

The Use of Computer Assisted Pronunciation Training in Teaching English Pronunciation for First-Year EFL Students at Saida University

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ABSTRACT

The present research work investigates the use of Computer Assisted Pronunciation Training in teaching English pronunciation for first-year EFL students at the department of English language and literature, Saida University, Algeria. It also aims to provide a cursory account of the vital place of Information and Communication Technology in developing the linguistic skills of English foreign language learners in particular and the learning process in Algerian universities in general. The topic is an original contribution in the Algerian context since there is a scarcity of studies related to the teaching of English pronunciation through the use of ICT tools. The researchers relied on "Pronunciation Coach Software," which focuses on developing the learner's correct pronunciation of English sounds, including consonants and diphthongs, through an experiment with two groups of students. The investigation took six months. To evaluate students' oral production, the researchers conducted a Pretest and a Posttest. The test proved that students' negative attitudes towards learning English pronunciation changed after integrating the Pronunciation Coach. The results also revealed that there is an improvement in pronouncing certain sounds mainly, /Σ, τΣ/, δZ, Z/ and /T, Δ/ and, some vowels, including /Θ, ϕ/, /Y, ⊙, /↔Y, αY/ and /εI, αI/. The findings further demonstrated that students became more aware of the main differences between English and Arabic pronunciations in terms of place and manner of articulation of sounds.

Key words: Algerian EFL learners, English pronunciation, Computer Assisted Language Learning, Computer Assisted Pronunciation Training, Pronunciation Coach Software, Saida University

INTRODUCTION

With the dawn of Information and Communication Technology (ICT), most universities and academic institutions sought to change teaching practices by including software and applications that may improve teaching and learning and change students' motivation. The teaching and learning of languages make no exception. Teachers and learners show great interest in using ICTs in improving their languages. This fact led to the birth of Computer Assisted Language Learning (CALL). CALL is helpful for both teachers and learners because it can provide immediate feedback and help in improving students' self-directed learning. Hence, this interest leads companies to introduce myriad software. Even researchers, who were specialized in language studies, provided literature that shows an emerging interest in integrating CALL in language teaching and learning. Although these researchers showed the importance of CALL, its integration, and effectiveness in teaching and learning foreign languages,

few studies had been devoted to integrating CALL and its integration in teaching pronunciation. This opportunity opens the gate for scholarship on the possibility of incorporating CALL as a medium to improve speaking and listening skills. Indeed; the use of CALL creates a variety of pronunciation software that can develop the listening and speaking skills of the EFL learner. Thereby; this can bridge the gap between the traditional approaches to teaching pronunciation to the newly adopted strategies, including Computer Assisted Pronunciation Training (CAPT). The latter provides more opportunities for EFL learners to improve their oral performance.

The present research under scrutiny aims to shed light on the use of CALL in teaching English pronunciation in the Algerian EFL context. It also attempts to show the effectiveness of CALL in improving first-year EFL students' pronunciation through introducing them to CAPT. Hence; this research work intends to give some scholarship on using CALL in general and CAPT in developing the appro-

priate English pronunciation in particular for first-year EFL learners in the Algerian context, hoping that this may make teachers familiar with new pronunciation software that can improve the listening and speaking skills of learners in sessions of phonetics and oral expression. The use of CAPT in teaching English pronunciation, a pivotal question imposes itself: How can CAPT help in improving first-year EFL students' English pronunciation? As such; the researcher raised the following research questions:

- Which features of the software can help in improving the students' speaking skills?
- Does the inclusion of CAPT change the pedagogy of teaching English pronunciation?

The researchers set the following key hypotheses:

- Students listen to native speakers, record their speech, and check their errors with scores.
- The inclusion of CAPT raises the learners' awareness of the difference between the sounds of their mother tongue and English ones.

REVIEW OF THE RELATED LITERATURE

The Teaching of English Pronunciation in Algeria

EFL students receive lectures on English pronunciation through two modules in the Algerian context. Through the phonetics module, the learners were introduced to English sounds and the main rules for transcription, stress placement, and intonation. They are trained to listen and develop oral performance through the oral expression module, which is taught for three years at the license level, while phonetic lectures were given for two years. Although the modules are fundamental units in learning English pronunciation and improving oral performance, students still have a low background in mastering speaking skills. Besides, the lack of authentic materials, teaching instructions, and newly designed syllabi that give importance to ICT inclusion in the classrooms and the skill have no place in pedagogy at the level of schools.

Besides, the low background in acquiring correct pronunciation at the university level is due to several factors, mainly the over-loaded syllabi that favor theory rather than practice. Besides, teachers focus on pronunciation assessment in teaching English pronunciation, which gives much importance to error detecting in improving their oral production. Ghounane; (2018) conducted a study in the Algerian context on the constraints facing EFL learners in learning English pronunciation. She found that learners have problems with English sounds because they still confront obstacles in distinguishing between Arabic sounds and English ones.

The teaching of English pronunciation for EFL learners in Algerian universities still depends on traditional approaches to the teaching of the speaking skills, mainly the use of the grammar-translation method, even though each department of language teaching has a language laboratory equipped with audio-visual materials. Other factors can be limited to the teaching instructions that insist on pronunciation assessment through detecting sound errors without forgetting the lack of teachers who master the pedagogy of pronunciation

teaching or getting extra training on how to teach pronunciation. Teachers; who are learning phonetics, do not give much importance to the micro-level accent in improving the students' speaking skills i.e., they just prepare them to pass exams rather than developing a strategy that may help to improve their oral proficiency. Most tests and exams are written and hence giving no opportunity for the student to speak and get guidance in improving the speaking skills. Teachers also neglect the importance of ICT in pronunciation and their students' needs and motivation. For example, the use of Mobile Assisted Language Learning (MALL), as self-directed learning, can be helpful for students mainly at home (Ghounane, 2019).

Pronunciation Instruction

Teaching English pronunciation or pronunciation instruction is a fundamental unit for all EFL learners to develop their speaking and listening skills. Students, who acquire a good background in writing skills but find difficulties in speaking, can have problems in communicating their ideas. According to Wong (1993), pronunciation instruction remains an important medium in linking listening with speaking i.e., developing these two skills should go hand in hand in pronunciation instruction so that the student can speak and understand the English language.

In her study, Wong (1993) confirmed that the student needs to be familiar with the different features of English speech, including sounds, stress placement, rhythm, and intonation. He can understand spoken English, mainly parts of connected speech. Therefore; learning these features may raise students' awareness and develop their knowledge of pronunciation.

Although several experts have introduced many instructions to improve pronunciation for EFL learners in Algerian Universities, students still feel that they face difficulties pronouncing words correctly and recognizing certain features as intonation and rhythm. In their instructions, teachers concentrate on segmental phonemes i.e., introducing the student to English sounds (vowels and consonants), their place, and manner of articulation which they should include in the secondary schools' programs. Students also learn suprasegmental phonemes in the second year; however, they cannot develop good speaking skills. Seferolu; (2005) maintained that the teaching instruction should consider the suprasegmental level instead of teaching learners the appropriate pronunciation of sounds.

Pronunciation instruction in the Algerian context gives importance to both features. However, the students still find difficulties in building a correct pronunciation or distinguishing the essential elements that can help them recognize the correct pronunciation. Time constraints also play a crucial role in diminishing language proficiency because teachers give more importance to presenting rules instead of practice.

Computer-Assisted Language Learning (CALL)

With technological advancement, the field of English pronunciation witnesses a revival due to the introduction of

many teaching materials, including audio-visual aids with the combination of texts without forgetting the inclusion of a variety of software that re-nationalizes language teaching in general and pronunciation instruction in particular. The interest in using technology to improve education led to Computer Assisted Language Learning (CALL).

Several studies stress the importance of technology and computer application in teaching the English language as a foreign language. According to Gorjian, Hayati, and Purkhoni (2013), CALL technologies can help students to reduce anxiety and provide a collaborative environment where they can develop speaking skills. Gorjian et al., claim that "CALL philosophy puts a strange emphasis on student-centered lessons that allow the learners to learn their own using structured and, or unstructured interactive lesson" (p. 35). Indeed, the use of CALL proves its effectiveness in class through many advantages. In his part, Kilickaya (2007, p. 8) claims that CALL has advantageous for EFL learners:

- Learner autonomy,
- rich information for repetitive practice,
- immediate and detailed feedback,
- flexible learning (anytime, anywhere, anything learners want),
- increased motivation, and
- less frustration.

(as cited in Min, 2013, p. 13)

Although many programs improve the teaching and learning of English pronunciation, many countries still do not support the use of technologies, or they do not try to integrate it into their teaching curricula.

Scholars link the origin of CALL to Computer-assisted Language Instruction (CALI). Language teachers favored this expression. However, it appeared that it supported teacher-centered instruction, while teachers preferred the learner-centered approach, which gives importance to learning rather than instruction (Ong'onda & Muindi, 2016). Therefore, the increasing demand for technology in teaching and learning, mainly pronunciation, has flourished with the support of Liu's pronunciation software that enables learners to record, compare their pronunciation, and score the level (Waschauer & Healey, 1998). The dawn of such applications and their availability lead to growing interests in developing pronunciation pedagogy that goes hand in hand with such progress and gives birth to Computer Assisted Pronunciation Training (CAPT).

Computer-Assisted Pronunciation Teaching (CAPT)

It is important to note that pronunciation is a daunting task, mainly for EFL teachers, because of many hindrances that they may confront in teaching this unit. The first problem can be the number of students since the teacher has to care or pay attention to all students. The teacher should follow the student's progress in improving their pronunciation, and this is impossible with a large number that exceeds 40 learners in one class. Another hindrance can limit to pronunciation that necessitates time and patience from the teacher who has to raise the learner's awareness towards developing two linguistic skills at the same time, mainly speaking and listening.

Hence, some scholars agree that integrating computer-based teaching is necessary to reduce time constraints and raise the students' awareness rather than teaching the theoretical side.

With the birth of a new teaching pedagogy that makes technology at its heart, the field of teaching pronunciation receives remarkable attention as it is the wheel of a good mastering of the communicative side of the language. Therefore, this advancement paves the way for students to learn in an environment rich in practice. According to Thomson and Derwing (2014, p. 336), "a strong appeal of CAPT is its ability to provide learners with more practice than they can normally access in a traditional program" (As qt in Khoshshima, Saed & Moradi, 2017, p. 104).

Students can access the unlimited number of software that helps them raise their awareness of how they can develop their performance through the support of their teachers. In this regard, LaRocca (1994) maintains that "digitized pronunciation software packages afford high-quality sound and video clips of speakers, which allows the learner to look at articulatory movements that used in producing sounds" (As qt in Khoshshima, Saed & Moradi, 2017, p. 104).

The field of pronunciation teaching witnesses many scholarships by using a myriad of software. Most of these studies stress the importance and effectiveness of CAPT in teaching pronunciation. Among these investigations, a study conducted by Liu (2008) used "Clear Pronunciation 2 Software". Liu compared this program with the traditional way of teaching. Tanner and Landon (2009) employed "Cued Pronunciation Readings software" to examine the placement of stress and intonation. Khoii and Aghabeig (2009) also used "Rosetta Stone Software" to teach listening skills for Iranian ELF students (Khoshshima et al., 2017).

Computer-Assisted Pronunciation Training (CAPT)

The introduction of CAPT into the teaching pedagogy based on internet-based learning helps students learn English pronunciation. Many scholars serve in developing approaches and applications for teaching phonetics. In their research, Hoffman and Buckingham (2000) give value to this claim through an experiment that provides transcription activities that help students. These applications give learners a native-like environment where they can learn English. According to Neri, Cucchiari, Strik, and Boves (2002), CAPT offers an environment where students can reduce stress and have unlimited access and accessible learning. They claim that "through the integration of Automatic Speech Recognition (ASR)," students can "receive individualized, instantaneous feedback" (p. 1).

The use of CAPT witnessed a revolution in the last few decades. Many researchers conducted studies that focused on the use of technology-based learning. According to Neri et al. (2002), CAPT software was designed and used to record and score the EFL learner's degree of language proficiency in sound production, stress placement, and intonation. They recorded and compared their speech to the native speakers' speech. Although CAPT proved its effectiveness, the problem that faces students is that when it comes to evaluating their address. They cannot know whether their address

differs from that of native speakers or not (Dekaney, 2003). Researchers developed many systems to improve these applications. In light of this idea, Min (2013) highlights that these systems can “provide automatic electronic visual feedback that the student could get access to and study repeatedly. These systems aimed at providing a one-to-one computer-student interaction and were practically implemented with presently available technology” (p. 17).

With the dawn of computer-based learning, many researchers conducted studies on specific software to deal with stress placement and intonation. Scholars like Hsia, Wang, and Chung (2004) investigated the attitudes of college students towards the use of speech recognition functions, while Hirata (2005) explored the effectiveness of CAPT in producing different aspects of pronunciation (Ong’onda & Muindi, 2016). Indeed, interests in exploring the integration of CALL and CALT started early than the 2000s. Researchers like Rostron and Kinsell (1995) conducted a study that showed how students were trained using computer-based learning and improved their pronunciation (Ong’onda & Muindi, 2016). In his part, Stibbard (1996) claimed that technology helps to improve the language production of EFL learners, mainly pronunciation (Ong’onda & Muindi, 2016).

Although researchers conducted studies in CALL, many hindrances affect its use in teaching, mainly teaching foreign languages. According to Chapelle (2001), pronunciation as a field of research receives the least attention. As such, CAPT practitioners find difficulties in designing the appropriate software.

METHODS

The present study investigated the use of CAPT in improving English pronunciation for EFL learners in the Algerian context. To realize such an aim, the researcher conducted this study based on an experiment with the first-year EFL students at Dr. Moulay Tahar University of Saida, Algeria. The instrument used in this research is computer software called “Pronunciation Coach.” The experiment took six months.

The researchers conducted two tests, a Pretest after three months of studying the theoretical side of phonetics for the first-year level during the academic year 2017-2018, and a Posttest by the end of the experiment. The tests were for the experimental and control groups. The researchers asked students to read and record some texts to see their progress and took notes every week. Students received 15 minutes of instruction on some essential features of English pronunciation (sound production and their place, and manner of articulation). They experimented for 15 minutes with two students.

In the eighth week of the second semester, the researcher conducted the post-test. Students, from the experimental groups; we’re given a text with its mp3 to listen to and then record their voices. The researcher gave the same activity to the control group.

Participants

The researchers selected Stratified Random Sampling in choosing their population. The population is 254 students.

They selected the participants according to their gender. The students were 80 females and males. Their ages were between 19 and 45 years old. The researchers took 40 students forming two groups (the experimental group) and used the traditional method with the control group. The experimental group had the software installed in their computers, while the control group was learning through videos, reading written texts (short stories), and recoding through MP3. All students from the experimental group master computing. They trained them on how to use the software. The researchers asked the students whether they listened to visual aids to learn English pronunciation or not.

Research Instruments

Pronunciation coach is software that teaches the learners how to pronounce from sound production to sentence. It allows students to record their speech and compare it to an example. It also permits them to use speech recognition to score their pronunciation. This software helps to create a pronunciation model, the learner has to enter any word and pronounce it, and then s/he can press the button, listen and score their pronunciation as figure 1 shows:

As figure 1 demonstrates, there are three positions in the pronunciation model. The first one shows the lips’ movement, the tongue, and the teeth whereas, the second one gives more details about how the students produced each sound, while the third one shows the place where the tongue touches the palate. In figure 2 below, the researchers captured the production of the sound /t/ from the word *violate*. The model shows the position of the lips, the tongue, and the place where it touches the palate (the alveolar ridge).

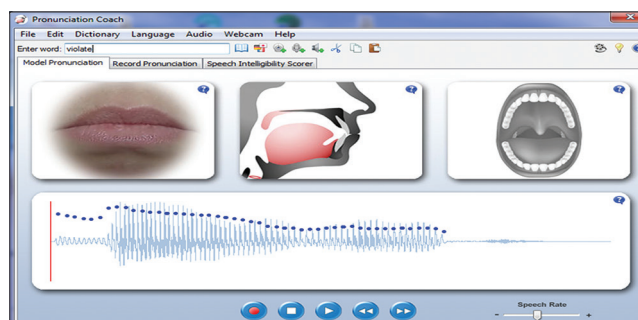


Figure 1. Pronunciation model of pronunciation coach software

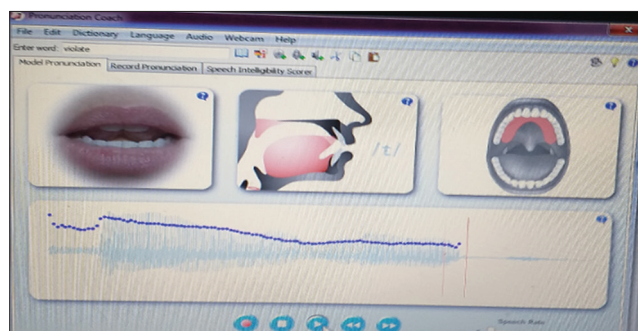


Figure 2. Model pronunciation of the sound /t/ from the word violate

The software also contains a speech intelligibility scorer that helps the students to record their pronunciation and score their speech. For a good lesson, the rating should be more than 50%. Figures 3 and 4 reveal how to register and rate the pronunciation level:

The researchers used the software to teach students how to pronounce English sounds, their place, and manner of articulation because they are still beginners. They have to recognize how to produce English sounds and differences in their production from their native language.

FINDINGS

During the first week, the teacher gave both groups an overview of English vowels and consonants. Through the second week, students from the control group took practice through mp3 recordings, while the students of the experimental group learned how to use the software. The teacher asked them to type some vowels and listen to how the native speakers pronounce them. They also learned how the articulators move to produce the sound, mainly the mouth, the tongue, and the vocal cords. The teacher also asked the students to pronounce English vowels and record them in the software. The experiment took 35 minutes for each session. Each student pronounced the sounds given by the teacher and scored their pronunciation. The teacher checked the scores and asked students who had a low level (less than 50%) to repeat pronouncing until they mastered the sound production and got a good score. Table 1 shows how both groups score in the Pre and Post-tests:

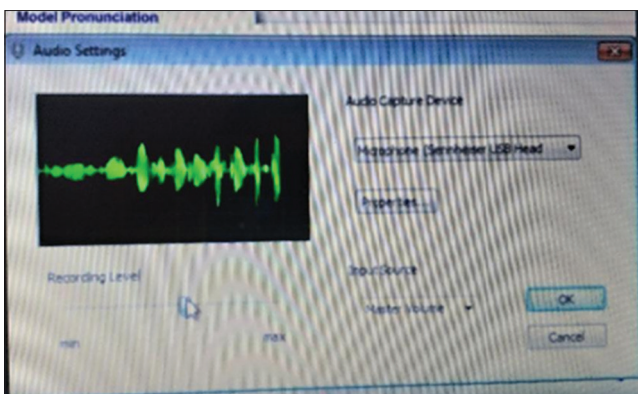


Figure 3. Recording sound production (word yellow)

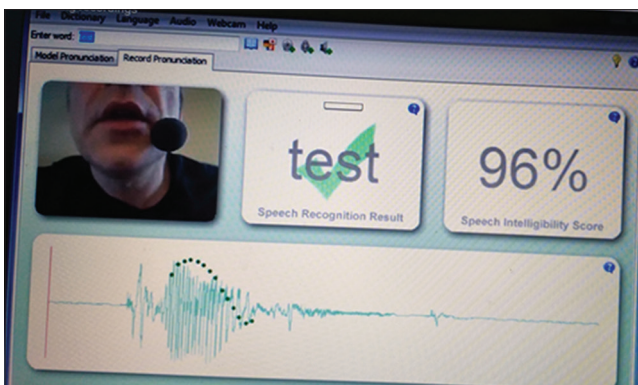


Figure 4. Speech intelligibility scorer

The results demonstrate a significant difference between the results of the control and experimental groups. The analysis revealed that students who belonged to the experimental group were more motivated towards learning English pronunciation through the use of CAPT.

After five weeks of testing students, the teacher checked the level of pronunciation through a Pretest. The findings revealed that the experimental group's level of articulation scores better than the level of the control group, as table 2 shows. During the five remaining weeks, the researcher asked students to pronounce words of one syllable and score their pronunciation. At this level, the teacher did not give more instructions to students. Her main concern was to train them to pronounce some words correctly and achieve their pronunciation, while students of the control group took practice speaking and recording without any score. Figure 3 shows an example of some terms used in the experiment (cheese).

After the teacher trained the experimental group, they gave an activity for both groups to test the effectiveness of the software. She asked both groups to pronounce some diphthongs, including /Y↔, I↔, I, ε↔, εI, αI, αY, ↔Y/. The findings of the first part of the activity revealed that students from the experimental group learned the difference between certain diphthongs, mainly; /εI/ and /αI/, /αY/ and /↔Y/, /I↔ and /ε↔/, while students from the control group still face difficulties to pronouncing these diphthongs and making a difference in their production.

As a part of the activity, the teacher asked the students to produce short and long vowels mainly /⊙, ⊙], Y, υ], Θ, ϕ, I, ι]. The results demonstrated that students from the experimental group distinguish these vowels, mainly; in words. To reinforce the findings of the experiment, the researchers gave students some words for transcription:

Table 3 indicates a vast difference between the control and experimental groups in recognizing vowels and distinguishing their pronunciation. The analysis demonstrated that students from the control group face difficulties with /Θ/ and /ϕ/ with 56.23%. They also have problems of differentiating /⊙/ and /υ] with 39.40%. On the other hand, students' level from the experimental group scores better in getting the difference between long and short vowels with 83.16% for hat and hut.

The teacher gave students another question to test their recognition of some English consonants, mainly 'c' and its pronunciation as /s/ or /k/. Another problem that they also face is when they put /τΣ/, /Σ/, /Z/, /δZ/, /Δ/, /T/ and /δ/. The activity contains some words to test their recognition according to their training:

Table 4 gives an overview of the level of both groups. The researchers found that students of the experimental group develop their sound recognition, mainly; similar words such as seed and seethe, diss and this, vat and that, etc. The teacher focused on listening to see the students'

Table 1. Statistics from the Pre and Post-tests

	Number of students	Scores	
		Pretest	Posttest
Control group	40	31%	38%
Experimental group	40	33.50%	65%

Table 2. Tests procedures of the study

40 students in each group	Experiment groups	Control groups
Experiment duration & materials	16 weeks for training through the traditional method and CAPT (sound production) The use of “Pronunciation Coach Software.” Eight weeks for the Posttest (recording of the same short story) Recording during pretest and posttest Pretest (Mp3 recording) Posttest (software recording)	16 weeks for training through traditional method (sound production) Listening, reading, and Mp3 recordings Eight weeks for the Posttest (record of the same short story) place during pretest and posttest Pretest (Mp3 recording) Posttest (Mp3 recording)

progress. The results revealed that students, from the control group, are still struggling to recognize the difference between these consonants. They found that those students still find difficulties inputting /κ/ and /τΣ/ like in anchor, archaic, and architect with a score of 33%, while students, from the experimental group, did not find any constraint. The teacher also found that students, from the control group, have some obstacles distinguishing /Σ/, /τΣ/ and /Z/, /δZ/. The analysis proves their level of recognition in both transcription and listening. They are still confused between /τΣ/ and /Σ/ with 45% and /Z/, /δZ/ with 42.73%.

DISCUSSION

The present study aimed to shed light on the use and integration of Computer Assisted Pronunciation Training in the Algerian EFL context by taking first-year EFL students at Saida University as a case in point. The researchers conducted an experiment that involved the introduction of “Pronunciation Coach Software” to teaching English pronunciation which is still done in the Algerian context following traditional methods. Hence, the reached findings from the experiments sought to answer the main question which piloted the study “How can CAPT help to improve first-year EFL students’ English pronunciation? Hence, as an answer, the researchers found that the introduction of Computer Assisted Pronunciation Training has raised the EFL students’ awareness towards the importance of integrating ICT in teaching and learning English pronunciation. This confirms Khoshsima et al.’s (2017) finding on the importance of integrating CAPT in raising students’ awareness.

The researchers also found that the students learned quickly how to pronounce English vowels and consonants through listening to native speakers, producing some sounds, and scoring their rates. In other words, CAPT provides a native-like environment where students can learn, as claimed by Hoffman and Buckingham (2000). The researchers also found that CAPT can be integrated into the teaching of English pronunciation by providing 15 to 30 minutes for practice by the end of each session.

The results also revealed that the rate of students from the experimental group scored better than the control group. It proves their level of sound performance. Students belonging to the experimental group were more motivated to the training. To further reinforce the experiment’s findings, the researchers recorded the students’ sound production. They

Table 3. Level of vowels recognition in words

Words	The experimental group	The control group
Hat/ηθt/		
Hut/ηθt/	83.16%	56.23%
Chook/τΣYκ/		
Choose/τΣυ ʃz/	76.21%	41.63%
Hill/ηIl/		
Heel/ηi ʎ/	69.33%	46.60%
Hop/ηθπ/		
Hoop/ηυ ʎπ/	71.33%	39.40%

Table 4. Level of consonants recognition in words

Words	The experimental group	The control group
Share/Σεε↔/	91.16%	45%
Chair/τΣεε↔/		
Shop/Σθπ/	78.33%	51.31%
Chop/τΣθ/		
Genre/ʃZθvρ↔/	81%	42.73%
Join/δZθIv/		
Anchor/θNκ↔/	66%	33%
Seed/σi ʃδ/		
Seethe/σi ʃΔ/	69.60%	29%

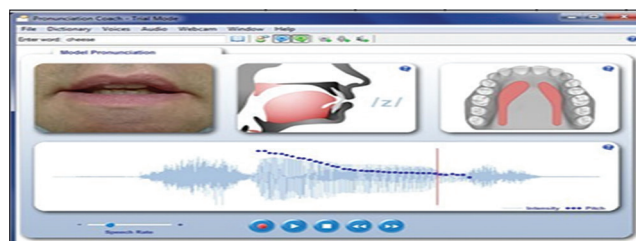


Figure 5. Students’ training to pronounce words

compared the output of sounds first and their pronunciation of the words listed in the previous tables.

For the second research question, “which features of the software are more effective,” the findings indicate that the pronunciation model helps students recognize how English sounds were produced with audio-visual aids. Students also benefited from speech intelligibility scorer after their training. They started recording some sounds and words

and scored their speech. This software has improved the students' level of pronunciation in comparison to the control group, which shows the validity of the second research hypothesis and answers its research question. Hence, the results confirm the findings of the studies mentioned in the literature review on the effectiveness of CAPT in improving the pedagogy of English pronunciation teaching and learning. When it comes to the third research question, "Does the inclusion of CAPT change the pedagogy of teaching English pronunciation?" The analysis indicated that with the integration of CAPT in pedagogy, teachers could change students' attitudes towards learning English pronunciation, on the one hand, raise their awareness towards the use of ICT in learning. To include CAPT in teaching English pronunciation, teachers need to prepare programs that can combine the traditional approaches with CALL integration.

RECOMMENDATIONS

It is the responsibility of teachers to raise their students' awareness of how they can learn languages and the benefit of technology. Teachers can direct learners' motivation and benefit from their research interests, improve their needs, and guide them to discover the usefulness of CALL. As such, the researchers recommended the following points:

- Teachers should be eclectic in approaching the syllabus according to their learners' needs.
- Experts in language teaching should give more importance to the integration of CALL in teaching pronunciation.
- The examination should be oral with scoring rather than written.
- Teachers should vary teaching tools between movies, videos on English pronunciation, and CAPT software.
- Teachers can benefit from time, although one session per week is not enough to use technology.

CONCLUSION

This research paper attempted to explore the use and introduction of Computer Assisted Pronunciation Training into the Algerian EFL context through a study conducted with first-year students learning English pronunciation. The researcher introduced CAPT through an experiment conducted by "Pronunciation Coach Software."

The study showed that technology provides an undeniable affordance to English pronunciation teaching and learning. It also revealed that the inclusion of pronunciation software that technology brings into the light could change the teaching instruction of English pronunciation, change students' attitudes, and raise their awareness towards the integration of technology in developing their speaking and listening skills.

To introduce CAPT in pedagogy, technology should be a part of language learning, i.e., it should be an integral ingredient in instructions, not just an optional module. Teachers of pronunciation should also raise students' awareness of

learning pronunciation and the importance of technology in improving their language performance.

Teachers can employ traditional approaches to teaching pronunciation and CALL through programs that train students to listen, repeat, record, and score their level to improve their speaking and listening skills, i.e., it provides a space for the student's self-practice and self-correction.

Although this research shows that CALT is an effective tool in teaching English pronunciation, there are some obstacles against its integration as time constraints (one hour per week is not enough), pedagogy, teachers' training, technology, and the lack of materials. Besides, teachers do not favor the use of pronunciation software. They claimed that these tools restrict the use of the traditional theories of pronunciation teaching.

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