



Culture, languages and media

Independent Project with Specialization in English Studies and Education

15 Credits, First Cycle

The Influence of Chatbots on English Oral Communication Skills in EFL Learners in upper secondary school

*Påverkan av chatbotar på engelska muntliga
kommunikationsfärdigheter hos EFL-elever i gymnasieskolan*

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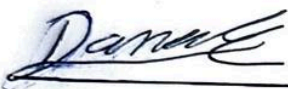
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Abstract

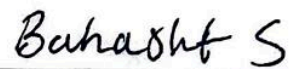
This study investigates the role of artificial intelligence (AI), particularly chatbots, in developing EFL students' oral communication skills in upper secondary schools, focusing on fluency, confidence and conversational ability. With the rising use and status of AI in society, it is important for educators to understand how AI can influence a key component of education: effective spoken communication. The study's purpose is to explore how chatbots influence learners' fluency, confidence, and conversational skills, framed by the Swedish curriculum's focus on digital competence and individualized learning. The primary research question examines how AI-based chatbots can contribute to improving oral communication skills and addresses associated challenges. By reviewing ten existing studies on the use of AI in developing speaking skills, the research provided insights on how the use of AI tools offer immediate and individualised feedback, support skill development, adapted environment for practising spoken English and confidence and lastly real-world conversational scenarios. However, limitations were also identified such as miscommunication between the chatbot and the student.

Declaration of contribution

We collaborated equally to finish this project. We supported and assisted each other throughout the process and made sure that every part was completed. Each of us took responsibility for different parts of the project, but we communicated regularly to ensure coherence and consistency in the final draft.



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1. Introduction

The use of artificial intelligence (AI) in education has gained significant attention in recent years, particularly in the development of language skills among learners. *Artificial intelligence (AI)* refers to computer systems designed to perform tasks that typically require human intelligence, such as learning, problem-solving, and language understanding. In the context of language learning, AI tools like chatbots use natural language processing to simulate human conversation, offering learners the opportunity to practice and engage with language in a dynamic, interactive way. Chatbots are increasingly integrated into educational contexts to facilitate language practice, particularly in informal settings outside of traditional classrooms (Abu Shawar & Atwell, 2007; Chiu et al., 2024). One of the most promising applications of AI in language learning is the use of chatbots, which are increasingly utilized to support students' speaking abilities outside of traditional classroom settings. Language teaching researchers have taken an interest in chatbots due to their ability to engage users in communication using the target language (Kim & Kim, 2023). Chatbot-supported language learning helps students practice language skills in a natural way, such as through daily conversations (Fryer et al., 2017). Chatbots create opportunities for learners to practice English through real-time conversations, providing an accessible and low-pressure space for language learners to enhance their oral communication skills (Kim & Kim, 2023). *Oral communication skills* encompass the ability to effectively express oneself and understand others through spoken language. This includes several components such as pronunciation, fluency, listening comprehension, and the ability to engage in spontaneous conversations. As AI continues to integrate into educational contexts, it is crucial for educators to understand how chatbots specifically contribute to the development of English oral communication skills among English as a Foreign Language (EFL) learners (Fryer et. al, 2019).

In Sweden, English language teaching faces a challenge in helping students achieve proficiency in all areas, including speaking. English as a Foreign language is taught in Swedish schools starting from grade 3. While Sweden is known for its high English proficiency, some upper-secondary students experience challenges with fluency and confidence in both formal and informal English communication (Fälth & Nilsson, 2017). This gap in speaking proficiency becomes increasingly problematic in a globalized world where strong English communication skills are essential (Skolverket, 2011). According to Skolverket's (2011) curriculum, a key mission of upper secondary education is to equip

students with the skills to navigate and respond effectively in an increasingly digital world. Furthermore, it emphasizes that schools are responsible for ensuring students develop digital competence in a digitized society and can use digital tools and media effectively for learning (Skolverket, 2011). This gap in language proficiency is especially problematic given that oral communication skills are a central component of language learning, yet they are often underemphasized in traditional classroom settings (Chiu et al., 2024; Fryer et al., 2019). Building on this perspective, this study explores how AI tools like chatbots can help bridge the gap in speaking proficiency, providing students with new, autonomous opportunities to practice English beyond the traditional classroom setting.

Vygotsky's (1978) sociocultural theory believes that learning happens through social interaction. This means that learners improve their language skills by engaging with others in a supportive environment. In the case of chatbots, they act as tools that support scaffolding, which offers learners a chance to practice speaking without a fear of judgment. This is significant because it highlights how chatbots can create a safe space for students to develop their communication skills independently. According to interactionist theory (Ellis, 1999), learning happens best when students can have real conversations where they can work through misunderstandings and clarify meaning. Chatbots can facilitate this by simulating real conversations that give learners the chance to engage in dialogues and practice fluency, which helps build confidence and speaking ability. Therefore, chatbots not only support language development, but also foster the confidence needed for effective communication in real-world scenarios (Fryer et al., 2017).

Speaking learning involves developing several competences, including linguistic, sociolinguistic, pragmatic, interactive and strategic skills. Linguistic competence emphasizes the accurate and efficient use of grammar, vocabulary, pronunciation, and fluency (Lightbown & Spada, 2013). Sociolinguistic competence is about contributing to meaningful interactions by focusing on appropriate use of language in different social settings through culturally sensitive elements (Canale & Swain, 1980). Further, pragmatic competence is used for a functional communication by using language for specific communication goals such as apologizing (Kasper & Rose, 2002). Interactive competence is about navigating conversations successfully, such as managing turn-taking and maintaining the flow of dialogue (Bygate, 1987). Lastly, strategic competence helps speakers manage gaps in their

knowledge or language use by employing techniques like gestures or paraphrasing (Canale & Swain, 1980). These competencies can help achieve appropriate spoken communication.

While numerous studies have examined the use of AI in language learning, much of the existing research focuses on areas like vocabulary acquisition, grammar, and reading comprehension (Fryer et al., 2017). However, there is a lack of research focusing on how AI tools, such as chatbots, specifically influence oral communication skills (Abu Shawar & Atwell, 2007). Furthermore, AI technology, particularly in the form of chatbots, is still evolving, and the challenges associated with these tools have yet to be fully addressed (Abu Shawar & Atwell, 2007). Lee & Maeng (2023) discuss how these limitations raise important questions about the long-term viability of chatbots as comprehensive tools for supporting spoken English practice, making it necessary for further research to examine how these tools can be optimized for language learners' needs. However, there is insufficient exploration into how these technologies can be specifically leveraged to improve oral communication skills at the upper-secondary level (Lee & Maeng, 2023). This research gap presents an opportunity to explore the impact of chatbots on speaking proficiency and determine how AI can address the challenges of improving learners' fluency and confidence in real-world communication scenarios.

1.1 Aim and research question

The purpose of this study is to investigate the role of AI, particularly chatbots, in supporting the development of English oral communication skills among upper secondary EFL learners. The research aims to examine how chatbots, as AI tools, can influence students' speaking abilities in English by providing interactive experiences. This study is relevant as many students struggle with speaking fluently and confidently in a second or foreign language. Chatbots, as accessible and interactive tools, provide students with a unique opportunity to practice speaking in a low-pressure environment, offering a solution to this gap in language learning. Understanding how chatbots can be effectively integrated into language learning can be important for enhancing student engagement and promoting speaking proficiency.

What role do AI chatbots play in developing English oral communication skills among EFL learners at the upper secondary school level, according to existing research?

2. Method

This study adopts a systematic literature review approach to examine existing research on how the use of AI chatbots contribute to the development of English oral communication skills among EFL learners at the upper secondary school level. The systematic review method was chosen for its capacity to offer a thorough overview of current knowledge, uncover research gaps, and identify recurring patterns in the field. According to Kitchenham and Charters (2007), systematic reviews are highly effective for bringing together dispersed knowledge, uncovering gaps in research, and identifying recurring patterns or trends within a specific field. This aligns closely with our study's purpose of offering actionable insights into the integration of AI tools in language teaching and learning. By bringing together dispersed knowledge from multiple studies, this approach provides a thorough understanding of how AI tools can be effectively integrated into language teaching and learning, offering valuable insights into their potential role in improving English oral communication skills among EFL learners (Kitchenham & Charters, 2007).

Guidelines from Kitchenham & Charters (2007)

A systematic literature review, following the approach outlined by Kitchenham and Charters (2007), follows a structured process to ensure a thorough and transparent analysis of existing research. It begins with defining a clear research question, which helps maintain focus and direction throughout the review. To determine which studies should be included, specific inclusion and exclusion criteria are set based on relevance and study characteristics. A search strategy is then developed, involving the selection of appropriate databases, keywords, and publication timeframes. Once the search has been conducted, retrieved studies are screened by reviewing their titles and abstracts to ensure they align with the established criteria. Relevant data from the selected studies are then extracted and assessed for quality using tools such as the Critical Appraisal Skills Programme (CASP). CASP provides a structured way to evaluate whether a study is trustworthy, well-designed, and relevant to the research question.

Following the data extraction and quality assessment, the findings are synthesized by categorizing studies into thematic groups, comparing results, and identifying gaps in the literature. The final step involves reporting the findings in a structured manner, emphasizing key insights and proposing areas for future research. This systematic approach ensures

transparency and reliability, particularly when examining the role of AI tools, such as chatbots, in language learning.

In this study, the systematic search process followed these principles, identifying relevant studies from various academic databases. In line with Kitchenham and Charters (2007), priority was given to empirical, data-driven studies published in peer-reviewed journals, with a particular focus on research examining how AI supports oral communication skills among secondary-level EFL learners.

2.1 Data collection and search strategy

To gather relevant studies for our research question, we chose databases that provide access to a wide range of peer-reviewed studies and empirical articles relevant to the field of education and language learning. This approach ensured that no significant studies were overlooked. The databases we utilized included ERIC (EBSCO) and Malmö University's Libsearch to ensure that no studies were overlooked. **ERIC**, a widely used database for education-related literature and resources, provides access to over 1.6 million records, including peer-reviewed content. It offers an advanced search function, allowing users to apply filters such as date and publication type. **Malmö University's LibSearch** offers access to scholarly articles and academic resources, also providing filters to narrow the search to peer-reviewed articles. By using these two databases, we ensured that we captured both a wide breadth of studies and the most recent, relevant research on AI tools in language learning.

Search terms and strategies

To begin with, the search terms were carefully selected to reflect the study's focus on oral communication skills, artificial intelligence, and the target learner group. Boolean operators (AND, OR) were employed to refine the search. Examples of the search terms include: English language learning, EFL, oral communication skills, speaking ability, artificial intelligence or chatbots. To make the search more effective we used synonyms to find more relevant sources and ensure that we do not miss any relevant research. Examples of search terms included:

- (english language learners or esl or english as a second language or second language learning) AND (ai or artificial intelligence) OR (chatbot or artificial intelligence or ai) AND (communication skills or speaking skills or oral skills) AND (upper secondary

school or high school or upper secondary education) OR language acquisition

- AI or chatbot or chat gpt AND upper secondary or high school or secondary school or 10 grade or 11 grade or 12 grade AND ESL or english for second language or EFL
- language learning AND chatbots AND communication AND ESL

See appendix for search scheme.

We found that using fewer search terms that were more specific to our research field provided us with more relevant sources for our project. Terms like *AI chatbot* OR *ChatGPT* OR *Chatbot* AND *ESL* OR *EFL* AND *Speaking*, helped narrow our search even more. Another strategy we used to identify valuable sources was analyzing the keywords from other relevant studies. By drawing inspiration from these terms and incorporating similar ones, we were able to discover additional relevant resources for our research.

To refine our search and find the most relevant sources for our research, we started with initial searches that returned over a thousand results, making it difficult to pinpoint useful studies. To narrow down the results, we adjusted our search terms by adding synonyms and applying filters for peer-reviewed articles. For example, we replaced the term "English language learning" with "ESL AND language learning," which helped us focus on more relevant studies. We also combined specific keywords such as "chatbots," "communication," and "ESL" to make our search more targeted. This approach allowed us to identify sources that were both specific to our research question and relevant to the field of language learning.

2.2 Inclusion and exclusion criteria

To ensure the relevance of included studies in our systematic literature review, we established clear inclusion and exclusion criteria. The inclusion criteria focused on peer-reviewed studies that explored the use of AI, particularly chatbots, in developing oral communication skills among EFL learners. The studies published between 2014-2024 were considered, as it captures the recent advancements in AI technology relevant to language education.

Additionally, the studies needed to emphasize oral communication skills as this is crucial for our research.

Some exclusion criteria were applied. Articles that focused on reading, writing and listening were exempted because they were not relevant to our research. Non-empirical studies, such as opinion pieces or theoretical articles, were excluded in favor of studies with data-driven findings. In addition, research published in other languages than English was not included, as this would have made it difficult for us to interpret and analyse accurately. These criteria ensured that the studies selected were directly relevant to answering our research question.

2.3 Overview of selected studies

| Author Year Title Journal Database | Aim/RQs | Method Data Collection Selection Participants Material Country | Main results |
|--|--|--|--|
| Chiu, T. K. F., Moorhouse, B. L., Chai, C. S., & Ismailov, M. 2024 Teacher support and student motivation to learn with artificial intelligence (AI) based chatbots Interactive Learning Environments Taylor & Francis | To explore the relationship between teacher support, AI chatbot usage, and student motivation | Mixed methods Combination of surveys, interviews and focus groups Purposive sampling EFL learners, teachers AI-based chatbot use in EFL learning environments China, Hong Kong | Teacher support boosted students' motivation to use AI chatbots, with significant improvements in language learning engagement. |
| Fryer, L. K., Nakao, K., & Thompson, A. 2017 Chatbot learning partners: Connecting learning experiences, interest, and competence | To investigate how chatbots can connect learning experiences, interest, and competence in language learning | Mixed-methods Surveys, interviews Purposive sampling ESL learners Chatbot learning partners for | Chatbots enhanced students' learning experiences by boosting interest and competence in language tasks. |

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|--|---|---|--|
| Computers in Human Behavior Elsevier | | language learning Australia | |
| Fryer, L. K., Thompson, A., & Nakao, K. 2019 Using chatbots for language learning: Enhancing EFL learner engagement and confidence Journal of Educational Technology & Society JSTOR | Investigate the role of chatbots in enhancing EFL learner engagement and confidence | Quantitative method Surveys and questionnaires Convenience sampling EFL learners (students) Chatbot-based language learning activities Australia | Chatbots increased learner engagement and confidence, suggesting potential for supporting EFL learning through interactive practice. |
| Huang, H., Wu, Z., Chen, X., & Tian, W. 2021 Chatbots for language learning—Are they really useful? A systematic review of chatbots in education Computer-Assisted Learning Elsevier | To evaluate the effectiveness of chatbots in language learning | Systematic review Literature review Studies focused on chatbots in education Various Chatbot tools in language education Global | Chatbots were found to offer mixed results; while useful for some, challenges in engagement and content variety remained. |
| Mayormente, M., Subhashini, R., Marvin, D., Christy, L. J., & Rengarajan, M. | To develop and assess a multilingual chatbot aimed at enhancing interactive English language learning | Experimental study System performance metrics, user feedback | The chatbot achieved 98.3% accuracy in intent recognition using Support Vector Machines, |

| | | | |
|--|---|--|---|
| <p>2024</p> <p>Design and Evaluation of a Multilingual Chatbot for Interactive English Language Learning</p> <p>2024 International Conference on Data Science and Network Security (ICDSNS)</p> <p>IEEE Xplore</p> | | <p>Purposive sampling</p> <p>ESL learners</p> <p>Multilingual chatbot for language learning</p> <p>Not Specified</p> | <p>effectively adapting to users' proficiency levels and languages, thereby enhancing the language learning experience.</p> |
| <p>Üstünbaş, Ü.</p> <p>2024</p> <p>Hey, GPT, can we have a chat? A case study on EFL learners' AI speaking practice</p> <p>International Journal of Modern Education Studies</p> <p>Academic database</p> | <p>Examine how AI-based chatbots support EFL learners' speaking practice and engagement</p> | <p>Case study</p> <p>Interviews and observations</p> <p>Purposive sampling</p> <p>EFL learners</p> <p>GPT-based chatbot and conversation practices</p> <p>Turkey</p> | <p>EFL learners found the AI chatbot helpful in practicing speaking, with some expressing increased motivation and speaking confidence.</p> |
| <p>Wu, Z., Huang, L., & Chen, Y.</p> <p>2023</p> <p>The design and evaluation of a digital learning-based English chatbot as an online self-learning method</p> <p>Educational Technology Advances</p> | <p>To explore how a chatbot facilitates self-learning and English practice</p> | <p>Experimental study</p> <p>Pre- and post-tests, surveys</p> <p>Convenience sampling</p> <p>EFL learners</p> <p>Digital English learning chatbot</p> <p>China</p> | <p>The chatbot improved learner's language skills and self-learning behaviors, highlighting its effectiveness as a self-study tool.</p> |

| | | | |
|--|---|---|---|
| SpringerLink | | | |
| <p>Yang, Y. F., Hsieh, W. M., Wong, W. K., Hong, Y. C., & Lai, S. C.</p> <p>2022</p> <p>Reducing students' foreign language anxiety to improve English vocabulary learning in an online simulation game</p> <p>Computer Assisted Language Learning</p> <p>Taylor & Francis</p> | <p>To examine the impact of reducing foreign language anxiety through online simulation games</p> | <p>Mixed-methods</p> <p>Surveys, interviews and gameplay observation</p> <p>Purposive sampling</p> <p>ESL learners</p> <p>Online simulation game for vocabulary practice</p> <p>Taiwan</p> | <p>Reducing foreign language anxiety led to significant improvement in vocabulary acquisition and student engagement during gameplay.</p> |
| <p>Young, J. C., & Shishido, M.</p> <p>2023</p> <p>Investigating OpenAI's ChatGPT potentials in generating chatbot's dialogue for English as a foreign language learning</p> <p>Journal of Language and Education Technology</p> | <p>To investigate ChatGPT's potential in generating relevant dialogue for EFL learners</p> | <p>Experimental study</p> <p>Pre- and post-tests, data analysis</p> <p>Purposive sampling</p> <p>EFL learners</p> <p>ChatGPT-generated dialogue and activities for language practice</p> <p>Japan</p> | <p>ChatGPT was effective in generating useful dialogue, enhancing learners' language practice and fluency.</p> |

2.4 Analysis method

The data from the selected studies were analyzed using thematic analysis, a method commonly used for identifying patterns and themes in qualitative data. This approach involves reviewing the data to identify significant categories and grouping them into broader themes that help answer the research question (Braun & Clarke, 2006). While Kitchenham and Charters (2007) provide guidelines for conducting systematic literature reviews, thematic

analysis offers a structured way to synthesize findings across multiple studies, allowing for effective organization of key insights. Thematic analysis is a qualitative method that involves identifying, analyzing, and interpreting patterns or themes within data, providing a detailed understanding of recurring trends (Braun & Clarke, 2006). By focusing on commonalities and differences in the studies, thematic analysis helps reveal overarching trends and offers a comprehensive understanding of how chatbots influence the development of oral communication skills among EFL learners.

3. Results

This study investigates the role of artificial intelligence (AI), particularly chatbots, in supporting the development of English oral communication skills among EFL learners at the upper secondary school level. Specifically, it aims to understand how chatbots contribute to fluency, confidence, and conversational ability, as well as to identify potential challenges associated with their use. The results of the analysis are presented according to three major themes that emerged from the reviewed studies:

1. Chatbots as tools for practicing spoken English
2. Impact of chatbots on learner motivation and confidence
3. Challenges and limitations of chatbots in oral communication practice

3.1 Chatbots as tools for practicing spoken English

Realistic practice scenarios

Several studies highlight how chatbots provide opportunities for EFL learners to practice English in interactive, real-world scenarios. For example, Huang et al. (2021) and Chiu et al. (2024) found that chatbots simulate authentic conversations, such as ordering food, booking hotels, and engaging in casual dialogues, helping learners improve their fluency and communication strategies. These task-based interactions encourage learners to apply their language skills in realistic and relevant contexts, which can foster fluency and conversational ability. Similarly, studies by Üstünbaş (2024) and Young & Shishido (2023) found that tools like ChatGPT enabled learners to rehearse everyday situations, such as making requests or expressing opinions, in a way that felt natural and contextually relevant.

This idea of contextual practice is further supported by Fryer et al. (2019) and Wu et al. (2023), who highlighted that chatbot features, like guided exercises and spontaneous conversation, help learners engage with English outside the classroom. These findings collectively illustrate the shared conclusion that chatbots can effectively replicate meaningful conversational contexts, providing learners with practical opportunities to improve their oral communication skills (Fryer et al., 2019; Wu et al., 2023).

Personalized feedback and adaptability

Another common emphasis is the value of personalized feedback offered by chatbots. Fryer et al. (2019) and Mayormente et al. (2024) noted that chatbots' ability to provide immediate, tailored responses helps learners identify and correct mistakes in pronunciation and fluency. This adaptability makes the practice sessions more engaging and effective for individual learners (Fryer et al., 2019; Mayormente et al., 2024). Üstünbaş (2024) and Young & Shishido (2023) emphasized that learners appreciated the chatbots' ability to adjust their responses to match varying proficiency levels. This helped create a supportive environment for experimentation without fear of judgment (Üstünbaş 2024; Young & Shishido, 2023).

Fryer et al. (2019) and Young & Shishido (2023) also found that chatbots adjust their interactions according to each learner's proficiency level, offering progressively more challenging tasks and tailored feedback. By providing learners with challenges that match their current abilities, chatbots can help keep students focused and motivated. Fryer et al. (2019) argue that students are more likely to stick with activities that feel achievable but still pushes their limits. This personalized approach supports continuous learning which makes the experience more relevant and rewarding for students (Fryer et al., 2019; Young & Shishido, 2023).

Technological innovation and limitations

The studies also collectively reflect on the strengths and limitations of chatbot technology. Mayormente et al. (2024) demonstrated the advanced capabilities of AI chatbots, including Natural Language Understanding (NLU) and Support Vector Machines (SVM), which enable precise intent recognition and tailored practice. However, other studies, such as those by Huang et al. (2021) and Çakmak (2022), pointed out the challenges of chatbots in handling nuanced or informal speech, leading to occasional communication breakdowns that could disrupt the learning experience.

Overall, these studies suggest that chatbots act as valuable tools for developing oral communication skills in EFL learners. By engaging learners in realistic and context-specific conversations with chatbots that can provide immediate and personalized feedback, we can create an interactive and low-pressure environment for speaking practice.

3.2 Impact of chatbots on learner motivation and confidence

Safe, low-pressure environment

Across the reviewed studies, chatbots were shown to significantly influence learner motivation and confidence in speaking English. Many studies highlight the importance of chatbots in creating a non-judgmental space for language practice, contributing to learner motivation and confidence. For example, Üstünbaş (2024) and El Shazly (2021) found that learners felt less anxiety when interacting with chatbots compared to peers, allowing them to focus on improving their speaking skills. Chiu et al. (2024) and Huang et al. (2021) emphasized the role of chatbots in creating a low-pressure environment, which reduces performance anxiety and encourages learners to practice speaking without fear of judgment. This is beneficial for students who are hesitant to participate in traditional classroom settings. Chatbots offer a supportive space where learners feel comfortable making mistakes and experimenting with language, which helps them become more willing to engage in speaking tasks (Üstünbaş, 2024; El Shazly, 2021).

However, while this safe space supports language development, El Shazly (2021) cautioned that some learners still experienced anxiety when the chatbot misunderstood inputs, underscoring the need for better design and conversational fluency in AI tools. This supports findings from Mayormonte et al (2024) and Young & Shishido (2023), that showed how chatbots create a low-pressure, personalized space for students to build fluency and confidence in speaking English.

Scaffolding and confidence building

Learners' confidence was further supported by the adaptability of chatbots. Fryer et al. (2019) and Young & Shishido (2023) found that chatbots tailor their responses to match each learner's proficiency level, offering progressively challenging tasks that promote skill development without overwhelming students. Üstünbaş (2024) observed that learners

appreciated this scaffolding approach, as it allowed them to build confidence gradually. Similarly, El Shazly (2021) reported that role-playing with chatbots helped learners gain confidence in realistic scenarios, though some participants noted lingering anxiety during interactions with AI tools. In addition to this, students have reported that their interest in language learning has increased due to growing confidence in using English, which resulted from the use of chatbots (Yang et al., 2022).

Encouraging engagement and risk-taking

These findings indicate that chatbots foster a sense of autonomy and motivation by providing learners with opportunities to practice at their own pace. As Yang et al. (2022) observed, increased confidence often leads to greater engagement and willingness to take risks with language use, which is essential for developing fluency. Yang et al. (2022) also reported that 11.1% of students perceived an improvement in their English-speaking skills through the use of a chatbot. Students generally experienced that chatbots contributed to enhancing their speaking abilities. For instance, one student stated that they learned new expressions from the chatbot. The combination of a low-pressure environment and personalized feedback creates an atmosphere conducive to building both competence and confidence in oral communication (Yang et al., 2022).

These findings suggest that chatbots can play a pivotal role in boosting learners' motivation and confidence. By providing a supportive and personalized space to practice, they help remove the fear of making mistakes, allowing students to speak more freely. Chatbots encourage learners to take risks with the language and develop a sense of autonomy, which is crucial for building confidence in speaking. This creates an environment where learners feel more comfortable practicing English, which is essential for gaining fluency and confidence in real-world communication.

3.3 Challenges and limitations of chatbots in oral communication practice

Complex language input

Despite the clear benefits, several studies also highlight the challenges and limitations of using chatbots to improve language skills. Huang et al. (2021) Wu et al. (2023) and Young & Shishido (2023), noted that chatbots often struggle to handle complex or unclear inputs. In other words, chatbots can have difficulties understanding more nuanced speech, such as

informal language or pronunciations, which can lead to communication breakdowns. This issue is more noticeable for more advanced learners, who may expect the chatbot to respond with more sophisticated and dynamic interactions. For example, Wu et al. (2023) found that learners faced challenges when using non-standard pronunciations or informal language, which made it difficult for the system to provide accurate feedback. Additionally, learners sometimes received irrelevant responses from chatbots, disrupting the flow of conversations and causing frustration, particularly when they expected realistic and fluent interactions (Huang et al., 2021; Wu et al., 2023; Young & Shishido, 2023).

Irrelevant or unclear responses

In Üstünbaş's (2024) study, learners also reported some challenges with ChatGPT. Some participants encountered difficulties when the chatbot misunderstood prompts or provided long responses that were hard to follow. One participant mentioned how the chatbot occasionally gave answers that did not align with their intended topic, which disrupted the flow of the conversation (Üstünbaş, 2024). Similarly, in El Shazly's (2021) research, students reported that while the chatbot offered a structured environment for practicing oral communication, it sometimes failed to interpret unclear or incomplete utterances, causing frustration. Learners felt that this limited the chatbot's ability to effectively respond to more nuanced conversational needs (El Shazly, 2021). Likewise, Young & Shishido (2023) identified similar issues, noting that learners sometimes struggled to express their thoughts clearly, and the chatbot would respond in ways that were not helpful or relevant to their needs (Young & Shishido, 2023). Çakmak (2022) highlighted similar limitations with the chatbot Replika, particularly in its inability to fully comprehend nuanced inputs or manage unexpected conversational shifts. Participants in Çakmak's study reported increased speaking anxiety due to communication breakdowns with the chatbot, which often failed to provide meaningful responses to unclear or incomplete utterances. Similarly, Yang et al. (2022) reported that students faced difficulties using chatbots due to their inability to fully comprehend students' utterances. Learners also struggled with the chatbot's speech, which was sometimes too fast or lengthy, and found some of its expressions difficult to understand.

Need for teacher support

Another recurring challenge is the reliance on teacher support for novice learners. Chiu et al. (2024) emphasized that novice learners often need guidance to navigate chatbot interactions effectively. While chatbots are useful for providing regular speaking practice, they may not

be sufficient in supporting beginner learners without teacher guidance, and some learners continue to experience anxiety when chatbot misinterprets their inputs. This suggests that while chatbots can be beneficial for fostering fluency and confidence, they cannot entirely replace the role of a teacher, especially for students who are still developing basic language skills (Chiu et al. 2024).

To summarize, chatbots are effective for enhancing English communication skills. However, findings reveal that using chatbots can lead to challenges in understanding complex, informal language and non-standard pronunciation. These challenges can lead to communication breakdowns, particularly for learners who expect more realistic interactions. Additionally, chatbots may provide irrelevant or unclear responses, which can frustrate and discourage learners. Despite chatbots being an effective tool, they cannot replace the guidance and nuanced understanding provided by teachers, especially for novice learners.

4. Discussion

This study investigates the role of chatbots in supporting the development of English oral communication skills among EFL learners. The primary research questions were focused on understanding how chatbots contribute to learners' fluency, confidence and conversational abilities, as well as identifying the challenges associated with their use. Through a systematic review of studies, the aim of this study was to provide insight to the effect of chatbots on enhancing spoken English skills, especially in the context of the Swedish EFL classroom. The findings will be discussed in relation to language acquisition theories, examining how chatbots align with communicative and constructivist approaches to language learning, while also exploring their integration within the Swedish EFL curriculum and the potential for enhancing technological tools in the classroom to support language development.

Chatbots for developing fluency

Chatbots help improve fluency in EFL learners by offering interactive language practice in a low-pressure, supportive environment. This supports Vygotsky's (1978) sociocultural theory that learning happens through interaction. To explore how chatbots contribute to learners' fluency, it is important to consider the ways they provide interactive practice in a low-pressure environment, as shown in studies by Chiu et al. (2024) and Huang et al. (2021).

Chiu et al. (2024) and Huang et al. (2021) demonstrate that chatbots create opportunities for learners to engage in real-world conversational tasks such as role-playing, asking for directions, or discussing daily activities. These task-based interactions allow learners to use the language in practical and context-specific situations, which is essential for developing fluency (Chiu et al., 2024; Huang et al., 2021). Additionally, Üstünbaş (2024) emphasizes that learners can engage in dialogues with chatbots that mimic everyday situations, helping them get comfortable with common phrases and language structures. This repeated practice helps them speak more naturally and fluidly (Üstünbaş 2024).

This approach aligns with Skolverket's (2011) emphasis on developing both linguistic and digital competence in upper secondary education. By integrating chatbots, a digital tool, into learning, this method directly supports Skolverket's goal of fostering spoken language proficiency. Chatbots provide a low-pressure environment where learners can practice speaking in realistic, task-based scenarios (as demonstrated by Chiu et al., 2024; Huang et al., 2021), effectively addressing the gap in speaking fluency and confidence among Swedish students. Moreover, chatbots help learners navigate real-world communicative situations, which is in line with the curriculum's focus on preparing students for effective communication in an increasingly digital and globalized society. This connection between the curriculum and technological integration underscores how chatbots can contribute to achieving the educational objectives outlined by Skolverket (2011), while simultaneously enhancing learners' fluency and confidence outside traditional classroom settings.

Enhancing confidence

As findings reveal, chatbots can play a key role in boosting learners' confidence by offering a safe, non-judgmental space for practicing English, which is especially helpful for tackling performance anxiety. As mentioned, students in Sweden struggle with fluency and confidence in both formal and informal English communication. Skolverket (2011) notes that the gap in speaking proficiency is becoming an increasing issue in today's globalized world. While chatbots help improve fluency through interactive practice, they also provide a solution to this problem by creating a stress-free environment where learners can practice without worrying about making mistakes in front of others. Research from Chiu et al. (2024) and Huang et al. (2021) highlights how this private space allows learners to practice at their own pace, which gradually builds their confidence for real-life conversations.

This approach directly aligns with Skolverket's (2011) goal of creating an inclusive and supportive learning environment where students feel encouraged to take risks in communication. In traditional classrooms, speaking in front of peers can make students anxious, but chatbots offer a way to practice freely, which is essential for language development. By giving learners a chance to practice without fear of judgment, chatbots help build confidence and ultimately improve fluency and conversational skills.

Personalized feedback

In addition to creating a safe space for practice, Fryer et al. (2019) and Young & Shishido (2023) found that chatbots can provide valuable personalized feedback based on learner response. This can help students identify areas of improvement and guide their progress at their own pace, which helps improve fluency and accuracy. This goes in line with Skolverket's focus on individualized education (2011). By students receiving individualized feedback they can focus more on their own development, in contrast to receiving limited and collective feedback from teachers in a classroom setting. Teachers cannot always provide individualized feedback due to limited time frames. The Swedish curriculum's focus on each student's learning needs is an important topic for all teachers. Teacher feedback in combination with the feedback that students receive from chatbots can help foster language learning (Chiu et al., 2024).

Scaffolding and motivation

According to Üstünbaş (2024) and Chiu et al. (2024), chatbots provide personalized feedback and adjust the difficulty of tasks based on the proficiency level. This feature was appreciated by learners because the chatbot offered them tasks that challenged them just enough to promote growth without overwhelming them. This is a scaffolding approach which is essential for building confidence. As seen in studies by Üstünbaş (2024) and Young & Shishido (2023), this personalized feedback fosters a sense of achievement, which motivates learners to continue practicing and building their skills. With this kind of supportive interaction from the chatbots, as well as guidance from the teacher, learners can gain the confidence they need to participate more actively in both the classroom and real-life English conversations.

Researchers have highlighted that chatbots offer personalized learning experiences and immediate feedback, which are key for language development. By adjusting to each learner's

level, chatbots create tailored learning paths, allowing students to progress at their own pace and focus on areas where they need improvement. This instant feedback reinforces correct language usage and helps address mistakes right away. Studies by Chiu et al. (2024) and Huang et al. (2021) show how this approach fosters growth in a controlled environment. This connects with Skolverket's (2011) emphasis on personalized learning and the use of digital tools. Vygotsky's (1978) sociocultural theory and Ellis' (1999) interactionist theory highlight the value of social interaction and real conversations in learning. By simulating real-world interactions, chatbots support scaffolding and provide space for learners to practice, ultimately boosting both fluency and confidence in communication.

Chatbots in the Swedish EFL curriculum

Moreover, the Swedish syllabus for English encourages students to actively engage in conversation and practice dynamic language skills (Skolverket, 2022). Chatbots can serve as an effective tool for providing additional speaking practice outside of the classroom, particularly for students who may not have the opportunity to practice English outside the classroom. Research by Chiu et al. (2024) and Wu et al. (2023) highlights how chatbots offer learners the flexibility to engage in realistic, context-based conversations at their own pace. This allows students to practice English speaking skills independently in a low-pressure environment. For example, Üstünbaş (2024) found that students could use ChatGPT to practice common situations like making requests or asking for opinions, which helped them feel more confident in real-life conversations. This makes learners more comfortable in conversations. Real-time practicing not only helps improve fluency, it also prepares the students for everyday conversations.

For example, studies like Üstünbaş (2024) and Young & Shishido (2023) emphasize that chatbots allow students to practice speaking with anxiety often associated with traditional classroom settings. By simulating real-world scenarios like asking for directions or engaging in casual dialogue, chatbots create opportunities for learners to improve their communication strategies which is in line with the curriculum's aim to prepare students for practical language usage in everyday situations (Skolverket, 2022). This flexible practice is valuable for students in Sweden, where students are encouraged to take an active role in their language development. This makes chatbots an essential resource for reinforcing English oral communication skills outside the classroom.

Limitations of chatbots

While chatbots serve as an effective tool, they cannot fully replace the social interaction and peer collaboration that the curriculum suggests. For example, Chiu et al. (2024) observed that chatbot interactions encouraged task-based language practice, such as role-playing and answering situational questions. However, these tasks cannot fully replicate the dynamic, real-time exchanges that occur in face to face peer interactions. Chatbot tasks cannot replicate the nuanced feedback that comes from teacher-student interactions either. Therefore, chatbots should be viewed as tools, not replacements for teacher-student or student-student interaction. This is consistent with the findings of Üstünbaş (2024), who notes that while chatbots offer valuable speaking practice, learners still gain a lot more from the guidance and engagement provided by teachers and peers.

Even though chatbots are beneficial for individualized practice, they cannot provide the depth of understanding that a teacher can offer. Chiu et al. (2024) stresses the important role teachers play in guiding learners through complex language tasks. More advanced learners expect to engage in more sophisticated conversations, which chatbots can not offer (Chiu et al. 2024). Chatbots should complement and not replace teacher involvement. This supports the curriculum's focus on the teacher's central role in guiding the students' language development (Skolverket, 2011). In the Swedish upper-secondary context, these findings are relevant because the curriculum emphasizes fostering students' digital competence and promoting independent learning through technology. While chatbots align with these goals by providing self-paced and individualized practice, they lack the ability to address culturally nuanced language use and engage in sophisticated conversations, making teacher support essential. Teachers play a critical role in bridging this gap, ensuring chatbot-based learning integrates seamlessly with the broader educational objectives outlined by Skolverket (2011), particularly the focus on preparing students for real-world communication in an increasingly digitalized society.

5. Conclusion

This study explored the role of chatbots in supporting the development of English oral communication skills among EFL learners. The study was primarily conducted to determine whether chatbots are useful for improving learners' fluency, confidence, and conversational skills. The study also focused on identifying possible limitations and challenges linked with the use of chatbots as a tool in language learning. The findings reveal several key insights into the potential of chatbots as a means for practicing spoken English. Chatbots provide an interactive, low-pressure environment for language practice as well as promoting fluency and confidence through personalized feedback based on individual proficiency levels. Further, these tools imitate real-world conversational scenarios, giving learners the freedom and flexibility to practice outside the classroom. Additionally, the supportive, non-judgmental environment created by chatbots encourages learners to experiment with language which can gradually build their confidence in speaking tasks.

Nonetheless, chatbots are not flawless. Their difficulty in handling advanced inputs, informal language, and deviant pronunciation can lead to communication breakdowns and learner frustration. Furthermore, chatbots lack the ability to replicate the depth and spontaneity of human interaction, which again emphasizes their role as a complementary tool in language education. These findings carry important implications for teaching. Chatbots integrated into EFL classrooms can be a supplement to traditional teaching methods, providing opportunities for personalized and independent practice, addressing gaps in speaking fluency and confidence. However, their use should be paired with teacher guidance to navigate challenges and ensure that learners benefit fully from the technology.

While this study contributes to the growing understanding of AI in education, it is based on a review of existing research. Future studies could investigate the integration of chatbots in classroom settings to examine their long-term impact on speaking skills. A practical next step for empirical research could be to design and implement a study that tests the use of chatbots in Swedish upper secondary EFL classrooms.. This research could focus on measuring improvements in fluency and confidence and also evaluating learners' perceptions of the tool. Moreover, a study like this could examine how teacher intervention can enhance chatbot-based learning. Such a study would bring real-life insights into how to optimize chatbot use and bridge the gap between theoretical findings and classroom application.

By addressing these areas, future research can expand on the current findings, providing actionable recommendations for teachers and policymakers looking to leverage AI tools effectively in language education.

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7. Appendix

7.1 Table of searches

| Date | Database | Search words | Limitations (year, peer-review ...) | Number of hits | Selected articles (based on relevance to RQ) |
|-------------|------------------|---|--|-----------------------|---|
| 2024-12-04 | MAU Libsearch | AI AND education | Peer review 2014-2024 | 56525 | 0 |
| 2024-12-04 | MAU Libsearch | ((ai or artificial intelligence) AND (ESL or EFL) | Peer review 2014-2024 | 693 | 1 |
| 2024-12-04 | MAU Libsearch | (english language learners or | Peer review 2014-2024 | 145 | 0 |

| | | | | | |
|------------|----------------|--|---------------|---|---|
| | | esl or english as a second language or second language learning) AND (ai or artificial intelligence) OR (chatbot or artificial intelligence or ai) AND (communicat ion skills or speaking skills or oral skills) AND (upper secondary school or high school or upper secondary education) OR language acquisiton | | | |
| 2024-12-04 | ERIC via EBCSO | AI or chatbot or chatgpt AND upper secondary or | peer reviewed | 2 | 2 |

| | | | | | |
|------------|---------------|---|-------------------------|--------|---|
| | | high school or secondary school or 10 grade or 11 grade or 12 grade AND ESL or english for second language or EFL | | | |
| 2024-12-04 | MAU Libsearch | language learning AND chatbots AND communication AND ESL | Peer reviewed 2014-2024 | 49 | 6 |
| 2024-12-24 | MAU Libsearch | chatbots AND speaking AND ESL OR EFL | peer reviewed 2014-2024 | 107631 | 2 |
| 2024-12-24 | MAU Libsearch | chatbots AND oral skills AND ESL OR EFL AND upper secondary | peer reviewed 2014-2024 | 475 | 3 |

