

A Review Paper on “English Speaking and Learning by using ICT and AI Tools”

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Abstract: *This article aims to offer insight into the development of artificial intelligence (AI) and its influence on improving second language learning, with a specific emphasis on English. Artificial intelligence is evolving quickly in today's digital world. Digital tools and new software are continually being developed, giving users speedy results. Digital marketers have historically treated Artificial Intelligence (AI) with mistrust, as they do with all advances. AI is achieved by examining the cognitive process and researching the patterns of the human brain. This study aims to examine the benefits of using ICT and AI technologies to aid the improvement of students' spoken communication skills, as well as the factors that contribute to students' difficulties with speaking. Through extensive research, several studies were examined that demonstrated the effectiveness of artificial intelligence in improving oral fluency in language learners. The study also investigated the effects of integrating artificial intelligence into language learning, taking into account aspects such as technology capacity, data protection, and equity in language education opportunities. It also examines the ethical complexities of using artificial intelligence in language teaching, highlighting the relevance of a balanced approach that maximizes the advantages of the technology and minimizes potential difficulties. This article provides a thorough analysis of the influence of artificial intelligence on the development of skills to speak a second language, providing valuable information for educators, researchers, and practitioners in the field of language teaching. The findings of this paper will give some implications to oral English teaching in the future*

Keywords: Language learning strategies, Artificial Intelligence, Speaking skills, ICT

I. INTRODUCTION

The modern world has evolved into a global community where English is widely spoken. English is used extensively in numerous fields like education, engineering, IT, software, social media, newspapers, research, healthcare, the financial sector, and more. Language serves primarily as a means of thought, expression, and interaction. The fact that language is a means of communication follows logically. To truly become fluent in a language, it's essential to be able to talk to people in that language. Speaking fluently in the target language is the most crucial ability for every language learner. The extent to which the student has mastered the desired language is evidenced by his or her oral communication skills. English majors in the selected local teacher education university in the north of Vietnam are required not only to be advanced in English skills for basic communication but also proficient in the field of English language teaching. While a few demonstrate proficiency in foundational English communication, many struggle with limited vocabulary, grammar, and listening and speaking skills, which can hinder effective communication for conventional purposes and later for career-related intentions. Additionally, students often lack confidence in engaging with foreigners due to fears of making mistakes, leading to a reluctance to initiate or actively participate in conversations. Inadequate non-verbal communication skills and limited cultural understanding can further exacerbate issues in intercultural exchanges, potentially resulting in misunderstandings or unintentional rudeness. Moreover, students have limited opportunities for real-world practice due to the scarcity of interactions with foreigners and a lack



of international tourists in the area. These limitations contribute to the student's difficulties in developing their conversational abilities in real-life situations.

Students acquire the four skills necessary to express themselves clearly in a different language through language education: reading, writing, speaking, and listening. To speak the language well, they need to be proficient in all four abilities. Speaking is typically the most frequently used to determine whether someone has successfully acquired a language out of the four language skills. According to Brown, the ability to communicate effectively is the one that students will be evaluated on the most in the real world. Teaching effective communication skills has been overlooked despite its importance, with most EFL/ESL educators continuing to see it as little more than rote memorization of dialogues or drills. However, the 21st century calls for the development of students' communicative competence; therefore ELLs' English instructors must provide them with the training they need to better handle everyday situations. One of the most challenging aspects of learning a new language is practicing oral communication.

AI has emerged and transformed the way we work in many fields, especially in education where revolutionary initiatives made possible by AI have been implemented. Recognizing the potential of AI in learning and research facilitated by easy access to AI information through the Internet and social networks, students in this mentioned university have attempted to use AI for some initial experiments in their English study. Despite this awareness, students' actual experience with AI is limited due to such factors as insufficient IT infrastructure and resources, lack of effective AI integration in curricula, and students' financial constraints in acquiring necessary equipment and software.

English may be broken down into three categories: linguistic, social, and affective.

A. linguistically-related problems

- Grammar
- Vocabulary
- Pronunciation
- Fluency
- Fragmented sentence structure
- Expressions

B. Social-related problems

- Readiness for Real-World English Practice
- Speaking-Classroom Comprehension

C. The affective-related problems

- Motivation
- Attitude
- Time Spent Learning the Language
- Anxiety
- Classroom conditions
- Students and teachers' competencies.
- Environment
- low self-assurance
- Family background
- The Fear of Failure

Many students struggle with affective-related difficulties in speaking issues such as anxiety, low self-assurance, and tension. The causes of the speaking difficulties are low motivation, poor engagement, lack of general knowledge, infrequent dictionary use, reading laziness, unfamiliar word pronunciation, nervousness, insufficient exposure to language and grammar, fear of criticism, shyness, lack of speaking practice, and the Fear of Failure. According to



Amoah and Yeboah, students have trouble speaking up in class because they worry about making mistakes that would reflect poorly on them. Some of them are worried about receiving negative feedback from peers or instructors, according to Afifah et al., the effects of speech suppression are exacerbated in conditions of increased anxiety. For this reason, some students opt to avoid making any verbal contributions in class altogether.

Speaking difficulties are a common challenge for students; the students are at a loss for words, which indicates there is a lack of data for discussion in certain disciplines. Some pupils, for instance, struggle to follow discussions on geographical, historical, cultural, religious, etc.-related themes. Therefore, teachers have crucial responsibilities in creating a language environment in which students can practice speaking by providing them with a variety of linguistic settings or social contexts.

For the past 30 years, researchers have been studying Computer Assisted Language Learning (CALL) as a subfield of English language instruction. Even at the dawn of the 21st century, CALL was having an impact on how languages were taught and learned. According to Davies et al., "Web 2.0 fever" permeated the field at the time. Wikis, message boards, social media sites, and virtual worlds were all used to foster this proliferation of communities online.

Web 2.0 applications can shift the focus of language instruction to the learner by empowering students to act as active creators of their own information rather than passive recipients. Language educators are beginning to see the potential benefits of Web 2.0 tools for their students' education.

With the support of Web 2.0 tools, educators can devise fresh methods of instruction that foster greater student engagement, boost academic and social competence, and encourage more independent study. The use of technology in the classroom, and specifically learning tools, has been shown to be effective in fostering critical thinking in students.

For years, AI and robotics have been used to help youngsters learn languages. In summary, AI may offer greater and more enticing possibilities for youngsters to speak the target language. Recently, affordable and reliable AI technologies have made exploring this idea in regular classrooms possible. This paper investigated the difficulties of learners face in learning speaking skills and the use of various ICT tools and AI tools to improve speaking abilities.

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II. LITERATURE SURVEY

Artificial intelligence (AI) has the potential to transform the way teaching and learning take place in schools. Specifically, AI can be an effective tool for improving students' speaking and listening skills. This literature review will explore the current research on the importance of AI in education for this purpose.

Artificial intelligence (AI) has emerged as a powerful tool in the field of language teaching, transforming the way educators and learners interact with language learning materials and resources. One of the key roles of AI in language teaching is personalized learning. AI-powered language learning platforms can tailor instruction and content to individual learners' needs, abilities, and preferences. By collecting data on learners' performance, AI algorithms can identify areas of weakness and provide targeted exercises and materials to address those specific areas. This personalized approach enhances the learning experience, allowing learners to progress at their own pace and focus on areas that require more attention. Furthermore, according to Vincent-Lancrin and Vlies (2020), AI can facilitate language learning through natural language processing (NLP) techniques. NLP enables AI systems to understand and generate human language, making it possible for learners to engage in interactive conversations and receive instant feedback. Virtual language tutors powered by AI can simulate real-life language interactions, providing learners with opportunities to practice their speaking and writing skills in a supportive environment.

According to Madhavi et al., students' language skills, including listening, speaking, writing, and reading, improve with the help of ICT tools. Extended learning, first, is the process of enhancing traditional teaching and learning with the use of social networking sites, instant messaging apps, blogs, wikis, and other forms of cutting-edge online communication. Social media platforms facilitate student-to-student communication, fostering collaborative discussion, critical thinking and the exchange of opinions, expanding the classroom as a venue for instruction and the acquisition of knowledge.



Second, using mobile or portable devices like mobile phones, computers, tablets, and similar gadgets is made possible by the concept of "ubiquitous wireless," which highlights the rising prevalence of wireless networks and makes them available to students. Finally, Intelligent Searching aids the teacher in locating, organising, and retrieving data. Last but not least, the use of games and simulations for learning purposes has been shown to improve students' problem solving, critical thinking, motivation, and communication abilities. Tools for education, such as educational software, websites, and videos; methods for organising and delivering instruction in the classroom with the use of technology; and the "Learning management system," which includes platforms like Moodle, Canvas, and automated assessment tools; these are all examples of ICT applications.

According to Ahmadi, use of technology to teach and learn English has been the subject of a number of studies, all of which have found positive results. According to Hennessy et al., and Dineshkumar et al., the use of ICT functions as a catalyst for inspiring both educators and students to adopt novel approaches to their work. According to the findings, teachers believe they have a responsibility to foster pupils' rising sense of autonomy. CALL improves students' motivation to study and self-perception as language learners.

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III. LANGUAGE ACQUISITION STRATEGIES

Many scholars have attempted to categorize methods for learning a new language; for instance, see the work of Gani et al., Learning strategies, communication strategies, and social strategies are the three primary groups that make up the taxonomy of methods for acquiring a second language. All methods employed in the service of learning are collectively referred to as "learning strategies," whether they are cognitive in nature or involve the learning process more remotely through metacognition. Clarification, practice, memorization, and monitoring are all examples of cognitive techniques. Learning tactics including repetition, translation, deduction, and so on are examples of cognitive strategies. Planning, goal-setting, and self-management are all examples of metacognitive skills.

Applying metacognitive methods entails preparing for and reflecting on study, keeping track of one's own work and that of others, and assessing one's own progress and learning outcomes. The focus of communication techniques is on the process of engaging in conversation and gaining understanding or clarifying the speaker's goal, making them less directly related to language acquisition. When words fail, speakers turn to communication tactics to help them through. Activities that learners partake in to put their newfound knowledge into practice are known as social strategies.

Six distinct categories of language-learning methods exist:

- Memory strategies, can aid in the retention of knowledge learned.
- Cognitive strategies, which give students multiple avenues for understanding and producing new language.
- Compensation strategies, It aids learners in filling in knowledge gaps and keeping conversation flowing naturally.
- Affective strategies, which teach students to trust themselves and their abilities.
- Metacognitive strategies, can aid students in developing communicative ability by focusing, planning, and assessing their own learning; and
- Social strategies, which foster more conversation and deeper mutual understanding. Finally, suitable methods of language study contribute to making the learner speak fluently in the English language.

IV. METHOD

Moreover, students should be encouraged to use these tools both in the classroom and at home, practicing various topics and repeating exercises to improve fluency, vocabulary, and pronunciation. Pairing AI tools with other



technologies, such as video recording for self-analysis, can boost their effectiveness. Integrating AI tools into the curriculum can reinforce learning and build conversational skills over time. It is advisable that future research explore the long-term impact of AI tools on conversational skills and examine other AI tools' effectiveness for different populations.

First and foremost, teachers should clearly communicate the benefits of these AI tools to encourage students and provide explicit instructions on how to use them for effective practice. Clear instructions for using AI tools and providing feedback on performance are essential for improvement. Additionally, educators should address challenges such as students' limited knowledge of vocabulary and short sentences by providing resources like glossaries for different topics and introducing difficult vocabulary to learners. Besides, teachers are advised to create a supportive environment and choose topics suited to students' language levels and interests. This assistance helps students feel more confident and motivated to express their opinions and improves their overall communication abilities.

The influence of AI on the development of listening skills the evolution of listening skills has also been significantly impacted by the quick developments in artificial intelligence (AI). How people learn and improve their listening skills has been completely transformed by AI technology, notably in the areas of speech recognition and natural language processing emphasize that in order to communicate properly with someone while speaking to them, one need to both speak and listen. Consequently, in the language learning process, the activities that link the two language skills should be planned, for instance, by engaging in discussion and pair work while using multimedia. During such activities, students have the chance to connect and develop their ability to articulate their thoughts clearly. Xiao et al. (2020), argue that "active listening helps not only oral communication but also online text communication" (p.1). Students are taught to cooperate and assume responsibility through „teamwork“. In addition, online oral presentations, conversations, role plays, storytelling, and even games are effective activities for fostering better listening conditions. People now have access to individualized language learning apps that assess pronunciation, intonation, and understanding and offer real-time feedback and specialized exercises thanks to AI-powered tools and applications. According to Hodgan et al. (2014), building comprehension of specific words and sentences in a tale is the first step in effective listening comprehension. AI-enhanced podcasts and audiobooks make use of speech recognition and NLP to provide interactive features, track progress, and provide content recommendations based on listener listening histories, improving engagement and comprehension. Virtual language tutors and automated speech evaluation systems have allowed for significant advancements in AI-assisted language instruction, giving students the chance to practice their listening skills in a safe setting and receive immediate feedback on their speaking and pronunciation skills. The impact of AI on improving listening abilities is evident and holds enormous promise for future improvements in communication ability.

The study utilized a quasi-experimental design to illustrate and evaluate the impact of AI tools on the process of improving and developing conversational skills among 28 first-year students specialized in English pedagogy at the aforementioned university. This investigation adopted a quasi-experimental framework, specifically a non-equivalent control group design, encompassing both a control and an experimental cohort. Nonetheless, participant selection was not randomized.

The proposed approach includes a discussion of different ICT tools and techniques for studying a foreign language to overcome the difficulties in English language learning. It is incumbent upon us to provide a learning environment for second language learners that mimic that of native English learners. For example, if a boy of 3 or 4 years old asks the shopkeeper "chocolate", the shopkeeper says "Do you want chocolate", and the boy answers yes. In this example, the boy unknowingly learns the sentence "Do you want chocolate". This sentence is registered in his mind and inferences are stored in his mind like grammar, etc. If the same scenario is repeated once or twice, then the boy can use the same sentence and ask his friend "Do you want a biscuit". That says the visual impact will be greater than the audio text impact on learning.



4.1 Power Point

PowerPoint is commonly utilized in the classroom due to its practicality and convenience. According to Nur Aziz and Ani Setyo Dewi, PowerPoint's primary use in the classroom is to help teachers convey their lessons to pupils via large screens and projectors. In addition, students can make better use of its features in presentations, where they can boost their effectiveness. It has a lot of features to create innovative English teaching material to motivate and attract learners.

4.2 Devices, Gadgets & Apps

With the arrival of the 4.0 technological era, online learning has become more accessible to students who can afford mobile phones, iPads, or tablets. Students who have access to the Internet in their homes or on the go can supplement their classroom education with self-directed study on any topic of personal interest. For instance, if they wish to work on their English conversation skills but are unable to meet in person due to distance, they could call their partners and discuss the themes. Some English-speaking students who are too nervous to speak up in class for fear of embarrassing themselves in front of their teachers or peers can submit recorded video clips to their instructors as an alternative to speaking up in front of the whole class. Students can communicate in English with their friends and teacher on social media like Facebook, WhatsApp, Twitter, and soon. When it comes to learning and teaching strategies like inquiring learning, self-directed learning, and formative assessment, Kusmaryani et al., conclude that devices provide some benefits to both teachers and students. Apps like Google Classroom and educational games can help teachers raise their students' achievement levels by allowing them to publish materials for students to study and administer tests of their spoken communication abilities.

4.3 AI / Language-Recognition Software

The fear of mispronunciation is a common obstacle for students. They can refine and improve their speech with the help of speech recognition software. According to Kuning, the gadget may assess the speaker's delivery and offer a positive comment based on that analysis. In any case, it permits the same words to be repeated. "Duolingo" is a standard piece of speech recognition software that listens in on conversations and then tells you whether or not you spoke a word correctly the first time around. This tool will be very helpful for those who like to practice at home. Many more apps are available on the Internet for testing and learning English speaking skills.

4.4 Social networking and video-sharing websites

Currently, there are many social networking and video-sharing websites. One of the most popular is YouTube. YouTube is a social media site where users can view and share videos, and academics have shown that it may be used as a resource for both educators and students. Videos, films, video clips, trailers and music clips are all resources that teachers can use to offer their students the knowledge and linguistic contexts they need to practise speaking [37-39]. In addition, Jalaluddin, said that students can share the results of their efforts to build dialogues or discussions on YouTube for others to comment on, which would boost students' selfassurance and assist them avoid making grammatical mistakes while studying.

V. CONCLUSIONS

The present study emphasizes the importance and the benefits of incorporating AI tools such as Call Annie and Praktika in language instruction to improve students' English conversational skills. It is evident that the use of AI tools can boost students' engagement and motivation in language learning, as they offer interactive and immersive experiences. Thanks to the enhancement of the participants' conversational competence and their positive feedback on the impacts of such tools on their conversation practice, implications for English language educators and teachers should be taken into consideration.

There are different strategies and tools available to overcome problems in developing English-speaking abilities. The following strategies were developed by various researchers: 1) memory strategies; 2) compensation strategies 3) cognitive strategies 4) metacognitive strategies 5) affective strategies, and 6) social strategies. In this digital era, teachers and learners have many ICT and AI tools for teaching and learning English-speaking skills. The most common



tools are PowerPoint, English learning videos, Animations, online video-sharing platforms like YouTube, Vlog, etc., grammar correction apps, vocabulary development apps like Duolingo, NLP apps, Language gaming tools like kahoot and Speech recognition and correction AI tools. Social media platforms like Facebook, WhatsApp, and Instagram can be used to communicate with native speakers. Films with English subtitles on Netflix and similar platforms are useful to enhance their speaking abilities. In the experimentation, the ICT group students showed superior speaking skills performance than the Non-ICT group students. Learners can develop their speaking skills effectively by making use of appropriate ICT and AI tools.

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