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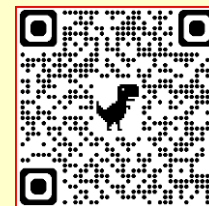
ENGLISH PRONUNCIATION DEVELPOMENT THROUGH TECHNOLOGY FOR ESL LEARNERS.

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ABSTRACT

This study aimed to investigate the improvement of English pronunciation skills through artificial intelligence- (AI-) based speech recognition technology for English language learners (ESL learners). The research used quantitative method in which the data was collected from the final year BS English students of Quaid-e-awam University of Engineering Science and Technology, Nawabshah. The sample size of the study was 20 and data was collected using questionnaire with the help of Google forms; further, it was analyzed statistically using MS Excel. The Results showed that technology related tools enable faster pronunciation improvement than traditional methods. The respondents gave good rating for tools that provide examples for correction of pronunciation, and it empowers faster pronunciation development. The results also revealed that the ESL learner have a strong inclination toward technology in enhancement of their pronunciation skills because these technological tools proved to be productive and helpful for ESL learners.

Keywords: Technology, English Speaking Skills, Artificial Intelligence (AI).

Introduction

Modern era is the era of technology. Technology is in every aspect of student's educational need. Hişmanoğlu (2006, p. 101) highlighted that pronunciation is "essential to obtain full communicative competence". Among the student's educational needs, pronunciation is one of them. (Ellis, 2009) state that there are many skills to learn when learning a language, including reding and productive skill, but pronunciation is important for effective communication. For better and accurate communication with English native language speaker, ESL learner must focus on pronunciations skills. Brewater (2004) focuses on the use of technology in teaching learning. There are many ways to develop pronunciation with help of technology. Many mobile application and software program that are very useful for pronunciation enhancement. Moreover, social media is one of the best tools that ESL learner can use for their development of their English pronunciation. Technology delivers instrumental tools, and furthermore, it enhances the chance to learn in actual world. Larsen-Freeman and Anderson (2011). International news channels including CNN, Al Jazeera and DW News, play a vital role in developing English pronunciation. Nowadays there are numerous sources for enhancement English speaking, but because of lack of awareness, they could not using them. Modern era is quite different; gradually it is rejecting the traditional way of learning. New technological advancement makes student leaning simple; just on

the fingertips, they could enhance any skill, including receptive and productive skills. Supporting skills includes pronunciation, vocabulary, and grammar. Supporting skills are quite easily build up with help of modern technology. Rosyidah and Giyoto (2018, p. 1) stated that "basically, vocabulary is the essential to learn English, and vocabulary is one of the key components of language, there is no language without vocabulary. Julia (2002) stated that without pronunciation there would be no spoken language and no oral communication. For acquiring pronunciation, ESL leaners must get command over vocabulary because it plays an essential role in enhancement of pronunciation; without having English vocabulary, getting command over pronunciation is impossible because Pronunciation depends on vocabulary of that specific language. Recently Artificial Intelligence (AI) has a great influence over education and other fields. According to research, mostly student have been using AI for their educational purposes; it helps in every aspect of students, specially for ESL learners. From guidance to translation, AI plays a vital role in students' educational careers. The use of AI technology has become well known in language teaching. Numerous studied have been conducting research on how AI-powered speech recognition system improve speaking and pronunciation. Garca-Sánchez and colleagues (2020). Artificial Intelligence (AI) brings a revolution in enhancement of English pronunciation and speaking; it converts spoken language into text, and it also give the translation in native language of that foreign spoken language. Tarnopolsky and Degtiariova (2003) approved that videos provide opportunities for students to listen, notice and perceive how native speakers act and speak. This undoubtedly will help them exercise more on their language skills, including pronunciation. YouTube is also a most advantageous tool for acquiring a language and foreign accent. In modern days, YouTube is best source of learning; every sort of information a student can get from it. For ESL learner, English language V-log, documentaries, broadcasts, news, movies and speeches are best source for development of their pronunciation and accent.

Significance of Study

Technology, according to Soliman's opinion, is a beneficiall tool for students (2016). The study on the 'English pronunciation development through technology for ESL learners' has appreciable importance in the field of linguistics and education. It focuses on the solution for worldwide ESL learners regarding pronunciation issues. Effective pronunciation is vital for successful communication with each other; without proper pronunciation, the communication will not be conveyed in a proper manner because of communication barriers. It critically examined all sort of technological tools, including those related to the internet, social media, AI-powered tools and software. Technology-based tools provide ESL learners with practice opportunities, real-time assessment, and proper feedback.

Research Questions

1. To explore the tools for enhancement of English pronunciation.
2. To explore the role of listening in English pronunciation development.

Research Objectives

1. What are tools to enhance English pronunciation?
2. What is the role of listening in English Pronunciation development?

Literature Review

Dennis (2024) conducted a research on using AI-Powered Speech Recognition Technology to Improve English Pronunciation and Speaking Skills in which researchers wanted to determine how impact of AI-powered Speech Recognition Technology (AISRT) can improve English pronunciation of ESL learners. Qualitative data was used; survey and questionnaire were analysed thematically. Comparative analysis was also conducted using paired t-test to investigate the significance of the improvement in pronunciation and oral skills. Finally, the result determined that students received rapid feedback and practiced pronunciation and speaking fluency with the AI-technology, and AI also helped students in improvement of their sound production and speaking skills. This study examined the Improvement of English Pronunciation Skills through AI-Based speech rrecognition ttechnology. This study was carried out by Dja'far and Hamidah in 2024 to analyse how of AI-based speech recognition technology fostered the English pronunciation skills among students. The researcher elected 58 third-year accounting diploma students from the state of polytechnic of Malang, Indonesia and they were divided into two groups. A quasi-experimental design was used. Moreover, a t-test analysis was used to discover the statistically significant difference between two groups. Conclusion revealed that AI-based speech recognition provided more effective approach to enhance the English pronunciation skills as compared to traditional methods.

The study was published by Yolanda Joy Calvo Benzies which was published in 2017 describes Contributions of new technologies to the teaching of English pronunciation. This study showed how students enjoyed using technological tools that they were used to practice their pronunciation. Furthermore, the research paper determined that the results were very gainful regarding use of technological material like apps and websites that help them in enhancing pronunciation skills. In this study over 30 students voluntarily participated, and participants in the pilot study seemed as enjoy using these technological resources, and they had found them useful and helpful for their language development (Benzies (2017).

A research article on 'Speech technologies for pronunciation feedback and evaluation' in which mix method was used. Elven students were participated, and students in the course were middle-aged engineers from different language backgrounds. The target was assigned to them to use 'Talk to Me' program. The data was collected by pre-test and post-test. Questionnaire and charts also were used in this study. The main objective of the study was to investigate the access of speech-recognition-based language learning program could improve standard of pronunciation of middle-aged immigrants who were studied English in Sweden. The Results showed that practice with the program was useful to those students who started the course with a strong foreign accent but was of limited value for students who began the course with improved pronunciation. Hincks (2003)

Research Methodology

This study English pronunciation development through technology for ESL learner is a Quantitative method-based research article. This study is relaying on quantitative method because it requires ESL learners' thoughts about development of pronunciation skills through modern technology in the form of questionnaire. Google form was used for data collection. The data was collected through questionnaire. In this article the simple random sampling is used. The participants were belonging from different departments of Quaid-e-Awam university of science and technology, Nawab shah, Pakistan. There were fifteen undergraduate students' participants mainly, they belonged to final-year undergraduate students of English department.

Findings

The findings reveal that the technology-based tools are an effective support for ESL learners in developing pronunciation skills. The tools focus on providing feedback, appropriate examples and best chance for practice. Moreover, it shows that the ESL students' response toward technology-based pronunciation tools was positive. Overall, finding determined that technology tools are instrumental in providing faster and more effective pronunciation development. Findings reveal that ESL students find moderate affect of technology on speaking having average score (3.75) see in the table. Students thought that there was great effect of technology in their speaking skills having score (3.75), moreover, technological tools, also focus on specific sounds or word with score of (3.60). Additionally, pronunciation enhancement tools give clear examples for correction of pronunciation errors to ESL learners having score (4.00). Interesting thing that ESL learners found that's the technological tools break down complex sounds into manageable units and its very easy for learners to practice the pronunciation skills with core of (4.50). Furthermore, the modern technological tools found to be very helpful in providing gradual guidance to ESL learners. Feedback that play a vital role in pronunciation development because of it the practice became more enjoyable and participants showed best response of the technological tools regarding the feedback for correction of errors with score of (3.60) and it seems from result that these tools providing immediate feedback to learners with score of (4.00). Participants give positive response for tools that offer repeated practice with time to time having score of (4.00).

With practicing of pronunciation with technological tools, they improve pronunciation skills very fast as results show (3.50). findings show that the technological tools adapt current pronunciation level of students (3.60). For those technological tools that has interactive features for helping in correcting mistakes students showed good response for them with score (3.60). Findings reveals with score of (3.60) for challenging to improve beyond current ability of leaners. Score of (3.60) it seems that the tools are helpful for students to focus on difficult words.

Features	Average Rating
Effect on speaking	3.75
Focus on specific sounds or words	3.60
Clear examples of correct pronunciation	4.00
Acts as bridge to improve pronunciation skills	3.40
Break down complex sounds into manageable steps	4.50
Providing gradual guidance to improve accuracy	3.60
Adapt current pronunciation level	3.60
Challenges to improve beyond current ability	3.60
Enables pronouncing previously difficult words	3.60
Facilitate faster improvement	3.50
Encourages repeated practice	4.00
Interactive features helpful in correcting mistakes	3.60
Providing specific feedback on pronunciation errors	3.60
Feedback is constructive and useful	4.25
Offer immediate feedback	4.00
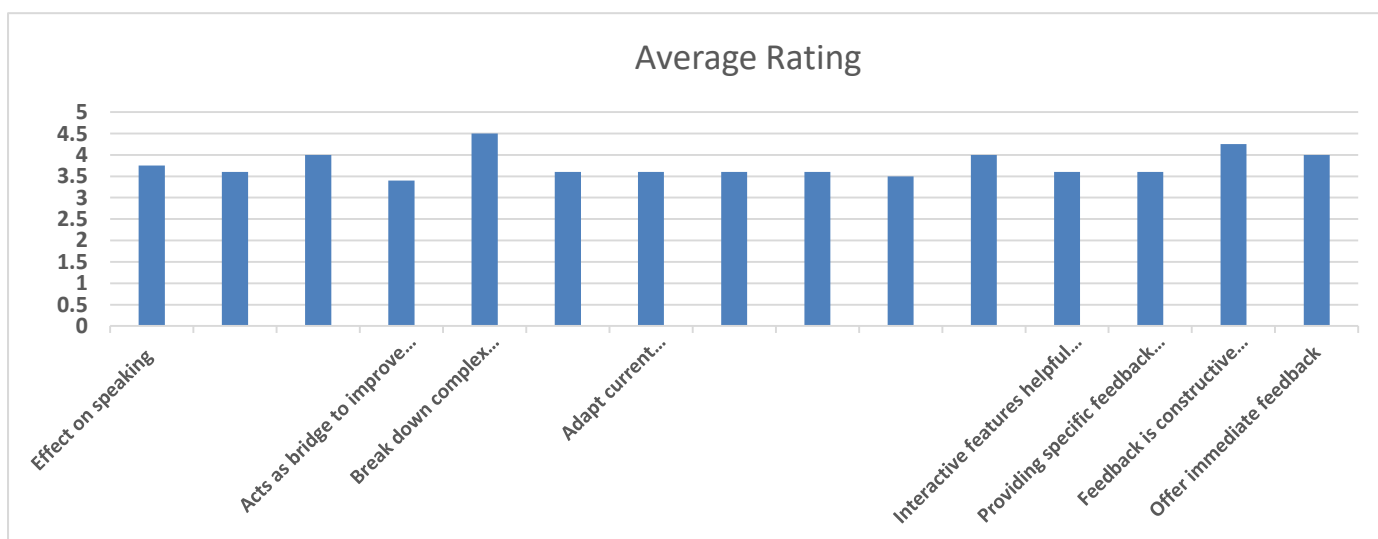
Discussion

This study was based on a questionnaire that showed how technology can be helpful in developing pronunciation skills with rating of (3.40). The data reveals that how ESL learners use technology tools for improving pronunciation. The technology-based tools are largely effective in improving pronunciation skills among ESL learners. Participants appreciate many features such as focus on specific sounds or words, offer immediate feedback, and facilitating faster improvement with average rating of (4.50).

This study suggests that practice is a key aspect of successful pronunciation development, respondents were agreed for this feature with score of (4.00) average ratings. Feedback mechanisms were another key strength, with average ratings score of (4.25). ESL learners emphasizing the immediate nature of feedback. Additionally, the tools provide faster and immediate feedback for

correct pronunciation with average rating of (4.00), and immediate feedback play a crucial role in improvement of any skills, and in the same way, technology play a vital role in providing immediate feedback to learners. Moreover, technology also has features to make pronunciation errors correct with average rating of (3.60).

ESL learner appreciated the feature of repeating practice having average rating of (4.00); practice is only one way of improvement. With repeating practice of pronunciation, the pronunciation will gradually improve. A majority of participants response positively when asked that the technology helps them focus on specific sounds or words with average ratings of (3.60), they find challenging, it means that such tools provide a specific approach to pronunciation practice, according to individual needs.

However average rating of (3.60), the tools become useful regarding breaking down complex sounds into manageable steps. This feature obviously decreases the learner cognition load, and it empowers gradual improvement having score of ratings(3.60). In this study, findings also showed that, the ESL learner gave a positive response to technological tools in their personal learning for development of English pronunciation.

Findings of collected data from students regarding English pronunciation development showed that the participants agreed that the tools enable faster pronunciation improvement than traditional methods. Moreover, many respondents found responsive features, like voice recognition and comparison with native speakers, helpful in identifying and correcting mistakes.

The results showed that the respondents give good rating for tools that provides examples for correction of pronunciation, and it empowers faster pronunciation development.

Finally, according to the results, it investigated that the technology and technological are very helpful for pronunciation development for ESL learner. Additionally, all participants response positively for the tools that can enhance their skills. Findings also reveals that the learner have a strong inclination toward technology in enhancement of their pronunciation skills because these technological tools proved to be productive and helpful for ESL learners.

Conclusion

Finally, according to findings and data, it showed that the ESL learners are interested in using educational technology to enhance their pronunciation skills. ESL learners could improve their pronunciation skills. For ESL learners, educational technology is very helpful for the improvement of their language learning, pronunciation skills, speaking skill, and communication skills. With the help of technological tools, the ESL learners can practice

anytime and anywhere; they can practice their pronunciation and get regular feedback to correct their pronunciation errors. With help of technology, ESL learners can improve their pronunciation skills on daily routine targets.

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Appendix

year	Department	The technology tool helps me focus on specific sound	The tool provides clear examples of correct pron	The technology tool acts as a bridge to improve my pronu	The tool breaks down complex sounds into manageabl	The tool provides gradual guidance to improve	The technology tool adapts to my current pronunciation	The tool challenges me to improve my pronunciation just	Using the tool, I can pronounce words I previously found	The tool enables me to improve faster than	The tool encourages me to repeat and practice sounds	The interactive features (e.g., voice recognition, feedback) are helpful	The tool allows me to compare my pronunciation	The feedback provided by the tool is specific and helps me	I find the feedback constructive and useful for impr	The tool offers immediate feedback that moti

		s or words I find difficult to pronounce.	unciation for me to imitate.	nciation skills effectively.	e steps to help me practice.	my pronunciation accuracy.	level and offers tailored support.	beyond my current ability.	difficult with some practice.	I could with out it.	multiple times for mastery.	in correcting my mistakes.	with native speakers or models.	identify my pronunciation errors.	oving my pronunciation.	vates me to improve.
Third	BS English	4	4	3	4	3	3	3	4	4	4	4	4	4	5	5
Fourth	B.S English	4	5	3	4	4	4	4	3	2	5	4	4	3	5	4
First																
Fourth	English	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Fourth	Bs English	1	2	1	5	2	2	2	2	3	2	1	1	1	2	2
Fourth	BS English	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Fourth	English	4	4	5	4	4	4	4	4	4	5	4	4	4	4	4
Fourth	English	4	4	5	4	4	4	4	4	5	5	4	3	5	4	4
Fourth	BS English	2	1	5	4	5	5	4	5	4	4	4	4	4	5	5
Fou	Electrical	1	1	1	2	1	3	3	2	3	3	3	3	4	5	5

rth	automation and control Engineering															
Fourth	Bs English	2	2	2	2	2	2	1	1	1	1	2	1	2	2	2
Fourth	English	4	3	4	4	4	2	2	2	2	2	4	4	4	4	4
Fourth	Education	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Third	Bachelor of Business Administration	5	5	5	3	5	4	4	5	5	5	5	4	3	4	5