Developing Learners' English Speaking Skills using ICT and AI Tools

E. Madhavi[1,2*], Lavanya Sivapurapu[1], Vijayakumar Koppula[3], P. B. Esther Rani[4], Vemuganti Sreehari[5]

[1] Department of English, Koneru Lakshmaiah Education Foundation, Vaddeswaram, Guntur, Andhra Pradesh, India
[2] Department of English, CMR College of Engineering & Technology, Hyderabad, Telangana, India
[3] Department of CSE, CMR College of Engineering & Technology, Hyderabad, Telangana, India
[4] Department of English, Institute of Aeronautical Engineering, Hyderabad, Telangana, India
[5] Department of English, Malla Reddy Engineering College, Hyderabad, Telangana, India

ARTICLE INFO	ABSTRACT
  	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. The study's primary goal is to provide useful recommendations for students, teachers, and learners that will facilitate better English language instruction and learning. Different studies were analyzed, and elements related to difficulties with communication were separated into three distinct groups: linguistic, social, and affective. We looked into numerous information and communication technology (ICT), Apps, and artificial intelligence (AI) resources that help in teaching and learning English. 100 students are participated in our experiment, who were placed into two groups: ICT and Non-ICT. Taught English for the Non-ICT group using traditional methods and for the ICT group using ICT and AI tools. When compared to non-ICT students, ICT students demonstrate superior performance in all parameters of the speaking test. ESL students will see significant improvements in their communication skills with the use of technology and artificial intelligence (AI) technologies for teaching and learning language.

1. 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 [1]. 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 [1-5].

---

* *Corresponding author.*
E-mail address: madhavikoppula6@gmail.com

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, [6] 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 practising oral communication [7].

However, students typically experience a great deal of difficulty when it comes to speaking. According to studies by Putera *et al.*, [5] and A. Asakereh and H. S. Afshar [8], the most significant challenges students have when communicating in English may be broken down into three categories: linguistic, social, and affective.

A. *linguistical-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 [5].

According to Amoah and Yeboah [9], 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.*, [10], 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 practise speaking by providing them with a variety of linguistic settings or social contexts.

Nguyen and Pham [11] claimed that speakers' pronunciation is influenced by a number of external circumstances. Lack of a sufficient vocabulary hinders a learner's ability to communicate their thoughts and ideas in a foreign language. Indeed, students have insightful ideas and a desire to share them, but they lack the linguistic competence to articulate those ideas effectively in the target language.

When it comes to issues that are connected to social interactions, students typically struggle to comprehend discourse when it takes place outside of the classroom. The English-language exercises are consistently finished as soon as the students have completed the class. When speaking with their close friends and relatives, they either employ their mother tongue or a regional dialect. Students additionally struggle with linguistic issues as a result of personal factors, such as a lack of motivation to read books and infrequent opportunities to engage in conversation at home.

According to Abu Alyan, [12] students experience difficulties in communicating when they come across a lexical item they are unfamiliar with, a grammatical construction they are unsure about, or the realisation that they cannot express what they mean. Lack of self-confidence and anxiousness also manifest as speech issues among students. The insecurity, shyness, anxiety, nervousness, and worry that they typically experience when communicating in English may surface. Those are substantial issues that college students face nowadays. According to Putera *et al.*, [5], a person's emotional state might have an impact on their ability to convey ideas clearly.

Language proficiency in the four broad areas of reading, listening, speaking and writing is all bolstered by technology usage amongst students in English language acquisition, as stated by Khanh and Van *et al.*, [13, 14]. The advancements in multimedia technology made possible by the Fourth Industrial Revolution have had a profound effect on the teaching and learning of foreign languages, allowing for a more varied and efficient transfer of foreign language abilities with the use of IT successes, especially in the area of language instruction. Additionally, Nguyen and Pham [11] claimed that using technological tools in the classroom is far more prevalent than in business and trade.

Language instruction has been influenced by the widespread adoption and innovative use of ICT. First, the malleability made possible by modern technology has liberated students from the constraints of a predetermined curriculum and allowed them to learn at their own pace. Second, there is promise for language learning in informal community contexts thanks to networked learning capabilities. Finally, open educational resources have altered the role of the educator by making previously inaccessible knowledge freely available to everyone. Finally, the increasing availability of AI tools that employ Automatic Speech Recognition (ASR) or Natural Language Processing (NLP) is modifying the process of instructing and learning a foreign tongue [15].

For the past 30 years, researchers have been studying Computer Assisted Language Learning (CALL) as a subfield of English language instruction [16]. 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.*, [17], "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 [18]. 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.

The widespread availability of mobile devices has facilitated an explosion of new forms of textual, visual, and auditory communication. When employed in conventional classrooms where students have less possibility for autonomy, several authors, Bozdoğan [19], and Burston [20] have valid reasons to doubt that digital tools and applications may improve language learning. Some of the apps created by SO-CALL-ME include VISP (Videoclips for Speaking Production) and ANT (Audio News Trainer), as mentioned by Kannan and Munday [15]. Most of them feature self-evaluation tasks and built-in corrective mechanisms to help students see how they've progressed and, in turn, be more motivated to keep going. The app's instructional design draws from the fields of game design, cognitive science, and second language instruction. These initiatives aim to create radically different methods of acquiring, disseminating, and evaluating linguistic expertise.

Of course, real-world apps are also a part of mobile language learning because they provide opportunities for real-world practise. Listen to radio broadcasts from countries with large second-language populations, read postings written by native speakers, and interact with them all through social media apps like Twitter and Facebook. Students can also view English-language shows on Netflix or videos on YouTube and films with English subtitles or text. Online chatting tools like Skype, MSN Messenger, Google Talk (for teleconferences), and others let students practise their speaking abilities with peers, educators, and even native speakers.

All of these apps have spread like wildfire through the world of language study. In 2018, more than 100 million people used Duolingo, a free language-learning tool that helps users improve their vocabulary, grammar, and pronunciation in 28 different languages. Kahoot and similar gamification software are used extensively in foreign language schools and have amassed a user base of over 70 million [15, 21]. Rosetta Stone and digital flashcard platforms like Quizlet also attract large numbers of language learners. In addition to the usage of various social media platforms designed specifically for use in the classroom, such as Google Classroom, Twitter, Facebook Groups, Instagram, Schoology, Edmodo, and others), many education centres throughout the world make use of other forms of online networking.

NLP or natural language processing is a branch of AI modelling, has been crucial in advancing CALL. Natural language processing enables pattern recognition in spoken language on mobile devices. As a result of artificial intelligence's advancements in language processing, a variety of new uses have emerged. Language translation software based on artificial intelligence, such as Google Translate, has made significant strides in aiding students of foreign languages and second languages.

For years, AI and robotics have been used to help youngsters learn languages [21]. 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.

2. Literature survey

According to Ahmadi [22], 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.*, [23] and Dineshkumar *et al.*, [24] 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.

This shift from teacher-centered to student-centered approaches is largely attributable to technological advancements. This change is tremendously helpful for students' learning, which is why teachers should take on the role of facilitators and guides [25]. Gillespie [26] argued that when students use technology, they are more likely to work together on assignments. It makes it easier for them to learn new material and engage with videos and other sources.

Warschauer and Kern [27] outlined two viewpoints on implementing technology in the classroom. In the first place, the cognitive method allows students to have more meaningful interactions with the target language and to construct their own knowledge. Second, with the social method, students need opportunities for genuine social connections, such as working together on real-world projects.

Computer-mediated communication is a valuable tool for linguistic development. Discussions facilitated by a computer encourage more equitable participation than those conducted in person. In agreement with the aforementioned viewpoint, Shadiev and Yang [28] argued that exposure to authentic resources presented in the target language is essential for effective language acquisition.

According to a study by Gilakjani, [29] students who use technology in the classroom have a better time and retain more information. Students have also reported that they find using technology to be a positive experience. Another finding from this study indicated that students were more motivated, engaged, and social while using technology in the classroom.

Learners' self-assurance can be boosted when instructors give them roles as teaching assistants [30]. Students are given the opportunity to practise what they've learned and solidify their beliefs and skills. Since students have had plenty of time to grasp the technology, they may assist teachers in integrating it while the teachers focus on leading the curriculum.

According to Pourhosein Gilakjani *et al.*, [31], instructors believe that e-mail and the web encourage student-driven education. According to research conducted by Parvin and Salam, [32] students can gain more exposure to the target language in meaningful contexts and develop their own expertise by utilising technological tools. Students need opportunities for social contact in order to hone their real-world abilities. Students accomplish this by working together in meaningful ways.

Basma [33] conducted research on how students' writing, vocabulary, word choice, and spoken English could all benefit from the use of WhatsApp applications in English debate journals. Conclusions drawn from this study included that WhatsApp was effective in helping students enhance their writing, speaking, vocabulary, and word choice. Researchers [34] analysed student motivation and classroom participation. Based on the results, it was determined that incorporating educational technology into the classroom increases student participation. When it comes to convenience and inspiration, technological aids have vastly improved.

According to Madhavi *et al.*, [35], 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.

3. Language Acquisition Strategies

Many scholars have attempted to categorise methods for learning a new language; for instance, see the work of Gani *et al.*, [2]. 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, practise, 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 practise are known as social strategies.

Six distinct categories of language-learning methods exist:
  i. Memory strategies, can aid in the retention of knowledge learned.
  ii. Cognitive strategies, which give students multiple avenues for understanding and producing new language.
  iii. Compensation strategies, It aids learners in filling in knowledge gaps and keeping conversation flowing naturally.
  iv. Affective strategies, which teach students to trust themselves and their abilities.
  v. Metacognitive strategies, can aid students in developing communicative ability by focusing, planning, and assessing their own learning; and
  vi. 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.

4. Method

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 mimics 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.

The following ICT tools can be used to improve learners speaking abilities:

4.1 PowerPoint

PowerPoint is commonly utilised in the classroom due to its practicality and convenience. According to Nur Aziz and Ani Setyo Dewi, [36] 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 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, [37] 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' self-assurance and assist them avoid making grammatical mistakes while studying.

4.3 Movies

There's no denying the dramatic benefits of employing films as a teaching tool for foreign languages. Teachers reportedly employ this technology tool to get students interested in learning a language [40, 41]. Videos featuring vivid visuals, engaging soundtracks, and exciting action are shown to keep students engaged and facilitate rapid comprehension of course material. Films serve another purpose by presenting realistic and applicable communication situations and authentic linguistic contexts to their audience.

For instance, learners are able to understand the conversations in both their native language and the matching English sentences when watching certain movies and clips in their native language that are accompanied by English subtitles or text. This results in improvements to the student's vocabulary, grammar, fluency, and organisation of sentences. Watching films or videos with English subtitles or text is an effective way to learn and improve pronunciation. The intonation of a native speaker's speech is easy to observe.

4.4 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 [11, 42]. 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.,* [43] 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.

4.5 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, [44] 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 [45].

We did an experiment with 100 students in the 7th grade at an Indian school. Selected students and their parents are Non-native English speakers. Students are assessed on their English-speaking skills by the certified trainer and awarded grades on a 5-point Likert scale. The students are divided into two equal groups based on the histogram of mean values of student grades in all parameters. One group is ICT with 50 students, and the other is non-ICT with 50 students. Conventional training was used for the students in the non-ICT group and the ICT group students with ICT and AI tools for 60 hours. After the training, the students' English-speaking skills are assessed again. The Table-1 shows the results of ICT and Non-ICT students. The mean value of 50 students' performance in various parameters pre-training and post-training is shown in Table 1.

Table 1
ICT and Non-ICT students' performance

Non-ICT			
Parameter	Pre-Training	Post-Training	Absolute Difference %
Vocabulary	1.12	2.31	51.5
Fluency	1.05	2.11	50.2
Grammar	1.03	2.1	50.9
Pronunciation	0.9	2.05	56.1
Expressions	1.05	2.1	50
ICT			
Parameter	Pre-Training	Post-Training	Absolute Difference %
Vocabulary	1.12	3.94	71.5
Fluency	1.03	3.55	70.9
Grammar	1.03	3.67	71.9
Pronunciation	0.88	4.03	78.2
Expressions	1.03	4.31	76.1

Figure 1 shows the performance of ICT students and the Non-ICT group in all parameters. Bottom lines are Non-ICT pre-training and ICT Pre-training overlap each other because the data of the two groups are similar. It shows that the ICT group Post-training performance is superior to the Non-ICT group post-training performance.

Figure 2 shows the absolute difference in percentage between the pre-training and post-training performance of the ICT group and the non-ICT group. All parameters show a 20% difference between ICT and Non-ICT. In our observation the ICT group performance on the parameters of fluency, pronunciation, and expressions, it is very high. That shows that ICT tools like films with subtitles, PowerPoint presentations, videos, gadgets, apps, and AI-based English apps are playing a vital role in improving English speaking skills.
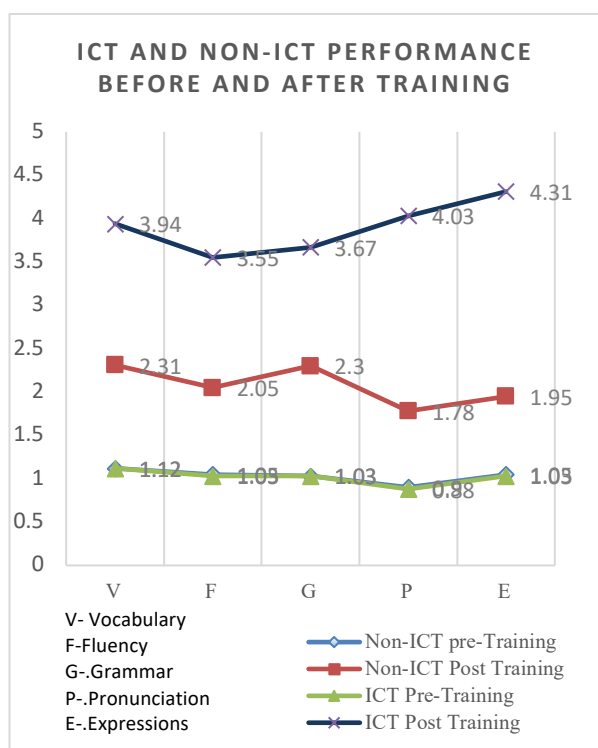

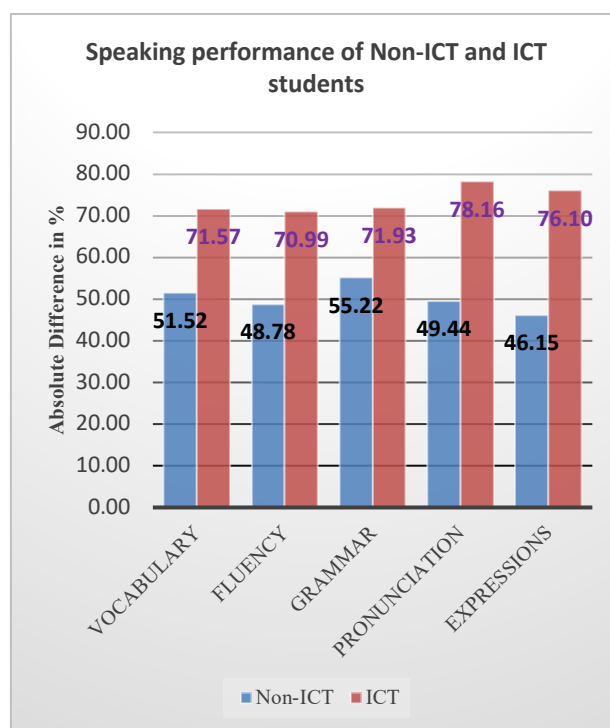**Fig. 1.** ICT group and Non-ICT group Pre training and Post training Performance

Fig. 2. Speaking performance of Non-ICT and ICT students

5. Conclusions

Our research focused on the problems faced by ESL and EFL students in developing speaking skills. The problems are categorized into three categories: linguistically-related problems, socially-related problems, and affectively-related problems. Researchers stated that the factors for problems are low motivation, not having regular reading habits, poor engagement, poor vocabulary building, less usage of the dictionary, less support to pronounce unfamiliar words, insufficient exposure to language and grammar, lack of knowledge of the topic, nervousness, fear of criticism, shyness, lack of speaking practice, The Fear of Failure, family background, lack of environment, and support to rehearse English both inside and outside of the classroom. 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.

References

[1] Rao, Parupalli Srinivas. "The importance of speaking skills in English classrooms." *Alford Council of International English & Literature Journal (ACIELJ)* 2, no. 2 (2019): 6-18.

[2] Gani, Sofyan A., Dian Fajrina, and Rizaldy Hanifa. "Students' learning strategies for developing speaking ability." *Studies in English language and education* 2, no. 1 (2015): 16-28. https://doi.org/10.24815/siele.v2i1.2232

[3] Harmer, Jeremy. "Methodology in Language Teaching: an Anthology of Current Practice." (2004): 80-82. https://doi.org/10.1093/elt/58.1.80

[4] Trialoka, Venti Septika, Hilda Puspita, and Syafrizal Sabarudin. "ENGLISH LEARNERS'STRATEGIES IN LEARNING SPEAKING SKILL (A STUDY OF UNDERGRADUATE STUDENT OF ENGLISH EDUCATION STUDY PROGRM AT UNIVERSITAS BENGKULU IN 2016/2017 ACADEMIC YEAR)." *Journal of English Education and Teaching* 1, no. 1 (2017): 9-20. https://doi.org/10.33369/jeet.1.1.9-20

[5] H. Putera Jaya, I. Petrus, and N. Lingga Pitaloka, "Speaking Performance and Problems Faced by English Major Students at a University in South Sumatra," *South Sumatera. Indones. EFL J.*, vol. 8, no. 1, pp. 105–112, 2022, [Online]. Available: https://journal.uniku.ac.id/index.php/IEFLJ/index.

[6] Brown, Gillian. "Teaching the Spoken Language." *Studia Linguistica* 35 (1981): 166-82. https://doi.org/10.1111/j.1467-9582.1981.tb00708.x

[7] A. Bueno, N. McLaren, and D. Madrid, "TEFL in Secundary Education," *ResearchGate*, no. February, p. 16, 2015, [Online]. Available: https://www.researchgate.net/profile/Daniel-Madrid-2/publication/39213623_TEFL_in_Secundary_Education/links/54d9fa710cf25013d0438ecc/TEFL-in-Secundary-Education.pdf.

[8] Afshar, Hassan Soodmand, and Ahmad Asakereh. "Speaking Skills Problems Encountered by Iranian EFL Freshmen and Seniors from Their Own and Their English Instructors' Perspectives." *Electronic journal of Foreign language teaching* 13, no. 1 (2016).

[9] Amoah, Seth, and Joyce Yeboah. "The speaking difficulties of Chinese EFL learners and their motivation towards speaking the English language." *Journal of Language and Linguistic Studies* 17, no. 1 (2021): 56-69. https://doi.org/10.52462/jlls.4

[10] Afifah, Disa, Nani Ronsani Thamrin, and Endang Darsih. "Analysis of students' inhibitions in speaking skill." *Indonesian Journal of Learning and Instruction* 3, no. 2 (2020).

[11] Nguyen, Thi Doan Trinh, and Vu Phi Ho Pham. "Effects of using technology to support students in developing speaking skills." *International Journal of Language Instruction* 1, no. 1 (2022): 1-8. https://doi.org/10.54855/ijli.22111

[12] Abu Alyan, Abedrabu. "Oral communication problems encountering English major students: Perspectives of learners and teachers in Palestinian EFL university context." *Arab World English Journal* 4, no. 3 (2013).

[13] Chau, Khanh Gia. "The effect of ICT on learners' speaking skills development." *International Journal of TESOL & Education* 1, no. 1 (2021): 22-29.

[14] Van, Lam Kieu, Truc Anh Dang, Duc Bao Tran Pham, Thi Thanh Nga Vo, and Vu Phi Ho Pham. "The effectiveness of using technology in learning English." *AsiaCALL Online Journal* 12, no. 2 (2021): 24-40.

[15] Kannan, Jaya, and Pilar Munday. "New trends in second language learning and teaching through the lens of ICT, networked learning, and artificial intelligence." (2018). https://doi.org/10.5209/CLAC.62495

[16] Golonka, Ewa M., Anita R. Bowles, Victor M. Frank, Dorna L. Richardson, and Suzanne Freynik. "Technologies for foreign language learning: A review of technology types and their effectiveness." *Computer assisted language learning* 27, no. 1 (2014): 70-105. https://doi.org/10.1080/09588221.2012.700315

[17] Davies, Graham, Sue EK Otto, and Bernd Rüschoff. "Historical perspectives on CALL." *Contemporary computer-assisted language learning* (2013): 19-38.

[18] Başal, Ahmet, and Talat Aytan. "Using Web 2.0 tools in English language teaching." In *Conference proceedings. ICT for language learning*, p. 372. libreriauniversitaria. it Edizioni, 2014.

[19] Bozdoğan, Derya. "MALL revisited: Current trends and pedagogical implications." *Procedia-Social and Behavioral Sciences* 195 (2015): 932-939. https://doi.org/10.1016/j.sbspro.2015.06.373

[20] Burston, Jack. "Twenty years of MALL project implementation: A meta-analysis of learning outcomes." *ReCALL* 27, no. 1 (2015): 4-20. https://doi.org/10.1017/S0958344014000159

[21] Underwood, Joshua. "Exploring AI language assistants with primary EFL students." *CALL in a climate of change: adapting to turbulent global conditions–short papers from EUROCALL* 2017 (2017): 317-321. https://doi.org/10.14705/rpnet.2017.eurocall2017.733

[22] Ahmadi, Dr Mohammad Reza. "The use of technology in English language learning: A literature review." *International journal of research in English education* 3, no. 2 (2018): 115-125. https://doi.org/10.29252/ijree.3.2.115

[23] Hennessy, Sara, Kenneth Ruthven, and S. U. E. Brindley. "Teacher perspectives on integrating ICT into subject teaching: commitment, constraints, caution, and change." *Journal of curriculum studies* 37, no. 2 (2005): 155-192. https://doi.org/10.1080/0022027032000276961

[24] Dineshkumar, R., M. Kalimuthu, K. Deepika, and S. Gopalakrishnan. "Engineering Education with Tool Based Technical Activity (TBTA)." *Journal of Engineering Education Transformations* 36, no. 2 (2022). https://doi.org/10.16920/jeet/2022/v36i2/22166

[25] Riasati, Mohammad Javad, Negah Allahyar, and Kok-Eng Tan. "Technology in language education: Benefits and barriers." *Journal of education and practice* 3, no. 5 (2012): 25-30.

[26] Gillespie, Helena. *Unlocking learning and teaching with ICT: Identifying and overcoming barriers*. Routledge, 2014. https://doi.org/10.4324/9781315798479

[27] Warschauer, Mark, and Richard Kern, eds. *Network-based language teaching: Concepts and practice*. Cambridge university press, 2000. https://doi.org/10.1017/CBO9781139524735

[28] Shadiev, Rustam, and Mengke Yang. "Review of studies on technology-enhanced language learning and teaching." *Sustainability* 12, no. 2 (2020): 524. https://doi.org/10.3390/su12020524

[29] Gilakjani, Abbas Pourhosein. "A review of the literature on the integration of technology into the learning and teaching of English language skills." *International Journal of English Linguistics* 7, no. 5 (2017): 95-106. https://doi.org/10.5539/ijel.v7n5p95

[30] Sabzian, Fouzieh, Abbas Pourhosein Gilakjani, and Sedigheh Sodouri. "Use of technology in classroom for professional development." *Journal of Language Teaching & Research* 4, no. 4 (2013). https://doi.org/10.4304/jltr.4.4.684-692

[31] Gilakjani, Abbas Pourhosein, Leong Lai-Mei, and Hairul Nizam Ismail. "Teachers' use of technology and constructivism." *International Journal of Modern Education and Computer Science* 5, no. 4 (2013): 49. https://doi.org/10.5815/ijmecs.2013.04.07

[32] Parvin, Ruxana Hossain, and Shaikh Flint Salam. "The effectiveness of using technology in English language classrooms in government primary schools in Bangladesh." In *FIRE: Forum for International Research in Education*, vol. 2, no. 1, pp. 47-59. Lehigh University Library and Technology Services. 8A East Packer Avenue, Fairchild Martindale Library Room 514, Bethlehem, PA 18015, 2015. https://doi.org/10.18275/fire201502011049

[33] Alsaleem, Basma Issa Ahmad. "The effect of "WhatsApp" electronic dialogue journaling on improving writing vocabulary word choice and voice of EFL undergraduate Saudi students." *Arab World English Journal* 4, no. 3 (2013): 213-225.

[34] Badejo, Johannes Adedokun, and Joyram Chakraborty. "The effects of technology on incarcerated student motivation and engagement in classroom-based learning." *Human-Intelligent Systems Integration* 4, no. 3-4 (2022): 71-80. https://doi.org/10.1007/s42454-022-00044-8

[35] Madhavi, E., Lavanya Sivapurapu, and Poul Kati. "Value Role of ICT Tools in English Language Teaching and Learning-Emphasis on Covid-19 Pandemic." *World Journal of English Language* 13, no. 2 (2023): 324-324. https://doi.org/10.5430/wjel.v13n2p324

[36] Aziz, Imam Nur, and Yuli Ani Setyo Dewi. "THE USE OF POWERPOINT AS MEDIA OF LANGUAGE TEACHING ON STUDENTS'SPEAKING SKILL." *Humanities & Social Sciences Reviews* 8, no. 1 (2020): 344-358. https://doi.org/10.18510/hssr.2020.8145

[37] Jalaluddin, Mohammad. "Using YouTube to enhance speaking skills in ESL classroom." *English for Specific Purposes World* 17, no. 50 (2016): 1-4.

[38] Ilyas, Muhammad, and Miranti Eka Putri. "YouTube Channel: An alternative social media to enhance EFL students' speaking skill." *J-SHMIC: Journal of English for Academic* 7, no. 1 (2020): 77-87. https://doi.org/10.25299/jshmic.2020.vol7(1).4141

[39] Mandasari, Berlinda, and Dyah Aminatun. "IMPROVING STUDENTS'SPEAKING PERFORMANCE THROUGH VLOG." *English Education: Journal of English Teaching and Research* 5, no. 2 (2020): 136-142. https://doi.org/10.29407/jetar.v5i2.14772

[40] Khan, Atiya. "Using films in the ESL classroom to improve communication skills of non-native learners." *Elt Voices* 5, no. 4 (2015): 46-52.

[41] Rao, P. S. "The impact of English movies on learning english in esl/efl classrooms: a classroom action research." *A Peer Reviewed (Refereed) International Journal* 7, no. 4 (2019).

[42] Sung, Yao-Ting, Kuo-En Chang, and Tzu-Chien Liu. "The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis." *Computers & Education* 94 (2016): 252-275. https://doi.org/10.1016/j.compedu.2015.11.008

[43] Kusmaryani, W., B. Musthafa, and Pupung Purnawarman. "The influence of mobile applications on students' speaking skill and critical thinking in English language learning." In *Journal of Physics: Conference Series*, vol. 1193, no. 1, p. 012008. IOP Publishing, 2019. https://doi.org/10.1088/1742-6596/1193/1/012008

[44] Kuning, Dewi Sri. "Technology in teaching speaking skill." *Journal of English Education, Literature and Linguistics* 2, no. 1 (2019): 50-59. https://doi.org/10.31540/jeell.v2i1.243

[45] Haristiani, N., 2019, November. Artificial Intelligence (AI) chatbot as language learning medium: An inquiry. In *Journal of Physics: Conference Series* (Vol. 1387, No. 1, p. 012020). IOP Publishing. https://doi.org/10.1088/1742-6596/1387/1/012020