AI Chatbots for Language Practices

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ABSTRACT

In recent years, the possibility of enhancing speaking skills has drawn some serious attention from the language education field as AI-powered tools such as chatbots—such as ChatGPT—gain in popularity. While questions remain about their long-term efficacy, their potential to deliver real-time feedback is especially important in non-Western countries like Vietnam. This paper explores AI avatars' potential for overcoming traditional language learning issues—apprehension, inadequate speaking practice, and low levels of quality feedback customization. This research study focuses on the potential of artificial intelligence tools for language learners and the challenges in making meaningful, authentic conversational interactions with cultural adaptability and scalability through deep analysis of existing research and real-world applications. In light of this, the paper emphasizes that more research must be conducted to improve the use of AI avatars within varied educational settings and enhance their impact on oral communication abilities.

Keywords: AI, ChatGPT, Chatbot, AI powered-Chatbot

Background of Study

Artificial intelligence (AI) technology and chatbots have recently garnered significant attention in the field of language training, primarily because of their shown capacity to enhance students' English-speaking abilities. Explorations of sophisticated natural language processing (NLP) methods have generated debates among educators and scholars on the potential of technologies like ChatGPT in the field of second language (L2) learning and foreign language (FL) instruction. The students demonstrate the ability to overcome the common challenges faced in conventional language teaching as the level of complexity in language training grows. Artificial intelligence systems are universally recognized as vital instruments for enabling speaking practice, potentially helping students overcome these challenges. The present part analyses the existing obstacles associated with the development of verbal abilities and the possible advantages that artificial intelligence tools and chatbots may provide in language instruction and their prospective uses in language education.

Speaking skills are the primary form of communication in everyday life, so they are a basic component of language skills. Usually, for L2 students, one of the biggest obstacles to learning a language is the development of solid speaking abilities. A lack of rapid feedback, fear, and

little practice chances are several elements causing this challenge. As Hong (2021a) notes, conventional classrooms may prioritize reading and writing over speaking, leaving students with poorer oral skills. Furthermore, in exam-oriented educational systems, students frequently participate in artificial language activities that differ from real-world interactions, restricting their capacity to participate in natural conversations (Hong, 2021b; Tesol International Association, 2023).

By allowing students to practice speaking in a low-stress, flexible environment, artificial intelligence chatbots such as ChatGPT provide a means of closing this gap. These resources let students participate in real-time dialogues that reflect actual interactions. This increases their correctness in speaking, fluency, and confidence (Ghafar, 2023). Furthermore, chatbots offer instantaneous feedback—necessary for enhancing pronunciation and general language accuracy—sometimes disregarded in conventional courses (Hong, 2016).

Challenges in Teaching Speaking Skills

Teaching speaking in a foreign language (FL) or second language (L2) setting can be hard. One of the main problems is that students don't always get comments in real-time in regular classrooms. It can be hard for teachers to give personalized comments in long classes, so they might miss chances for students to fix their mistakes and improve their speaking skills (Rudolph et al., 2023). This problem gets worse when students can't talk to native speakers or don't have many chances to do so outside of school (Hong, 2018).

Speaking anxiety, particularly when addressing instructors or peers, is an additional challenge that students frequently encounter. Frequently, this anxiety leads to avoidance, which in turn reduces the amount of time that children spend improving their speaking skills. By allowing students to practice without the worry of making mistakes or feeling ashamed in a secure, nonjudging environment, artificial intelligence chatbots offer a possible answer to this problem (Hong, 2021b). These technologies also let students practice at their speed, which lets them repeat chats and get comments as often as necessary (ChatGPT International, 2023).

AI-powered solutions like chatbots present a creative way to address these issues by giving real-time feedback and helping to reduce speaking anxiety. The next portion will look at how these tools—especially ChatGPT—may assist in solving these problems and fostering the improvement in speaking abilities.

The Role of AI Tools in Enhancing Speaking Skills

AI chatbots in language education have lately become a very useful tool for students overcoming difficulties in acquiring speaking ability. One of the main advantages of these technologies is the way they give students many chances for genuine, daily interactions. As Xu et al. (2023) note, chatbots can replicate many conversational environments, allowing students to practice a broad spectrum of communication skills, including asking questions, seeking clarity, and offering comments. These discussions also cater to the learner's level, so the experience is more individualized and helps develop concentrated skills (Ghafar, 2023).

The instantaneous, tailored comments that artificial intelligence chatbots provide also have great value. Real-time grammar, pronunciation, and word choice corrections assist students in clearly defining areas for development. According to a Tesol International Association (2023), students thought they improved more quickly in speaking when using artificial intelligence technologies than in conventional classroom environments when feedback is sometimes delayed. AI chatbots can also track a student's development and provide customized suggestions for development as they keep on (Hong, 2015).

AI chatbots are especially successful because they can offer individualized learning experiences. These technologies in personalized learning environments (PLEs) fit the student's style and requirement, thus improving the efficiency and enjoyment of learning. Xu et al. (2023) observe that chatbots produce a dynamic interaction sensitive to personal choices, improving the language learning experience.

Potential of Chatbots in Vietnamese Language Education

English is progressively considered in Vietnam as a necessary ability for global communication and economic growth. English education frequently suffers from high-class sizes, inadequate resources, and an exam-oriented strategy emphasizing reading and writing over speaking skills (Le et al., 2022). Artificial intelligence chatbots, therefore, provide a scalable solution that allows students opportunities to engage in genuine English discussions outside the classroom. As Rudolph et al. (2023) point out, chatbots may reduce the workload of teachers by automating chores such as generating debate topics and offering opinions. This lets teachers concentrate on more difficult tasks like running discussions and providing individualized help. By integrating artificial intelligence technologies into English courses, teachers in Vietnam could increase the effectiveness of language training to help students cope with the particular needs of a fast-globalizing world. For example, one of the possible solutions to constant problems related to teaching spoken communication skills is the adoption of artificial intelligence-powered chatbots like ChatGPT. Such technologies create a flexible and low-pressure environment in which students may gain self-confidence, get tailored feedback, and engage in real conversations. With the growth of technology, opportunities for students to achieve the necessary oral competency for success in global societies will open, thereby promoting innovative ways of revolutionizing language training.

Statement of the Problem

This has always impeded teaching and learning how to speak a language, as there is no opportunity for spontaneous oral practice and immediate feedback. The traditional schools miss out on the speaking provision and are more inclined toward writing and grammar, the context being test-oriented for learning. AI-driven chatbots like ChatGPT provide a solution through which students can be allowed to practice speaking in a low-pressure, flexible environment. However, the long-term effectiveness of these techniques in improving proficiency, providing accurate feedback, and reducing learner apprehension is yet to be fully understood. Furthermore, in countries such as Vietnam, the need for further research into the successful integration of artificial intelligence chatbots into these environments is underscored by the amplification of these issues by high-class sizes, limited resources, and an emphasis on reading and writing over-communicating.

Speaking ability has long been regarded as one of the most difficult areas for language learners to improve, as normal schools lack adequate opportunities for oral practice and feedback. Large class numbers and teacher-centered strategies can give grammar and writing top priority above speaking, therefore depriving students of the opportunity to participate in meaningful dialogues (Hong, 2021a). This is a crucial field for research, even if AI-driven systems like ChatGPT have great promise to offer conversational practice. Their efficacy in raising speaking proficiency over the long run is yet unknown (Ghafar, 2023; Rudolph et al., 2023).

Particularly in domains like pronunciation and grammar (Xu et al., 2023), AI technologies may lack the capacity to offer real-time, high-quality feedback catered to individual learners's needs. This discrepancy in feedback is essential since students need rapid modifications if they are to raise their spoken performance. Although chatbots can replicate dialogues, their responses

could include minor mistakes or false information, therefore impeding rather than supporting students' development (Ghafar, 2023; Rudolph et al., 2023). Speaking anxiety is still a recurring problem for students as well; hence, even if chatbots can provide low-stress surroundings, nothing is known about their capacity to really reduce this anxiety (Hong, 2021b).

Given students' added challenges in improving their speaking abilities, the situation in Vietnam is especially troubling. Often stressing reading and writing for exam purposes, the Vietnamese educational system leaves speaking abilities underdeveloped (Le et al., 2022). Large class numbers and limited chances for students to interact with native speakers compound this, therefore aggravating the difficulty of raising oral proficiency (Hong, 2021a). Lack of chances to practice speaking English in realistic, real-world situations renders students unprepared for communication outside of the classroom.

Although AI technologies such as ChatGPT could help with some of these problems, their integration into Vietnamese classrooms has been delayed, mainly due to worries about the technological infrastructure and cost (Le et al., 2022). Furthermore, little study has been done on how Vietnamese students—who are used to teacher-centered, exam-oriented learning environments—reinterpret AI-driven conversational tools. Their successful application depends on an awareness of how these technologies might be properly adjusted to the Vietnamese setting (Rudolph et al., 2023).

By means of real-time feedback, lower speaking anxiety, and enhanced speaking proficiency in L2 learners, this paper seeks to investigate how AI-powered chatbots such as ChatGPT might solve the above-described difficulties. By analyzing present research and pragmatic implementations, we aim to grasp the possibilities of artificial intelligence tools to improve language teaching, especially in Vietnam, where conventional approaches have left speaking skills underdeveloped.

Literature Review

Children's Engagement with AI and AI Literacy

Understanding how children engage with and view AI devices as they become more common can help build successful teaching interventions. Studies on the cognitive consequences of interacting with these technologies, as well as the creative ways young children interact with artificial intelligence, have looked at Samuelsson (2023) looked at preschoolers' interactions with artificial intelligence and robots through play. Young children Using ethnographic techniques, the seven-month study, including 38 Swedish children between the ages of one and five, tracked interactions with a programmed robot (Blue-Bot). The aim was to understand how youngsters include robots in their play and investigate their beliefs about a future with artificial intelligence. Children utilized the robot in a variety of play activities, which encompassed all sixteen of Hughes' play forms. The outcomes of these activities inspired the development of imaginative concepts regarding the future functions of robotics. The study underscores the necessity of incorporating children's perspectives into classroom discussions regarding artificial intelligence.

This study was carried out using mixed methods and aimed to define the dimension of children's perception of artificial intelligence via their usage of intelligent speakers. This paper aimed to answer the question: To what extent are cognitive ability, autonomy, and privacy confinement imposed on voice-based conversational agents among primary school students in Scotland aged 6-11 years? Analysis of the surveys and interviews made for the study revealed that a significant

part of young people lacked emotional and agency clarity, leading to wrong assessments of the IQ of CAs. It was judged inappropriate to despise the CAs; however, a significant part of young people lacked knowledge of privacy rules. For this reason, the study strongly shows that AI literacy is necessary to empower young students to understand and adequately relate to AI.

These findings focus on the necessity of motivating younger students to better understand artificial intelligence. Early AI literacy education is necessary because students are interested in and curious to interact with AI, and their attempts to approach it are evident, whether or not they disclose their misconceptions related to AI's abilities and privacy concerns. More studies are required to investigate how early education courses may be successfully included in AI literacy initiatives to close knowledge gaps.

AI Chatbots in Language Learning

AI chatbots provide real-time feedback and adaptability, which makes them increasingly fascinating tools for enhancing language learning. However, Research shows both their opportunities and challenges in promoting language acquisition. Artificial intelligence chatbots suit Content and Language Integrated Learning (CLIL), which combines foreign language education with cultural material, according to the 2022 Mageira et al. Under Greek guidance, this study comprised 61 high school English and French students. Using "AsasaraBot," a chatbot developed to teach about the Minoan Civilization, the researchers compared chatbot-based learning with conventional ICT-based methods. Although less sure of its effectiveness in language acquisition, the findings revealed that AsasaraBot users were more engaged and improved in acquiring cultural content. The study indicates that although they still need more work for language instruction, artificial intelligence chatbots could be a great addition to teachers.

Emphasizing their use in classroom settings, Haristiani (2019) examined how artificial intelligence chatbots might help with language acquisition. Examining material and data from a Japanese language-learning chatbot, the Gengobot study found that chatbots provide flexible, on-demand learning, help boost student confidence, and give repeated practice for skill development. The paper did, however, also highlight negative aspects, including the poor conversational depth of the chatbot and the novelty impact. Though it improved grammar, Gengobot still needed additional work to increase more general language competency.

Shi et al. (2020) developed and evaluated a language-learning chatbot leveraging transfer learning and explainable artificial intelligence (XAI). Their work at Beijing Normal University involved mixed speech recognition, pronunciation correction, open-ended discussion spanning three language-learning levels, and chatbots with WeChat. Using GPT-2 and ontology graphs, the chatbot presented ordered explanations for its responses, hence augmenting XAI concepts. Results indicated that scalability needed to be improved even if the chatbot was giving customized practice, which was rather effective. The authors commented on how ontology could make the chatbot more transparent.

Tran et al. (2020) developed a study using a customized language acquisition chatbot, nicknamed Developing PLATICA, to address these issues. The chatbot was a senior project from Santa Clara University that used natural language processing and deep learning for instant grammatical corrections in presentations. PLATICA provided language drills, but the assessment indicated a need for further development to give greater relevance and accuracy to the conversations. These reflect some positive reinforcement activities related to artificial intelligence-based chatbots in language learning and new language exploration.

Despite artificial intelligence chatbots' impressive abilities, particularly in grammar and engagement, the drawbacks currently attached to them, such as low emotional connection and depth of conversation, underline the fact that their development has to be continuous. Future

research should thus focus on making chatbots converse better while incorporating more dynamic feedback mechanisms for handling a broader range of linguistic skills.

Benefits, Challenges, and Student Motivation

The use of Artificial Intelligence (AI) technologies, which encompass ChatGPT within higher education, typically elicits both enthusiasm and trepidation. Academic research in this area aims to find the best approaches for deploying AI to solve problems while encouraging academic integrity, skill development, student autonomy, and motivation. Steele's (2023) study pointed out the positives and negatives of applying ChatGPT in academia: assessing students' competencies, verifying the correctness of subject matter, and acknowledging the diminishing significance of traditional knowledge. The study aimed to reveal that AI technology, particularly ChatGPT, can enhance learning outcomes for higher education students by improving their understanding of academic work, ability to internalize it, and adherence to writing conventions. Steele argued that contrary to common belief, artificial intelligence has the potential to aid rather than hinder critical thinking, much like computers in educational settings. The findings confirm that when used appropriately, AI systems enhance learning and optimize accessibility. To mitigate potential risks, educators should emphasize the development of critical thinking skills and the practical application of information in reading lessons.

The study by Habibi et al. (2023) aimed to identify what motivates students to use ChatGPT in education-related settings. The present study, through the theoretical lens of the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), surveyed 1,117 Australian college students to gauge the acceptance and use of ChatGPT. The current quantitative study conducted partial least squares structural equation modeling. A multitude of users used ChatGPT for very specific purposes. However, the findings demonstrated that the level of technical availability was the most crucial factor in predicting the intention to behave in the future. That one's desire to engage in an activity was unaffected by the expectation of work is an intriguing result. According to the authors, a stronger technical basis would facilitate the incorporation of AI into classrooms.

Through Self-Determination Theory (SDT), Annamalai et al. (2023) examined the influence of chatbots on people's desire to learn English. Using a semi-structured interviewing approach, a group of twenty-five college students who were registered in a General English course were questioned to get information about their experiences using platforms like Mondly and Duolingo. Conversational agents have enhanced the acquisition of language proficiency in students while maintaining their independence by providing self-directed, adaptable learning opportunities and prompt language assessments. Furthermore, avatars are less successful in fostering a feeling of connection in the absence of emotional or social interaction. Existing research suggests that including avatars in traditional lectures will be a more efficient approach to meeting students' cognitive and emotional needs.

Hallal et al. (2023) looked into how artificial intelligence apps, like ChatGPT and Bard, could be used to improve the quality of organic chemistry lessons. Testing these robots thoroughly on difficult chemistry jobs, such as chemical symbols, InChI, and SMILES papers was important. The researchers tested both models using specific criteria. Some of the jobs they gave them were to name functional groups accurately and speak IUPAC jargon. In all tests where chemistry formulas and functional groups had to be found, ChatGPT regularly did better than Bard. It was clear, though, that neither image could recognize or understand the structure notations of InChI or SMILES. The writers mentioned that these AI technologies should be improved more before they are widely used in schools.

Artificial intelligence systems have the potential to significantly improve the learning process in higher education, notably in the areas of task mastering and interpreting textual information. However, it is critical to address issues like the collapse of traditional technology, the absence of human relationships, and AI's inherent limits as a universal solution to all problems. To enhance learning outcomes, future research should emphasize enhancing the accuracy and utility of AI tools for educational applications and investigating integration techniques between AI and traditional teaching methodologies.

AI Chatbots and Personalization in Learning

As student engagement and tailored learning are essential elements of modern education, artificial intelligence avatars have been integrated as tools to achieve these goals. Nevertheless, the incorporation of personalization and engagement into chatbot interactions poses a range of difficulties. In 2023, Lin and Chang proposed the CHAT-ACTS framework, which combines active and self-regulated learning (SRL) with individualized interactions facilitated by artificial intelligence. Based on their study, carried out in formal recognized education, chatbots can potentially improve motivation and engagement by investigating three main learning methodologies: self-regulated learning (SRL), active learning, and personalized interaction. Within a literature analysis and theoretical development, instructors are given recommendations on how to effectively employ avatars for the objectives of goal setting, individualized feedback, and the promotion of active learning strategies. The findings indicate that self-regulated learning (SRL) can be enhanced by allowing students to set goals and track their progress throughout the use of avatars. Nevertheless, the authors underscore the importance of a mutually beneficial connection between students and artificial intelligence. Future studies should confirm the validity of this paradigm in a wide range of educational settings.

In order to evaluate the capacity of chatbots to enhance student engagement in fully online courses, Hew et al. (2023) conducted two case studies. The study included 29 graduate students and 38 undergraduate students in their second year who were registered for online modules. Two chatbots were created: a social presence chatbot specifically constructed to enhance participation in English as a Foreign Language (EFL) listening activities in Study 2, and a goal-setting chatbot that utilized the SMART framework in Study 1. Methods of data collection included interviews, questionnaires, and conversation recordings. The findings revealed that students saw both chatbots as both convenient and advantageous. The goal-setting chatbot facilitated the elucidation of targets, while the social presence chatbot alleviated symptoms of isolation. Furthermore, the paper highlights the capacity of chatbots to augment participation in online learning settings.

For example, as Tyen et al. (2022) found, since an open-domain chatbot is trained to maximize the relevance of each response to language learning proficiency, it shows the best results when faced with a potential degree of linguistic difficulty. Word limiting and re-ranking are some of the possible adaptations that can be made to realize this potentiality, as an investigation carried out at the University of Cambridge concluded. Human examiners judged the decorum, sensitivity, and grammatical correctness of the chatbot and self-chats over a range of language competencies, A1 to C2. With re-ranking techniques, the system has significantly increased its capacity to help answer novices' questions in ways sensitive to this heterogeneous population's skill levels—albeit with continued ease. This paper argues that language effectiveness can be improved further by additional changes, including paraphrases and structural changes.

Furthermore, advanced AI chatbots hold enormous promise for individualized learning and engagement, particularly in self-regulated and online learning contexts. But surely, there is still room for further improvement in the interaction experience and the robustness that helps

novices. Future research could focus on the design of supporting a chatbot's abilities to attend to students' specific needs and make personalized feedback meaningful and relevant to improving long-term learning outcomes.

Discussion for further research

The effectiveness of AI technologies in language acquisition will be maximized by addressing numerous deficiencies, particularly in the area of speaking abilities. One of the primary limitations is that the majority of chatbots prioritize text-based communication over the development of vocal language abilities. Although these technologies have the potential to actively engage students in conversations, they typically lack the fundamental components necessary to enhance speaking abilities, such as appropriate pronunciation, fluency, and comprehension at the auditory level. This restriction is essential for students who aspire to enhance their spoken language skills. Mageira et al. (2022) reported that students expressed appreciation for chatbots in the context of cultural content learning; however, they were less optimistic about their potential to facilitate language acquisition. Consequently, in order to enhance the efficacy of speaking practice, chatbots must be equipped with sophisticated features, including pronunciation correction, authentic conversational flow, and speech recognition.

Moreover, the body of current research on the long-lasting impacts of artificial intelligence chatbots, like ChatGPT, on improving oral communication skills in contrast to traditional teaching strategies is quite lacking (Ghafar, 2023; Xu et al., 2023). The current studies have not definitely shown if these methods may significantly raise accuracy, pronunciation, or speaking fluency. Extensive and thorough studies are required to evaluate if AI-driven language practice can match or surpass conventional approaches and their effectiveness.

Another crucial concern is the variability in chatbots' adaptation to different degrees of expertise. According to Fryer and Carpenter (2006), chatbots were shown to be most beneficial for proficient learners but less suitable for beginners. Deciphering grammatical and typographical mistakes is a frequent obstacle for chatbots, especially for inexperienced users. To enable equitable use of these tools by all learners, it is necessary to enhance AI chatbots to offer replies that cater to different degrees of complexity, therefore providing improved help for beginners.

Cultural context management is another area in which current AI language tools are deficient. The design of many AI chatbots in non-Western contexts is constrained by their reliance on Western language and cultural assumptions, which undermines their usefulness. Significantly, the appropriateness of artificial intelligence platforms for Vietnamese learners has not been fully investigated (Rudolph et al., 2023; Le et al., 2022). Research should prioritize the cultural adaptation of chatbots to tailor them to the educational and linguistic requirements of diverse learners, particularly in non-Western settings. Although conversational agents have shown effectiveness in communicating cultural knowledge (Mageira et al., 2022), there is a lack of study on how cultural context is integrated into real speaking behavior. Such integration is crucial for learners to develop proficient communication abilities in many cultural settings.

Speaking anxiety is another topic that has received little attention. Although AI chatbots are often advertised as aids for reducing nervousness when speaking in front of people, little study has been conducted to determine their true influence on learners' confidence and anxiety levels. Further empirical research is required to confirm the effectiveness of chatbots in minimizing stress attributed to speaking (Hong, 2021b). The study by Haristiani (2019) revealed that chatbots are good for grammar drills, but they do not possess enough conversational richness

to make learners engage actively in emotionally involved and authentic conversations. To adequately grab the attention of learners, chatbots need to be responsive by catering to their emotional and social dimensions, which will facilitate interaction and alleviate loneliness.

Moreover, embedding AI technology within learning ecosystems is a challenge—for example, in Vietnam, many teachers have not been able to find ways for the technologies to work well because of their little or no knowledge of technologies and training (Le et al., 2022). Subsequent research may be directed at professional development strategies that will facilitate the ability of teachers to utilize artificial intelligence technology in classrooms. In this respect, teachers will be capacitated and empowered to ensure that the success of AI-driven chatbots in language learning is maximized (Ho, 2024; Nguyen, 2023; Pham & Le, 2024). Even though artificial intelligence systems, such as ChatGPT, present a real potential for improving speaking skills, there are certain challenges that need to be overcome. These issues will require further research to be satisfactorily addressed, including speaking anxiety, cultural appropriateness, and lack of immediate feedback (Ghafar, 2023; Rudolph et al., 2023; Xu et al., 2023). It is therefore important that more research is done in Vietnam to explore if and how tools like these can be adapted for the specific needs of students in Vietnam, ensuring their integration into classroom practice. These challenges must be addressed to fully realize the potential of AI-driven technologies for language education, especially in improving speaking skills.

Conclusion

Integration of the new artificial intelligence chatbots, such as ChatGPT, marks a milestone in language teaching, especially in oral communication skills (Pham & Le, 2024). Language learning centers based on the traditional way often pose challenges, such as little or no room for practical interaction, anxiety in speaking, and lack of fast feedback, all of which artificial intelligence technologies eliminate for a flexible and stress-free environment to enhance students' oral communication abilities. Chatbots deliver personalized aid and instant feedback, which are not so customary in pedagogical practices. Real-time effective feedback for novices remains an issue, even if artificial intelligence chatbots can potentially improve language learning in communication (Nguyen, 2023; Pham & Le, 2024). In Vietnam and other countries worldwide, educational institutions focus more on reading and writing, which helps in speaking and meeting other test demands. Accordingly, AI solutions may be especially beneficial. To do this, additional research, improvements in the technical infrastructure, and comprehensive teacher training must be implemented so that such aids can be operational in a classroom.

AI-driven chatbots can revolutionize language acquisition, particularly in the development of communication abilities, when all factors are considered. Nevertheless, further empirical research is required to evaluate their long-term efficacy and identify the most effective methods for their implementation in a variety of learning environments. It is imperative to overcome these challenges to realize their full potential and convert them into a sustainable, scalable solution for language education on a global scale.

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