

EXPLORING STUDENTS' USE OF ICT TOOLS TO ENHANCE THEIR RECEIVED PRONUNCIATION (RP): FIRST YEAR L.M.D STUDENTS AT THE UNIVERSITY OF EL OUED AS A CASE STUDY



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Abstract

This paper examines first-year L.M.D students' use of Information and Communication Technologies (ICTs) to enhance their Received Pronunciation (RP). Using a mixed-methods approach, the study combined a structured classroom observation with a reflective questionnaire to gather both quantitative and qualitative data. Descriptive statistics were used to analyse quantitative data, while thematic description was used for qualitative data. The study demonstrated that students frequently use ICT tools in task-oriented situations, neglecting self-paced use, which promotes fluency. The results, then, revealed that although students' use of these tools facilitates focused Received Pronunciation practice, it doesn't have long-term effects on pronunciation fluency unless used appropriately as part of self-autonomous learning. To address this gap, students should be provided with digital literacy to understand the methodological and strategic use of ICT tools, enabling them to achieve

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broader and long-term educational goals.

Keywords: Received Pronunciation (RP), Information and Communication Technologies (ICTs), mobile learning, language learning

Introduction

Pronunciation is a critical component of language proficiency. It remains a foundational aspect of second and foreign language acquisition, influencing both intelligibility and confidence in oral communication. The role of pronunciation in education is, thus, a crucial component of learning a language. It is the key to communicating effectively and confidently in any language. In the context of learning English as a second or foreign language (ESL/EFL), proper pronunciation enhances learners' confidence when using the language and leads to better understanding on the part of recipients. Such practice enables learners to produce sounds accurately and fluently and understand the sounds of the language as used by native speakers. Accordingly, their communication stability is increased, and a good understanding of English, being the target language, is developed. Broughton (2003) demonstrated this, stating that the teaching of pronunciation must always be arranged in the context of using native languages to become proficient in understanding and speaking. Conversely, poor pronunciation may lead to misunderstandings and communication breakdowns, which can be embarrassing and frustrating for language users.

Practically, to access native speakers' samples easily, ICTs have become essential tools. It provides learners with various digital tools and resources, such as online dictionaries, websites, tutorials, and electronic courses, to help them learn a language. Thus, it allows learners to access authentic language resources, such as audio and video recordings of native speakers, and to connect with native speakers of a language through online forums. It provides more interactive, visual, and engaging ways to learn a language.

Aligned with the context of the present research, although less commonly used today, Received Pronunciation (RP) remains a prestigious and widely studied accent model in English language education. With the growing availability of ICT tools, learners have increasing access to resources designed to aid pronunciation practice. Thus, they now have increased autonomy and resources to develop their pronunciation skills inside and outside the classroom. This paper examines how first-year university students employ various ICT tools when engaged in classroom

pronunciation tasks and their preferences and frequency for using such tools outside the classroom. Accordingly, the paper investigates the suitability and effectiveness of using mobile applications, online dictionaries, YouTube tutorials, phonetic transcription platforms, online audio pronunciation books, and automatic speech recognition (ASR) programs to enhance their RP Pronunciation.

1. Literature Review

The role of technology in language learning, particularly in improving pronunciation, has received significant and growing attention in scholarly works. Recent studies emphasize the pedagogical value of ICTs in language learning, especially in pronunciation training. Tools such as speech recognition apps, phonetic transcription platforms, and audiovisual enable multimodal engagement with language. Dave et al. (2024) demonstrated undergraduate students benefits from using ICT in the classroom. Their study emphasized that the usage of the online dictionary in classroom teaching had a good impact on the students' pronunciation.

Thi-Nhu Ngo et al. (2024) conducted a meta-analysis study to explore the effectiveness of automatic speech recognition (ASR) on the pronunciation performance of ESL/EFL students. Their study demonstrated that ASR is moderately more effective in ESL/EFL pronunciation learning than the non-ASR condition. The study also argued that ASR offering explicit corrective feedback is more effective in enhancing pronunciation than ASR that only provides transcribed words. This study aligns with body of research that confirmed similar results and recommended ASR programs with explicit corrective feedback for use in classrooms to foster students' pronunciation development (Neri et al., 2006; Saito, 2007, 2011, 2013; Hincks, 2015). However, Thi-Nhu Ngo et al. (2024) proved a negligible and limited effect of ASR on suprasegmental features of pronunciation, such as stress and intonation, compared with a significant impact on segmental features.

An experimental study by Edupulapati et al. (2023) asserted that learners achieve higher pronunciation performance when using ICT and AI tools compared with traditional methods. Their experiment particularly evaluated Speakometer, an AI-enhanced English pronunciation app, and revealed substantial gains in discrimination, sound perception, and production. ICT and AI tools support pronunciation accuracy through auditory modelling and personalised, interactive feedback. In addition, Bu

et al. (2021) employed and evaluated Pronunciation Teacher (PTeacher), a Computer-Aided Pronunciation Training (CAPT) that offers personalised exaggerated audio-visual corrective feedback for mispronunciations. Their study claimed that PTeacher significantly helped learners rectify mispronunciations and promoted their learning efficiently. Mahmood (2024) also investigated the effect of visual corrective feedback techniques on improving pronunciation accuracy on a sample of ESL learners from various countries and L1 backgrounds. His study revealed positive learner attitudes towards visual corrective feedback tools, emphasizing their motivational and remedial influences on pronunciation improvement. It also showed a significant correlation between the use of these tools and enhanced vowel production accuracy.

Mphahlele and Nel (2019) investigated the use of ICTs as a support method for students with trouble in reading by examining how ICT helps solve reading difficulties. They proposed an outline of how ICTs can be used to aid struggling readers with their phonics education. They highlighted the different applicable ways of ICT' use that facilitate such training and the importance of phonics instruction for reading growth and tests. Their study demonstrated the effectiveness of various ICT methods to increase the efficacy of phonics instruction. Such methods included offering more interactive and engaging ICT-based activities, enabling greater individualization of instruction and more effective assessment, and providing opportunities for phonics skill practice in various contexts.

Winn et al. (2020) confirmed the significance of using software programs in making teaching phonemic awareness and phonics easier. In their research, they emphasised ICT-based ideas, such as using technology to offer visual and auditory signals, opportunities for practice and assessment, and love for customized instruction to improve phonological awareness and phonics training. Along the same lines, the development of kindergarten pupils' phonemic awareness through technology-based interventions was covered in Brown (2019).

Thi Thu Ha and Hao (2021) conducted a literature review based on research on computer-assisted language learning (CALL) to investigate the benefits of ICT use in teaching English pronunciation. They drew conclusions through direct and indirect review, reviewing more than 190 studies that confirmed the positive effects of computer use on learners' language skills. Their study proposed evaluating ICT tools that are potentially used in teaching English pronunciation, as a first step in

employing ICTs in classrooms. To fulfil this, they suggested Yang and Chan's (2008) criteria: Effectiveness of the site; interaction of graphics with texts; enhanced information delivery; good organization; thought-provoking; accurate, reliable and engaging information; correct pronunciation; appropriate intonation; good quality of sound and pictures; free of bias content (gender, race, religion, etc.); frequently updated information; comprehensive coverage; efficient and quick downloading; usual accessibility and free-of-charge downloading; interactive opportunities. Thi Thu Ha and Hao (2021) concluded that with the selection of effective and reliable ICT tools, English pronunciation can be enhanced and that the time and effort devoted to teaching with computers are well worth investing in. However, few studies focused specifically on the use of these tools for RP learning, a standard often required in formal and academic settings. In the context of our study, few research assessed the impact of the way students use these tools on their RP. Accordingly, this paper will add to the body of research, providing a data-driven perspective on university students' use of ICT for RP development.

2. Methodology

2.1. Research Method and Design

The present study is a mixed-method approach. Both quantitative and qualitative methods are used. This design is significant to provide a comprehensive understanding of the ways of students' use of ICT tools in pronunciation tasks and account for such use in terms of benefits and misuse.

2.2. Participants

The study involved 230 first year L.M.D students at the university of Echahid Hamma Lakhdar of El Oued, in Algeria. The participants were enrolled in Phonetics course and they were selected based on convenience sampling. The participants were the researcher's students, and hence they were readily available. The students were sampled according to their grouping in their ordinary sessions, in six groups, over a period of 12 weeks.

2.3. Data Collection Tools

A structured observation was designed to observe students' use of ICTs during their ordinary sessions over a 12-week period, one and half an hour per week. The observation was held in each of the six groups, resulting in six observation checklists that have the same purpose. The observation was accompanied with a reflective questionnaire that was

administered at the end of the period to gather reflections on tool preferences, usability, frequency, and perceived effectiveness.

2.4. Data Analysis

The data collected was analysed using both quantitative and qualitative methods. Numerical data from the structured observation and the questionnaire were analysed quantitatively using descriptive statistics such as numbers and percentages. The observed behaviours and the students' responses to the questionnaire items were further accounted for and analysed qualitatively by interpreting their effects on the students' actual use of RP. Such qualitative analysis brought about insights into the use of ICT tools in the context of first-year students learning RP and the impact of such use on enhancing their RP-focused practice and RP fluency.

3. Results

The data gathered tracks three main ICT tools used by the participants in the classroom. They are in a sequence of frequency of use: 1. mobile applications, 2. online dictionaries, and 3. YouTube tutorials. The structured observation revealed that 75% of the students frequently used mobile applications, including Pronunciation, Learn Pronunciation, Quick Pronunciation, EPhonetics, Pronunroid, English Phonetics, Elsa Speak, BBC Learning English, Sounds by Macmillan, Speechling, and Forvo. The teacher already suggested some of these applications in initial sessions when students asked for RP-based applications to avoid using American pronunciation apps. The observation also showed that 30% of students use online dictionaries, such as Cambridge and Macmillan, with 15% also using mobile applications. Only 15% used YouTube tutorials, with 5% of them using them in conjunction with mobile apps. The results are shown in Table 1 below. Regarding the medium used, most students used their smartphones, while a few used tablets, indicating a preference for mobile learning among students (see Table 2).

Table 1

ICT Tools Used by First Year Students in RP Focused Classroom Tasks

Category	Number of Students	Percentage
1. Use of YouTube tutorials	36	15%
2. Use of online dictionaries	72	30%

3. Use of mobile applications	180	75%
4. Use of phonetic transcription platforms	00	00%
5. Use of online books with audio tapes	00	00%
6. Other (s)	00	00%

Table 2

Devices Used by First Year Students in RP Focused Classroom Practice

Devices	Number of students	Percentage
Phone	220	95.65%
tablet	20	8.69%
laptop	00	00%

In addition to the observed features above, the teacher intentionally observed the students' use of the language to investigate the fluency of their pronunciation. The results showed that, despite the students' success in completing accuracy-focused practice tasks with the help of ICT tools, they struggled to master their RP accent well when answering oral questions, asking questions, or reading aloud. To test their fluency, the teacher intentionally asked the students some simple questions to reply orally and requested them to read instructions for tasks or extracts from handouts to observe their RP accents.

The results obtained from the questionnaire also showed positive attitudes toward the use of ICT for improving students' pronunciation. The participants agreed to various degrees on the use of ICT tools when learning RP accent. 87.5% of the respondents reported that they found online dictionaries helpful in acquiring the correct RP. All of them reported that they preferred using ICT tools over traditional classroom methods for learning pronunciation. YouTube tutorials make it easier for them to imitate RP sounds, and mobile applications help them track their pronunciation progress. 82.5% of the students stated that the feedback they received from ICT tools was accurate and helpful, and 67.5% felt more confident in their RP after using these tools regularly.

Table 3

Online Dictionaries Are Helpful in Learning the Correct RP

	Number of Students	Percentage
Agree	175	87.5 %
Neutral	25	12.5 %
Disagree	00	00 %

Table 4

YouTube Tutorials Make Easier the Imitation of RP Sounds

	Number of Students	Percentage
Agree	200	100 %
Neutral	00	00 %
Disagree	00	00 %

Table 5

Mobile Applications Help Track Pronunciation Progress

	Number of Students	Percentage
Agree	200	100 %
Neutral	00	00 %
Disagree	00	00 %

Table 6

ICT Tools Preference Over Traditional Classroom Methods for Pronunciation

	Number of Students	Percentage
Agree	200	100 %
Neutral	00	00 %
Disagree	00	00 %

Table 7

The Feedback Received from ICT Tools Is Accurate and Useful

	Number of Students	Percentage
Agree	165	82.5 %
Neutral	35	17.5 %
Disagree	00	00 %

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	Always		Often		Sometimes		Rarely		Never	
	Number	%	Number	%	Number	%	Number	%	Number	%
I use ICT tools in classroom focused practice	160	80%	25	12.5 %	15	7.5 %	00	0%	00	0%
I use ICT tools outside classroom context to enhance my pronunciation fluency	7	3.5 %	20	10%	35	17.5 %	73	36.5 %	65	32.5 %

Table 8
Regular Use of ICTs Helps Improve Confidence in students' RP accent

	Number of Students	Percentage
Agree	135	67.5 %
Neutral	65	32.5 %
Disagree	00	00 %

As for the frequency of ICT tools used by first-year students learning RP, the results show fluctuating rates. Concerning the use of these tools in classroom-focused practice, students stated that they always, often, or sometimes used them in such a setting, with varying degrees of 80%, 12.5%, and 7.5%, respectively. However, these degrees decrease in favour of the rare and never use of these tools outside the classroom context to enhance pronunciation fluency. When asked about their use of ICTs outside classrooms, 36.5 % of the students stated they rarely use them, 32.5 % never use ICTs to enhance pronunciation outside the classroom setting, 17.5 %, 10 %, and only 3.5 % respectively stated they sometimes, often, or always use ICTs as part of their autonomous learning routine.

Table 9
Students' Reflection on the Frequency of their Use of ICT Tools in Classroom Focused Practice and Outside Classroom Context to Enhance Pronunciation Fluency

The questionnaire items related to the use of ICT tools by the students then moved to specific tools used outside accuracy-focused pronunciation practice, i.e., students' use of some ICT tools for enhancing pronunciation

while engaging in various activities, such as revision and practising English. As to the students' use of speech recognition features (voice input in Google Translate and AI assistants) to check their RP pronunciation when revising or preparing for class presentations, the results reveal that it is not a widely common habit among students, 50.5 % stated they rarely to never do it, with 40% and 12.5% respectively. 22.5% of the respondents reported that they sometimes did, and 17.5% and only 7.5%, respectively, stated they often or always did.

Table 10
The Students’ Reflection on the Frequency of their Speech Recognition Features Use

	Always		Often		Sometimes		Rarely		Never	
	Number	%	Number	%	Number	%	Number	%	Number	%
I use speech recognition features (voice input in Google Translate, AI assistants) to check my pronunciation when I revise or prepare for a presentation for a class	15	7.5 %	35	17.5%	45	22.5%	80	40%	25	12.5 %

The students may also be exposed to accurate RP accents while watching lecture-based YouTube tutorials, i.e., they follow various lecture contents while simultaneously listening to sound RP accents. When asked how often they do so, our respondents' answers varied. The majority, equal to 40%, said they rarely did, while 23% stated they sometimes did. 13.5%, 12.5%, and 11% reported, respectively, that they often, always, and never did.

Table 11
The Students’ Reflection on their Use of YouTube Tutorials to Receive Accurate RP while Watching Lessons

	Always		Often		Sometimes		Rarely		Never	
	Number	%	Number	%	Number	%	Number	%	Number	%
I watch lesson based YouTube tutorials and listen to accurate RP while watching	25	12.5 %	27	13.5 %	46	23%	80	40 %	22	11 %

my various
subject lessons

YouTube has become a rich source of comprehensive lessons in various subjects. Students typically opt for YouTube-based lessons to enhance their understanding of the academic subjects they study. Watching and carefully listening to those lessons may also contribute to improving the accent of English used. In this respect, the participants were asked about the frequency of their care on RP as they watched YouTube lessons. The results showed that most students generally didn't balance watching and listening with careful attention to pronunciation; they focused on the content of the lesson rather than the accent used. As displayed in Table 11, 40% of the students rarely paid attention to RP while watching YouTube lessons, while 11% never did. 46% stated they sometimes engaged in careful listening of RP accent while watching, whereas 13.5% and 12.%, respectively, reported they often and always do.

Table 12
The Students’ Reflection on their Use of Free Mobile Apps and AI-based Apps while Using English

	Always		Often		Sometimes		Rarely		Never	
	Number	%	Number	%	Number	%	Number	%	Number	%
I use free mobile apps and AI-based apps while using English.	45	22.5 %	50	25%	64	32%	00	00%	39	19%

Mobile apps have been increasingly developing, incorporating a variety of highly advanced online and offline pronunciation apps. What adds to its highly technological innovation is the AI apps that serve as a private tutor, guiding students exhaustively and responding to all their questions and concerns. Both apps, free and AI-based, are valuable and viable and can be used easily by students. In the context of this questionnaire, the students were asked about their use of these apps. The results showed that there was frequent use of these apps over the ICT tools mentioned in the previous questionnaire items. The majority, comprising 32%, 25%, and 22.5%, respectively, state that they sometimes, often, and

always use these apps. Only 19% state they never use them, and none state a rare frequency of use.

Table 13
The Students’ Reflection on their Use of Paid Mobile Apps and AI-based Apps while Using English to Receive Feedback and Adjust their Speech Accordingly

	Always		Often		Sometimes		Rarely		Never	
	Number	%	Number	%	Number	%	Number	%	Number	%
I use paid mobile apps and AI-based apps while using English to receive feedback and adjust my speech accordingly.	00	00%	00	00%	00	00%	00	00%	200	100 %

Despite their efficacy, free mobile apps and unpaid AI-based apps often lack many features compared to their paid versions, and the services available for unpaid use remain limited in comparison to upgrading to a premium membership. Paid mobile apps and AI-based ones involve extra services and constant feedback that the students can always rely on in the competency and fluency of their pronunciation. Accordingly, the regular use of these apps is effective when used conveniently for enhancement and progression rather than just as a tool to accomplish a targeted task. Regarding our participants’ use of these paid tools, all of them stated they never used them.

While the students agreed on the benefits of ICTs for improving pronunciation, their frequency of using them outside classrooms didn't reflect that. Although they see ICT tools as beneficial, they didn't exploit them as much as required to enhance their RP fluency.

4. Discussion

The findings of this research demonstrate the importance of ICTs in supporting pronunciation practice and the students' preference for their use over using traditional tools. Online dictionaries offer clear audio input with phonetic transcription. YouTube tutorials provide dynamic and contextualised models, allowing learners to engage with both auditory and visual cues. Mobile apps and AI-based apps offer structured feedback. The observed students opt for using smartphones over other ICT devices in the classroom. As for the tools used, they respectively use mobile apps, online

dictionaries, and YouTube tutorials when engaged in guided pronunciation tasks.

Despite their success in accomplishing the pronunciation tasks effectively with the help of ICT tools, the students don't reach such a level of success or enhanced pronunciation when using the language freely in the classroom. In other words, their authentic language use doesn't reflect the level of improved pronunciation they show in guided practice; the effect of ICT use in such a situation is thus temporal.

The students acknowledge the benefits of ICT tools in imitating native speakers' accents, tracking their pronunciation progress, providing them with accurate and beneficial feedback, and improving confidence in their RP accent. However, their frequency of using them doesn't reflect the required use of such claimed outstanding tools. Providing that a tool is of such benefit, its use should be regular and frequent to guarantee more efficient results. Based on the results of the observation and the questionnaire, the students' use of ICTs is usually limited to accuracy-focused classroom practice rather than constant use that promotes pronunciation fluency.

Accordingly, it is concluded that despite their awareness of the significant benefits ICT tools provide, the students' don't employ them appropriately to enhance RP as they mostly use them to perform classroom tasks. Such use of these tools doesn't guarantee long-term effects; it doesn't lead to improving their pronunciation fluency, and thus, the stated benefits remain temporary, and the students don't feel the confidence they desire. Hence, it is essential for the students to systemize their use of ICTs, following predefined long-term objectives rather than short-term ones as they do.

Conclusion

In this digital era, technology provides us with innovative and rapidly evolving pedagogical support. The research has demonstrated the effectiveness of using ICT tools for enhancing RP, offering students vast opportunities for learning through exposure to native RP accents and providing them with constant feedback, contributing to their confidence. However, the study has shown that the students predominantly use these tools merely to complete assigned academic pronunciation tasks. This limited and task-oriented use indicates that students are not fully exploring or engaging with the broader educational potential of these technologies. They succeed in accomplishing assigned

tasks but fail to enhance their RP fluency, which ICTs may help them with if used correctly. To reach the broad results of ICTs and gain long-term benefits that promote pronunciation fluency, students should use ICTs more responsively and systematically. Institutions and educators should also foster digital literacy and promote a more proactive and creative use of ICTs in academic settings.

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