

FROM ACCENTS TO ACCURACY: A LITERATURE REVIEW ON UTILIZING DIGITAL TOOLS FOR PERFECTING PRONUNCIATION

Dr. S. Khaleel Ahamed

Assistant Professor of English, Sadakathullah Appa College, Tirunelveli, Tamil Nadu, India.

Dr. K. Divya Lakshmi (Corresponding Author)

Associate Professor of English, Government Arts College for Men, Nandhanam, Chennai, Tamil Nadu, India.

Abstract:

Comprehending the pronunciation of an unfamiliar word holds paramount importance for English as a Foreign Language (EFL) learners. A non-native speaker has to consider the precise pronunciation of English words while developing Speaking Skills. This Pronunciation part is often overlooked while acquiring proficiency in English. With the introduction of new models and approaches, foreign language instruction has evolved over time. The advancement in technology has taken the domain of Language Learning to a level in which the physical barriers are extinct. With the advent of digital platforms, new and innovative ways to learn a language have taken their places to provide a more accessible, personalized and interactive learning atmosphere. This article aims at providing literatures that give insights on the increased use of digital sources in attaining pronunciation proficiency through sources such as digital dictionaries, language learning apps and online platforms excluding sources such as AI Chatbots, Virtual Classrooms, Gamification and Virtual Reality. These online tools have enabled learners to concentrate on distinct individual sounds, or phonemes, that form words in the English language. Through interactive features and engaging exercises, learners can explore and practice various English sounds, leading to more accurate pronunciation. While the advancements in technology are promising, it is crucial for researchers, educators, and language professionals to continue exploring and evaluating the effectiveness of digital resources. This study aims at conducting an extensive search of academic databases, journals, books, and other reputable sources to identify relevant literature related to language learning, pronunciation improvement, and the use of digital platforms in language education. The key findings and insights from the selected literature will be analysed and synthesised. The literature review will critically evaluate the strengths and limitations of the studies and provide a comprehensive and well-structured review of the literature, highlighting the implications and potential directions for further research in the field.

Keywords: English pronunciation, digital tools, technology, ICT, CAPT, CALL, EFL, mispronunciation.

Introduction

Comprehending the pronunciation of an unfamiliar word holds paramount importance for English as a Foreign Language (EFL) learners. Once they have acquired a new word, knowing its correct pronunciation becomes immensely important as it significantly impacts communication.

Mispronunciation can lead to communication breakdowns, underscoring the need for accurate pronunciation knowledge.(Metruk 2017). A non-native speaker has to consider the precise pronunciation of English words while developing speaking skills. This Pronunciation part is often overlooked while acquiring proficiency in English. And it is no surprise that Pronunciation Instruction is regarded as the "Cinderella area of foreign language teaching" (Kelly, 1969).With the introduction of new models and approaches, foreign language instruction has evolved over time. Because the prominence was on writing and reading skills, the educators used the Grammar-Translation method, which did not emphasise communication (Larsen-Freeman, 1986). The Direct Method and the Audiolingual Method, on the other hand, focused on imitation and repetition. As a result, pronunciation was given priority from the start. With the advent of the Cognitive Approach and the Total Physical Response in the following decades, Pronunciation Instruction fell out of favour (Celce-Murcia, et.al 1996; Celce-Murcia, et.al 2010). The Communicative Approach has been in use since the 1980s. It seeks to develop the communicative ability of the students.

The advancement in technology has taken the domain of Language Learning to a level in which the physical barriers are extinct. With the advent of digital platforms, new and innovative ways to learn a language have taken their places to provide a more accessible, personalized and interactive learning atmosphere. Theinformation and communication technologies (ICTs) are employed in educational settings, specifically in the learning and teaching of English pronunciation, is a significant trend in foreign language study. Similarly, numerous studies have brought to light that the application of computers can be used to practise vocabulary (Bărbuleț, 2013), reading skills (Alkahtani, 1999), writing skills (Krajka, 2000), and pronunciation learning (Alkahtani, 1999).From time to time, ComputerAssisted/Aided Language Learning (CALL) programmes are blueprinted to support English language learners by facilitating the acquisition of vocabulary and the development of speech sounds through engaging games(Young & Wang, 2014). Jones (1997), for example, reported that software and websites offer and follow a variety of Native/English accents from which one can choose. ICTs can help with pronunciation because online resources allow students to repeat as well as practise the sounds any number of times they need to (Pennington, 1999).CALL Programme development has proven to be critical in the English as Foreign Language/English as Second Language Classrooms. According to Llisterri (2007), over the last few decades, research has emphasized the importanceof pronunciation, which has been largely overlooked in the realm of learning foreign languages, eventually leading to the development of Computer-Assisted Pronunciation Training (CAPT). In other words, researchers investigated how modern technological tools could help EFL/ESL students improve their pronunciation. The introduction of CALL Courses greatly assists facilitators and learners in achieving Target Language skills in general and Target Pronunciation in particular. Language Laboratories use specialised software to teach listening skills. CAPT is yet another concept that has the potential to advance phonetic instruction. Voice commands (Automatic Speech Recognition) in smart devices may provide an ideal training ground for learners to achieve the Target Pronunciation.Language Learning Apps, Digital Dictionaries, AI Chatbots, Virtual Classrooms, Gamification and Virtual Reality also come in handy for the purpose.In the realm of

pronunciation teaching and learning, Gilakjani and Ahmad (2011) point out the presence of "a dearth of substantial research."

This article aims at providing literatures that give insights on the increased use of digital sources in attaining pronunciation proficiency through sources such as digital dictionaries, language learning apps and online platforms excluding sources such as AI Chatbots, Virtual Classrooms, Gamification and Virtual Reality. The paper will try to answer the following questions:

- i. What technologies do learners use in learning English Pronunciation?
- ii. To what extent has the technology risen in the domain of Language Learning?
- iii. What have been the positive results of using technology in learning English Pronunciation?

Literature Search Methodology

The methodology of the article is to present an overview of theories and models related to language learning, pronunciation acquisition, the importance of pronunciation accuracy for effective communication and the use of technology by

- Exploring the evolution of digital platforms in language education.
- Highlighting the advantages and potential drawbacks of using technology for pronunciation improvement.
- Introducing different types of digital pronunciation learning platforms (e.g., mobile apps, digital dictionaries, online platforms).
- Summarizing the pedagogical implications of the reviewed literature for language educators and instructors.
- Offering practical recommendations on integrating digital language learning platforms effectively into language teaching for pronunciation enhancement.

Databases such as ResearchGate, Google, Google Scholar, Springer Nature, etc., have been used to conduct the literature search. Additionally, sources like digital dictionaries, language learning apps, and online platforms have been surveyed.

Language Learning and Pronunciation Acquisition

English pronunciation is deemed to be one of the most arduous skills to acquire, necessitating a considerable investment of time for students to master it (Aliaga García et al., 2006 and 2007). Ensuring that pronunciation is comprehensible and intelligible is of utmost significance in teaching a foreign language. It stands as one of the fundamental requirements that learners must attain to achieve competence. According to Fraser (2000), it is essential to offer teachers courses and resources to enhance their proficiency in teaching pronunciation. Meanwhile, Cook (1996), as

cited in PourhoseinGilakjani (2016), defines pronunciation as the process of producing English sounds. Learning pronunciation involves repetition of speech sounds, evaluating them, and making necessary corrections when they are inaccurately produced. As students embark on their journey of learning pronunciation skills, they gradually cultivate new habits and surmount obstacles arising from their first language (L1).

According to Yates (2002, cited in PourhoseinGilakjani, 2016), pronunciation is the act of articulating speech sounds to convey meaning. Otlowski (1998) states that pronunciation involves using an accepted method to utter a word. However, Harmer (2001) highlights that many instructors fail to give adequate attention to teaching English pronunciation, and there are various reasons for this lack of emphasis. Many students also perceive that learning of pronunciation is not necessary and that it is simply pointless. They argue that communication in English is enough and that nothing else deserves spending time on.

Harmer (2001) says, the first thing noticed during a conversation between a native and non-native speaker is pronunciation. Grammar and vocabulary are also deemed to be important aspects of language, but they are rendered ineffective if the speakers could not pronounce words precisely. Despite grammatical errors, native speakers can understand people when they use correct pronunciation. Correct pronunciation ensures communication efficiency. Pronunciation is essential in communication; without proper pronunciation, no one can claim to be fluent in the English language.

According to Morley (1991), teachers should not teach but rather they should facilitate the learning of pronunciation. Teachers serve as coaches, speech coaches, and pronunciation coaches. The teachers shall serve as pronunciation coaches and their critical role is to check and guide while speaking English at two levels such as production of speech sounds and performance.

There are several suggestions to EFL/ESL teachers regarding helping and motivating students in improving their English pronunciation. To improve the English pronunciation of the students, the EFL/ESL teachers should get training pertaining to accurate pronunciation (Shahzada, 2012). In their pronunciation classes/training sessions, the EFL/ESL teachers shall speak in a clear and slow manner, in order to convince their students that their pronunciation is intelligible. According to Bradley-Bennett (2007), giving careful attention to pronunciation could significantly aid students in enhancing their speaking skills. Teachers should emphasize to their students that speaking slowly with precise pronunciation is preferable to speaking quickly with incorrect pronunciation. RasekhiKolokdaragh (2010) suggests that learners need to recognize that being intelligible is more crucial than speaking at a fast pace.

According to RasekhiKolokdaragh(2010), teachers shall make use of computers and related technologies, vis a vis, various types of software, to assist their students in enhancing their pronunciation. When they are exposed to authentic materials, use of technology becomes

effortless. RasekhiKolokdaragh (2010) says, teachers play a crucial role in familiarizing their students with both American and British English accents. Additionally, students should strive to comprehend both styles of pronunciation. To achieve this, teachers should assimilate pronunciation instruction into other language activities. This approach helps students become acclimated to the sound systems of the language they are learning and enables them to overcome pronunciation issues associated with English language acquisition.

According to Thanasoulas (2002), teachers shall serve as pronunciation coaches. They shall also provide their students pertinent feedback and stimulate them to enhance their pronunciation skills. Bearing these in mind, the researcher finds it necessary to create awareness on the significance of pronunciation and decides to take up this research that shall throw more light on the nuances of English pronunciation. The researcher also believes the prosodic analyses of the videos to be done in the chapters to come could help precisely locate the places of deviations in terms of English pronunciation by a non-native speaker. Such recognitions may also help ESL/EFL teachers identify the needs of the learners. The case study will try to find pronunciation problems that are very specific to the learners of the region which the researcher belongs to.

The Rise of Digital Language Learning Platforms

In the domain of language learning, the responsibility for innovation has largely rested on the initiative of individual teachers, sometimes in isolation (Gaballo, 2019). An effective approach to digital teaching and learning involves the convergence of pedagogy, methodology, and technology (Gaballo, 2019). Over the past decade, digital technologies have progressed significantly, driven by advancements in artificial intelligence (AI) and big data analytics. These developments have profoundly impacted human behavior, including language learning. Consequently, Digital Language Learning (DLL) has emerged as both an educational practice and a scientific field of study (Li, P., & Lan, Y. 2022). With the rapid evolution of technology-enhanced education and AI-driven innovations, DLL has become an exemplary interdisciplinary domain, serving as a bridge between language science, society, and industry (Li, P., & Lan, Y. 2022). For instance, some commercial products like Rosetta Stone have already begun exploring the integration of automatic voice recognition into their systems, allowing learners to receive real-time feedback on their pronunciation accuracy (Li, P., & Lan, Y. 2022).

The advent of new technologies with their multimodality and personalized, self-paced learning opportunities, complemented by automated feedback on performance, has proven particularly advantageous for pronunciation instruction (Pennington & Rogerson, 2019). Integrating computers in English classes enhances the effectiveness of pronunciation teaching for teachers and makes the overall learning experience more enjoyable for learners (Gilakjani et al., 2017). However, it is vital for educators not to rely solely on technology as a motivator; instead, it should be carefully incorporated alongside sound educational considerations (Ilter, 2009).

Despite the numerous advantages of computer technology, there are still limitations and disadvantages (Gips, DiMattia, & Gips, 2004). Students who are not familiar with computers may not benefit from its advantages (Roblyer, 2003). Additionally, the artificial intelligence of current computer technology is unable to address learners' unexpected learning difficulties and provide immediate responses to questions like human teachers can (Lai & Kritsonis, 2006). It's worth noting that while advancements in artificial intelligence and natural language processing have been made, as of September 2021, there were still certain limitations in the ability of computer technology to handle these aspects like human teachers.

While some areas of computer technology, such as reading, listening, and writing skills, have been well-developed for language learning (Lai & Kritsonis, 2006), AI-based computer programs, like ChatGPT for essay writing and DALL-E for generating artistic images (as stated by Zhao, 2023), suggest that computers are increasingly capable of performing human-like creative tasks.

Effectiveness of Digital Platforms for Pronunciation Improvement

Indeed, there is a diverse array of technologies and specialized software dedicated to pronunciation teaching and learning. Speech technologies have also found valuable applications in pronunciation pedagogy and assessment, offering remediation solutions for individuals with phonological impairment (Martha & Pamela, 2019). These advancements have significantly enriched the field of language education, providing innovative tools to enhance pronunciation instruction and support learners in honing their pronunciation skills effectively. *Learn English Sounds Right* is an online tool created by the renowned organization, the British Council, which specializes in English language education and cultural relations. Its primary purpose is to assist learners in enhancing their English pronunciation by concentrating on phonemes – the distinct individual sounds that form words in a language. The tool presents an interactive phonemic chart, allowing learners to explore and practice various English sounds. Similarly, the *Interactive Phonemic Chart* by English Club is another valuable online resource designed to support English learners in refining their pronunciation skills. Like the British Council's tool, this resource also focuses on phonemes and employs International Phonetic Alphabet (IPA) symbols.

On the other hand, *English File* represents a comprehensive series of English language learning coursebooks and resources developed by Oxford University Press. It offers learners a comprehensive language development experience, addressing various aspects of language learning such as grammar, vocabulary, listening, speaking, reading, and writing. This well-rounded approach equips learners with a holistic understanding of the target language and enhances their overall language skills.

In the present era, every youngster displays a natural inclination towards digital technology and possesses substantial knowledge about it (Walker & White, 2013). Thus, technology holds a lot of resources that are available for the present learners only a touch of the button away. These

resources serve as valuable additions to the language learner's toolkit, empowering them to improve their English pronunciation and phonetic awareness. The interactive tools facilitate targeted practice of different sounds and the recognition of minimal pairs, thus fostering learners' confidence in spoken English. By incorporating pronunciation practice within a comprehensive language learning programme such as English File, learners can achieve a more holistic language development journey.

The utilization of electronic dictionaries has shown to enhance students' pronunciation and vocabulary usage skills (El-Sawy, 2019). Digital dictionaries play a crucial role in improving pronunciation by providing various resources such as audio pronunciations, phonetic transcriptions, and interactive exercises. These tools help learners and speakers of a language enhance their pronunciation skills effectively. In the contemporary digital era, the use of dictionaries, particularly electronic ones, has become an inseparable and indispensable aspect of successful language learning for the vast majority of English as a Foreign Language (EFL) learners (Metruk, 2017). Electronic dictionaries have proven to be a valuable resource for practicing and enhancing pronunciation skills (Metruk, 2017). Moreover, dictionaries designed for English native speakers can also be utilized by second language (L2) learners, especially those who have attained a good level of proficiency in L2 and aspire to become proficient users of English (Metruk, 2017). Consequently, electronic dictionaries have established their significance in pronunciation instruction, offering an effective tool for EFL learners to practice and improve their pronunciation abilities (Metruk, 2017).

Additionally, phonetic transcriptions in digital dictionaries represent the pronunciation using specific symbols, aiding learners in understanding the phonetic aspects and producing the correct sounds more proficiently. The interactive pronunciation exercises available in these dictionaries allow users to repeat words or sentences and receive feedback on their accuracy, enabling them to practice and improve their pronunciation in a controlled setting. Moreover, the option to slow down audio pronunciations in digital dictionaries assists learners in identifying individual sounds, syllables, stress, and intonation patterns facilitating the proper emulation of correct pronunciation.

Addressing the persistent issue of pronunciation, digital technology presents numerous innovative opportunities for EFL/ESL learners, offering personalized and effective learning approaches (Blake, 2013; Liakin et al., 2015). Comparatively, students exposed to digital technology tools tend to acquire better pronunciation skills than those taught through conventional methods (Mohd Nasim et al., 2022). In the realm of English language teaching, digital technology plays a significant role, ushering in educational reform and exploring new teaching models for the modern era. Extensive evidence supports the positive impact of digital technology tools in enhancing students' learning experiences and improving their pronunciation effectively (Mohd Nasim et al., 2022).

Furthermore, there are significant pedagogical advantages for teachers, as digital technology allows teaching to be learner-centered and learning-centered, moving away from the traditional teacher-centered approach (MohdNasim et al., 2022). Notably, students exhibit a positive attitude towards these tools and techniques, as they empower them to gain confidence and autonomy in English pronunciation (Mohd Nasim et al., 2022). Pennington (1999) found that Computer-Aided Pronunciation (CAP) surpasses Human-Aided Pronunciation (HAP) instruction, such as having a human pronunciation coach or a phonetician assisting learners.

Conclusion

The findings from the analysis of the literature reviews exhibit the significant advancements in using technology to attain precise pronunciation in the process of language learning. To support the learners in enhancing their English pronunciation skills, digital tools, such as electronic dictionaries, language learning apps, and online platforms have emanated as valuable resources. Among the notable tools, *Learn English Sounds Right*, developed by the British Council, and the *Interactive Phonemic Chart* by English Club, have proven particularly effective because of their focus on phonemes and the use of the International Phonetic Alphabet (IPA) symbols.

These online means have enabled learners to concentrate on distinct individual sounds/phonemes, that form words in the English language. Through interactive features and engaging exercises found in the digital tools, learners can explore and get valuable individual practice of various English sounds, leading to more accurate pronunciation. The amalgamation of audio pronunciations, phonetic transcriptions, and interactive exercises in digital dictionaries has also played a crucial role in supporting learners on their journey towards pronunciation perfection.

As the technology and its landscape continue to evolve, the capabilities of technology-based pronunciation tools will see a potential expansion. The prospective scenario will demonstrate even more innovative and effective ways to assist language learners. Nevertheless, it is crucial to acknowledge that technology could never substitute/replace the traditional teaching methodologies but rather serve as an empowering tool that would facilitate effective Teaching Learning Process. Enhancement of the teaching approaches and providing more engaging and curated learning experiences can be achieved by integrating technology by the teachers. On the other hand, learners can benefit from the personalized resources, interactivity, and coziness that technology offers. Striking a balance between traditional teaching methods and technology integration can lead to a more effective and well-rounded educational experience.

The evolutions in technology are promising. However, it is crucial for researchers, educators, language professionals and enthusiasts to continue exploring and validating the effectiveness of other digital resources such as AI Chatbots, Virtual Classrooms, Gamification and Virtual Reality. Further research is needed to determine the long-standing impacts of these tools on language learners' pronunciation skills and to diagnose likely areas for enhancement.

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Data Availability Statement

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.