, "For

university entrance exam preparation, chatbots provide excellent practice, but teachers remain essential for explaining nuances of academic English required at UAE universities." Several students appreciated having chatbots available outside regular class hours. Aisha shared that: "Having the ability to organize study time around family obligations and prayer times makes learning more accessible for UAE students, encouraging us to maximize our learning without time constraints." Hamad added, "During Ramadan, I can adjust my English practice sessions to after iftar when I'm most alert, which traditional classes don't accommodate." Students suggested that chatbots should be designed to better fit UAE culture and language needs. Layla commented that chatbots should include "UAE-specific topics like discussing landmarks or local events, which makes the learning relevant to our daily lives." Jamal mentioned, "I can practice business English conversations related to Dubai's tourism industry, which directly helps with my career goals." The need for culturally relevant content matches what research by M. Liu & Reinders (2024)<sup>[22]</sup> found about the importance of making language learning materials culturally appropriate. Students also highlighted the value of personalized feedback from chatbots. Ahmed explained that with chatbots, "you receive personalized, one-on-one practice whenever it suits your schedule." UAE students appreciated the ability to "track their improvement over time to see their language development" (Khalid). Yousef noted, "When preparing for my IELTS exam in Dubai, I could practice speaking at my own pace and review areas where I needed improvement." This importance of personalized feedback supports Li *et al*'s

(2024) <sup>[21]</sup> research showing that adaptive learning technology helps improve language skills.

Table 5 shows the practical integration strategies for chatbots

in language learning based on student interviews at a UAE educational institution.

**Table 5:** Practical Integration Strategies for Chatbots in Language Learning

Strategy Type	Description	Student Examples	Supporting Research
Assessment Activities	Using chatbots for tests and homework	<ul style="list-style-type: none"> <li>• Sara: "Teachers should use this tool for giving tests both in classroom settings and as homework assignments."</li> <li>• Ali: "Chatbots enhance assessment capabilities and contribute to students' comprehensive understanding."</li> <li>• Reem: "Students can print results from the applications and submit them to teachers for review."</li> </ul>	Essel <i>et al</i> (2022)
Blended Teaching Approach	Using chatbots alongside traditional teaching	<ul style="list-style-type: none"> <li>• Mohammed: "Basic questions and answers work well with chatbots, but deeper discussions aren't possible with them. That's why we still need teachers."</li> <li>• Omar: "Learners should use chatbots for practice, but when encountering difficulties, they should seek guidance from their teachers."</li> <li>• Tariq: "Combining chatbot practice with our Arabic-speaking teachers' explanations helps bridge language gaps."</li> </ul>	AbuHamda <i>et al</i> (2021) <sup>[11]</sup>
Flexible Learning Schedule	Using chatbots outside regular class hours	<ul style="list-style-type: none"> <li>• Hassan: "In Abu Dhabi schools, chatbots could be used during independent study periods."</li> <li>• Maryam: "For university entrance exam preparation, chatbots provide excellent practice."</li> <li>• Aisha: "Having the ability to organize study time around family obligations and prayer times makes learning more accessible."</li> <li>• Hamad: "During Ramadan, I can adjust my English practice sessions to after iftar"</li> </ul>	Zhang <i>et al</i> (2023) <sup>[33]</sup>
UAE Cultural Adaptation	Making chatbots fit UAE culture and needs	<ul style="list-style-type: none"> <li>• Layla: Chatbots should include "UAE-specific topics like discussing landmarks or local events."</li> <li>• Jamal: "I can practice business English conversations related to Dubai's tourism industry."</li> </ul>	Liu & Reinders (2024) <sup>[22]</sup>
Personalized Feedback	Getting individual help from chatbots	<ul style="list-style-type: none"> <li>• Ahmed: "You receive personalized, one-on-one practice whenever it suits your schedule."</li> <li>• Khalid: Students can "track their improvement over time to see their language development."</li> <li>• Yousef: "When preparing for my IELTS exam in Dubai, I could practice speaking at my own pace"</li> </ul>	Li <i>et al</i> (2024) <sup>[21]</sup>

## Discussion

Our study shows that chatbots help students learn English while also having some problems. These findings explored how chatbots can be used well in language teaching, especially in UAE schools. Students said they got better at English skills by using chatbots. They improved their listening, speaking, reading, writing, and vocabulary, which supports what Vázquez-Cano *et al* (2021) <sup>[31]</sup> found about chatbots helping language learning better than just traditional teaching. One big advantage was that students could practice as much as they wanted. Mohammed said, "The chatbot never gets tired or annoyed when I make the same mistake many times." This patient practice helps language learners who need to try many times to learn pronunciation or grammar correctly.

Chatbots do not judge students. It, in fact, creates a safe place for learning that helps students try using English without fear. Yousef said there is "no judgment, no feeling embarrassed" when making mistakes with chatbots. This safety seems to reduce worry and make students want to practice more. Tariq said, "In my regular English class, I worry about others laughing at my accent, but with the chatbot, I can practice speaking without this fear." This shows how chatbots can help with the emotional barriers to language learning. This matches Costa's (2018) finding that users often see chatbots as friendly helpers.

Students liked that they could use chatbots anytime and anywhere, which worked well with UAE culture and weather. Aisha liked "having the ability to organize study time around family obligations and prayer times," while Saeed said that "during hot summer months when going outside is difficult, I can continue improving my English at home." This flexibility supports what Li *et al* (2024) <sup>[21]</sup> found about the need for adaptable learning settings.

However, students also found important limits to chatbot learning. Many said that "chatbots cannot fully replace human teachers" (Fatima, Sara, Ali, Hamad, Noura). Students worried about the mechanical sound of chatbots, with Jamal noting that "the voice sounds artificial without natural intonation." Students felt that chatbots lacked the emotional depth and cultural understanding that human teachers have. This finding agrees with Adamopoulou & Moussiades's (2020) <sup>[2]</sup> research showing the need for human involvement in AI education tools.

Cultural relevance was both a challenge and an opportunity. Students liked when chatbots included "UAE-specific topics like discussing landmarks or local events" (Maryam), but they were frustrated when chatbots "often couldn't provide appropriate responses" to cultural expressions (Hessa). Khaled liked when chatbots could "explain grammar rules in relation to Arabic language structures," suggesting that culturally adapted chatbots might work better. This supports M. Liu & Reinders' (2024) <sup>[22]</sup> and Badah *et al* (2024) <sup>[5]</sup> point about the importance of culturally relevant materials in language learning.

Students strongly suggested using both chatbots and teachers together. Mohammed said that "basic questions and answers work well with chatbots, deeper discussions are not possible," showing the continued need for human teachers. Tariq suggested "combining chatbot practice with our Arabic-speaking teachers' explanations" to help bridge language gaps. This balanced approach where technology helps but doesn't replace human teaching matches AbuHamda *et al*'s (2021) <sup>[11]</sup> findings about using technology well in teaching. Chatbots seemed especially good for tests and quizzes. Sara suggested using chatbots for "giving tests both in classroom settings and as homework assignments," while Reem noted that students could "print results from the applications and

submit them to teachers." Using chatbots for tests could give students more feedback while saving teachers time, supporting Essel *et al's* (2022) research on chatbot assessment benefits.

Students really valued the personal nature of chatbot learning. Ahmed liked getting "personalized, one-on-one practice whenever it suits your schedule," while Yousef liked being able to "practice speaking at my own pace and review areas where I needed improvement." This individual approach helps with the problem of giving personal attention in regular classrooms, especially for skills like pronunciation that need individual feedback.

Technical problems sometimes made learning harder. Khalid said, "Sometimes the chatbot doesn't understand my pronunciation because of my Arabic accent," showing that accent recognition is still a problem for language-learning chatbots. This technical limit connects to Okonkwo & Ade-Ibijola (2021) <sup>[26]</sup> and Karagianakis (2025) <sup>[18]</sup>, who found that chatbots have trouble with different accents.

Our findings suggest that chatbots can help language learning a lot when used as part of a good teaching plan that knows both their strengths and limits. They work best as practice tools that add to human teaching, giving safe places for repetition, personal feedback, and flexible learning times. However, they cannot replace the cultural understanding, emotional connection, and advanced language guidance that human teachers give. As Hassan suggested, chatbots are good for "independent study periods while teachers focus on cultural and contextual aspects of language specific to Emirati students."

### Implications of the study

This study has several practical implications for English language teaching in UAE schools and universities. First, teachers should consider using chatbots as supplementary tools that focus on specific language skills like pronunciation practice, vocabulary building, and basic grammar exercises. The technology can serve as a practice partner outside class hours. UAE educational institutions might develop or select chatbots that include local cultural references and contexts to increase relevance for Emirati students. Second, education leaders should adopt a blended approach rather than seeing chatbots as replacements for human teachers. Our findings showed that chatbots work best for independent practice, assessment, and basic skills development, while teachers provide cultural context, deeper discussions, and emotional support. Proper training for teachers on effective chatbot integration would help maximize benefits while minimizing limitations. For UAE students specifically, chatbots that can adjust to local schedules, including prayer times and Ramadan hours, would better support autonomous learning. Schools might consider creating structured chatbot activities that progressively guide students through language skills while still allowing the flexibility students value in our study.

### Conclusion

This study looked at how chatbots help students develop their language-linguistic competence. The study found that chatbots help build competence by giving students different ways to learn with text, sound, and pictures. They let students practice many times and make mistakes without feeling judged. UAE students liked that they could practice speaking new words without embarrassment. This, in fact, made them more confident in using English. Chatbots were also helpful

because students could learn anytime and anywhere. This worked well with UAE schedules, cultural practices, and weather. Students liked planning their learning around prayer times and family duties and could keep learning during the hot summer months. Additionally, chatbots helped students learn on their own and become more independent in their English studies. However, we found limits in how chatbots support relatedness. Chatbots couldn't give the emotional connection and real talk that human teachers provide. Students said that chatbots should help teachers, not replace them, especially for deeper learning and UAE-specific language needs. The best way seems to be using both, where chatbots handle practice and tests while teachers give cultural understanding, emotional support, and help with hard language points. This research concludes how technology can support mental needs in language learning. We suggest using chatbots as extra tools for UAE schools that include local cultural topics. Future studies could check how chatbot use affects language skills over time and look for ways to make chatbots better at creating feelings of connection, which this study found was missing.

### Limitations

This study had some limits that should be noted. First, we used only 30 students from one educational institution in UAE, so the findings may not apply to all students in different settings. Second, the researcher studied only students' opinions through interviews but did not measure actual language improvement through tests. Third, the students used different chatbots with varying features. Thus, this might affect how they experience English learning. Last, the study ran for only two months, so we could not see the long-term effects of chatbot use on language learning.

### Recommendations

Based on our findings, the researcher recommends the following

- We recommend that UAE schools introduce chatbots as extra English practice tools, not replacements for teachers.
- Teachers should create clear guidelines for how and when to use chatbots. They need to teach students basic skills practice, vocabulary building, and simple conversations.
- Schools should choose chatbots that include UAE-specific content and that respect local cultural values.
- Teacher training programs should include how to blend chatbot activities with classroom teaching.
- Developers should work on making chatbots that understand UAE cultural expressions and local accents.
- Future research should measure actual language improvement from chatbot use through pre-tests and post-tests, study larger groups of students, and look at the long-term effects of using chatbots for English learning in UAE contexts.

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