Universidad de Concepción
Dirección de Postgrado Facultad de Educación
Magíster en Innovación de la Enseñanza, Aprendizaje y Evaluación del Inglés

Phonemic Awareness Strategy to support the pronunciation of the –ed inflectional ending in Past Simple Regular Verbs

CAROLA LUCÍA ESTRADA CUEVAS

Universidad de Concepción
Concepción
Chile
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Profesora Guía: Dra. María Jesús Inostroza Araos
Facultad de Educación
Universidad de Concepción

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Abstract

This action research study tackles the mispronunciation of the –ed inflectional ending in past simple regular verbs in four EFL Chilean A2 level adult learners by determining how "The Sounds of Speech" application as a phonemic awareness strategy influences their pronunciation. Six intervention sessions of 45 minutes each were delivered. Pre- and post-intervention tests were administered in which learners recorded an adapted text containing 12 past simple regular verbs with three different endings, namely /t/, /d/, and /ɪd/. A checklist in the form of Can-do-statements was applied and a Focus Group was conducted to identify the learners' perceptions of the use of this application. The pronunciation of the verb endings from the pre-and post-intervention tests was analysed by ending and by participant using frequency quantification and comparing the results of both tests. The Focus Group data was analysed using thematic analysis to explore the participants' perceptions of the strategy, and the checklist data was analysed using frequency analysis. The results show that after the six sessions, the participants developed phonemic awareness by recognizing their own vocal tract and the way the sounds being studied are produced. Three out of four of the participants could improve the frequency of expected pronunciation after the post-intervention test. These findings suggest that teaching explicit, pronunciation strategies may well contribute to better pronunciation of the phonemes involved.

Keywords:

Phonemic awareness, explicit strategy, teaching pronunciation, -ed inflectional ending, past simple regular verbs.

Chapter 1: Introduction

1.1 Background information

According to CEFR (2001) (Common European Framework of Reference), by the end of A2 level, students should be able to describe past and personal experiences (e.g., what they did last weekend, my last holidays, etc.). A2 learners are also expected to interact with English speakers at a basic level; therefore, this interaction is to be mostly intelligible, that means, without affection of articulation of sounds and some control of phonological features and pronunciation should be clear enough to be understood. Thus, pronunciation of the - ed inflectional endings in past simple regular verbs is crucial.

In the same line, CEFR (2018) added three descriptors that assess pronunciation: Overall phonological control, sound articulation, and prosodic features (intonation, stress and rhythm). For A2 learners, pronunciation is expected to be generally clear enough to be understood, with clear pronunciation of familiar words (Phonological control). Systematic mispronunciation of phonemes does not hinder intelligibility (Sound articulation). Therefore, A2 learners can use the prosodic features of everyday words and phrases intelligibly.

The importance of –ed inflectional endings has been remarked by Watts & Huensch (2013) who analysed eleven textbooks that covered morphological –ed endings. According to these authors, the inclusion of –ed endings may be warranted because they are frequent in speech, problematic among learners, and represent a potentially stigmatizing error. In the same vein, Dávila (2018) argues that one of the difficulties that Spanish speakers face when learning English is the acquisition of the accurate pronunciation of the three phonological realisations of the –ed ending that marks the past simple tense of regular verbs.

This research study is focused on EFL adult learners, who differ significantly from children in the way they learn and process information. Pourhosein Gilakjani, & Ahmadi (2011) mentioned the influence of age on language acquisition and pronunciation. Adult learners may find pronunciation more difficult than children due to the “Critical Period Hypothesis” proposed by Lenneberg (1967). According to this theory, a critical neurological period in which human beings can learn a language exists. After this period that it is supposed to end around the age of 12, it would become difficult to master a second language, especially pronunciation. However, as stated by Bettoni-Techio (2008), the only consensus around this theory is that age affects language learning and pronunciation seems to be the most affected skill. Another theory that can be found is the sensitive period (SP) that claims that learning a second or foreign language after the age of 12 is not simply impossible but only harder. Nevertheless, several factors influence pronunciation in adult learners: personality, exposure to the L2, environment, attitudes, and motivation, as well as the effect of the mother tongue that can be transferred into the L2 (Moyer, 2004; Kenworthy, 1987; Pourhosein & Ahmadi, 2011). In this context, EFL adult learners’

classrooms must devote time to quality input to improve EFL pronunciation, especially in the initial phase of learning (CEFR, 2001).

During the process of acquisition of the L2, there exists the interference of L1 on L2. In pronunciation, this phenomenon takes place in early learning of the L2, where the learner tends to use a more similar L1 sound. According to Major (1987, p.102, cited by Setter & Jenkins, 2005) this interference should decrease over time as the learner becomes more proficient. Therefore, it is relevant to incorporate quality input at this stage of the learning process, including well-designed activities and carefully thought out strategies in order to improve learners' pronunciation. Setter & Jenkins (2005) recommend that pronunciation practice should be incorporated at as early a stage as possible in line with CEFR's recommendation.

Setter & Jenkins (2005) argue that another important approach to the intelligibility of pronunciation is related to those interactions between Non-Native speakers. In this area, segmental features have a major role in English as an International Language. Learners need to understand and be understood not only by native speakers but also by other non-native speakers from different first languages. Likewise, a number of EFL adult learners in Chile need English to communicate with people who are not native speakers of English. Therefore, intelligibility and comprehensibility are critical features that need to be developed in early stages of EFL learning.

1.2 Problem Identification

One phenomenon that affects intelligibility and comprehensibility in the context of this action-research is the mispronunciation of the –ed inflectional ending in the pronunciation of past simple regular verbs. In the context the current action research took place, it has been observed that after a short period or after some classes, EFL adult learners continue adding an extra syllable /ed/ at the end of the word when pronouncing past simple regular verbs. Even in more advanced levels, when EFL learners have become more fluent and have made their English more complex by adding more advanced vocabulary and structures, they continue struggling with the expected pronunciation of the -ed inflectional ending in past simple regular verbs. This affects intelligibility and may affect their listening comprehension since learners normally tend to expect to hear the words as they think they are pronounced.

Even though, EFL learners are able to understand the rules and to follow the activities that are aimed at practising this content, namely listening to the verb in past simple and place it in the correct column, reading aloud, using games such as the fly swatter competition, they continue adding an extra syllable to the pronunciation of past simple regular verbs.

Considering this, a possible solution that may tackle and improve this pronunciation issue is to raise learners' phonemic awareness, which is defined as the ability to understand and notice how the sound is produced. To raise this, first, learners need to familiarise themselves with their own vocal tract. In doing so, learners may notice that English and Spanish sounds are produced similarly but differently at the same time. Then, teaching explicit, overt input on the troubled sounds would help students notice the differences amongst the sounds. In this way, eventually, learners would produce the sounds without adding an extra syllable when pronouncing past simple regular verbs.

1.3. Aims

In consequence, this action research will be framed by one General Objective and two Specific Objectives, which are:

General Objective: To explore the influence of the use of "The sounds of Speech application" as a phonemic awareness strategy on the A2 learners' ability to pronounce –ed inflectional ending in past simple regular verbs to improve their intelligibility and pronunciation when communicating.

Specific Objective 1: To analyse students' pronunciation of –ed inflectional ending in past simple regular verbs when using "The sounds of Speech application" as a phonemic awareness strategy.

Specific Objective 2: To identify the A2 learners' perceptions of the use of "The sounds of Speech application" as a phonemic awareness strategy to support pronunciation of –ed inflectional ending in past simple regular verbs.

Chapter 2: Conceptual Framework

2.1 Pronunciation in EFL

According to Setter & Jenkins (2005), pronunciation involves the production and the perception of sounds (segmental features), both alone and in the stream of speech. In doing so, individuals interact with prosodic features (suprasegments): stress, intonation, and rhythm. On the other hand, our pronunciation is also a major factor in our intelligibility to our listeners. However, when a pronunciation feature impedes the intelligibility of a word, the likelihood – particularly in the case of a non-native listener, who tends to focus on the acoustic signal rather than use contextual cues to resolve ambiguity- is that communication will fail even before pragmatic factors enter the equation (Setter & Jenkins, 2005). Furthermore, Marchena (2020) states that pronunciation is the process of relating phonemes, intonation, word stress, and syllabic structures when a verbal message is constructed. Likewise, Forel and Puskás (2005) as cited in Marchena (2020) asserted that phonetics is defined as sound production, transmission, and perception; it is the descriptive system necessary for the study of the phonological aspects of any language. These experts affirmed that phonology refers to the existent inventory of sounds, their specific features, and the rules for specifying how they interact with each other; both phonetics and phonology are studied to comprehend how pronunciation works.

Pronunciation is, nevertheless, a critical component of intelligibility for the speaker and the listener and makes communication easy and smooth in terms of production and reception. For example, it is important to know which syllables in a word are stressed and how different patterns of stressed and unstressed syllables are pronounced. There are also common patterns of intonation in English, which enable us to give special emphasis to particular words, phrases and sentences. Thus, pronunciation comprises segmental and suprasegmental levels that includes the production and perception of the sound in isolation and in the speech. The phenomena and the features that occur when the sounds form words and phrases are called prosody, which includes stress, rhythm and intonation. (CEFR, 2018). Therefore, listening and pronunciation go together.

Pourhosein et al. (2011) suggest that learning to pronounce a foreign language is a cognitive skill rather than a physical one. Therefore, everyone can learn if given appropriate opportunities. Pronunciation is viewed as a sub-skill of speaking and if, according to these authors, we want to change the way a learner pronounces words, we have to change the way they think about the component sounds of those words. One way to think about sounds and their realisation is to develop phonemic awareness that can be defined as the realisation that the speech stream consists of a sequence of sounds, specifically phonemes, and the smallest units of sounds that makes a difference in communication. Consequently, individuals who are phonemically aware recognise that the speech stream is a sequence of these small sounds. (Yopp & Yopp, 2000)

In accordance with CEFR (2018), pronunciation is closely related to phonological control, which in turn, is a feature of spoken language along with range, accuracy, fluency, interaction, and coherence. In consequence, the features that

define pronunciation are phonological control, sound articulation, and prosodic features. Table 1 below gives details of each descriptor for A2 learners.

Table 1

A2 level Descriptors for Pronunciation according to CEFR (2018)

OVERALL PHONOLOGICAL CONTROL	SOUND ARTICULATION	PROSODIC FEATURES
Pronunciation is generally clear enough to be understood, but conversational partners will need to ask for repetition from time to time. A strong influence from other language(s) he/she speaks on stress, rhythm and intonation may affect intelligibility, requiring collaboration from interlocutors. Nevertheless, pronunciation of familiar words is clear.	Pronunciation is generally intelligible when communicating in simple everyday situations, provided the interlocutor makes an effort to understand specific sounds. Systematic mispronunciation of phonemes does not hinder intelligibility, provided the interlocutor makes an effort to recognise and adjust to the influence of the speaker's language background on pronunciation.	Can use the prosodic features of everyday words and phrases intelligibly, in spite of a strong influence on stress, intonation and/or rhythm from other language(s) he/she speaks. Prosodic features (e.g. word stress) are adequate for familiar, everyday words and simple utterances.

The three descriptors of pronunciation clearly state that at A2 level, EFL learners are expected to produce clear pronunciation of everyday words and simple sentences. Bearing this in mind when teaching pronunciation is critical in order to plan and develop effective strategies that would result in raising phonemic awareness.

2.1.1 Pronunciation of past simple regular verbs and challenges for Spanish speakers.

According to Dalal & Loeb (2005) as cited in Dávila (2018), consonant sounds in English are classified according to three main categories: 1) Place of

articulation, that refers to where in the vocal tract a sound is formed, and with which articulators; 2) Manner of articulation that refers to how the sound is produced and the way in which the airstream is modified as it passes through the vocal tract; and 3) Voice that refers to whether the vocal folds are vibrating during the production of a particular consonant. Therefore, whenever there is a verb ending in a voiced sound, the pronunciation will be /d/, which is an alveolar, voiced, plosive sound, and for the verbs ending in a voiceless sound, the pronunciation will be /t/, which is an alveolar, voiceless, plosive sound, according to the place of articulation, voice, and manner of articulation criteria. In the case of verbs ending in the sounds /t/ or /d/, the pronunciation will be /ɪd/ as in “started” /stɑːtɪd/ and “needed” /ˈniːdɪd/. In practice, these differences between /t/ and /d/ sounds are very small, and they can only be noticed when a verb is said in isolation or is followed by a word beginning with a vowel.

In this regard, one of the problems that EFL Spanish learners face is the realisation of the three –ed inflectional endings when communicating past experiences. According to Uribe-Enciso et al., (2019), it is undeniable that developing a proficient level of the pronunciation of the –ed inflectional morpheme would guarantee Spanish speakers a more fluent and intelligible process when communicating past situations or events in English. Additionally, Marchena et al., (2020) add that in order to produce the phonemes /t/, /d/, and /ɪd/ correctly, individuals need to be able to recognize that /t/ is pronounced after all voiceless consonant phonemes (/p/, /k/, /f/, /θ/, /s/, /ʃ/, /tʃ/, [except /t/]; /d/ is produced after all voiced consonant phonemes (/b/, /g/, /v/, /ð/, /z/, /ʒ/, /dʒ/, /w/, /j/, /l/, /r/, /m/, /n/ and /ŋ/ [except /d/], and vowels; and /ɪd/ is pronounced after /t/ and /d/.

Moreover, Rodríguez (2016), as cited in Marchena et al., (2020), explained that in order to correctly differentiate the three pronunciations of the past tense in regular verbs, it is important to pay attention to the pronunciation of the ending of the verb in the infinitive form (not to its writing) and to identify if it is a voiceless sound (the vocal cords do not vibrate) or if it is a voiced sound (vibration of the vocal cords). To conclude, although all three phonemes do exist in Spanish, in seeing words with -ed endings in English, a native Spanish speaker would naturally give it the /ɪd/ phonetic ending of Spanish. The /t/ and /d/ phonemes in accordance with the -ed phonological spelling at the end of words would not naturally follow, thus making these phonemes more difficult to recognize and produce, (Marchena et al.,2020),

Even though, the rules of the past simple tense are simple from a morphological view compared to Spanish past tenses, which are highly inflectional, the difficulty stems from the phonological structure. Spanish speaking learners at this level tend to use some repair processes such as adding an extra syllable at the end of the past simple verbs when pronouncing them. This interference might happen because EFL learners are prone to use familiar sounds and patterns of their L1 in the L2. Likewise, English system of sounds possesses unique sounds that are not found in Romance languages and some sounds are produced more softly.

(Uribe-Enciso et al., 2019). Moreover, Marchena et al., (2020) argue that this mispronunciation is a frequent error caused by overgeneralization, as final consonant clusters do not occur in Spanish. However, Dávila (2018) states that Spanish speaking learners may overcome this difficulty as they increase their phonological and morphological awareness of English.

According to Roach (2009), the difference in rhythm between English and other languages, including Spanish, should be considered. The duration pattern of each syllable varies in both languages. Therefore, strong and weak syllables play an important role in pronunciation. This feature of English might also well explain the addition of an extra syllable when pronouncing the -ed inflectional ending in past simple regular verbs. This common mistake is typical of Spanish speakers as Spanish is considered a syllable-timed language, opposed to English, which is considered a stress-timed language. Learners tend to see a word and read it as they see it; therefore, they tend unconsciously to pronounce words as they are pronounced in Spanish due to the transfer of the L1 on L2 as the orthographic representation of the words in both systems are different. This may seem to affect only the segmental level, however, it also affects the suprasegmental level as it interferes with the timing and rhythm of English, (Couper, 2006), thus, intelligibility.

Setter & Jenkins (2005) emphasise the importance of stress: If learners fail to recognise the significance of the timing of syllables when producing utterances in English, and instead produce an anomalous rhythm, may seriously impair the total intelligibility of their utterance. In fact, if the stressed syllables in a stream of English speech are incorrectly placed, native speakers may process the message as something completely different. If the normally strong syllables are weakened and the weak syllables strengthened, the intelligibility is lost, or at least severely impaired.

In the same vein, Carranza Marín (2008) as cited in Marchena et al., (2020) stated that Spanish speakers may face difficulties when producing the -ed ending because of the lack of sound-spelling correspondence, the addition of an “epenthetic vowel” (e.g., fixed, /fɪksɪd/, instead of /fɪkst), which is an over-generalized rule, and because the final consonant clustering is not common in Spanish. Basically, the mispronunciation of the -ed endings to form the simple past tense of regular verbs is a frequent error caused by overgeneralization.

Likewise, Lee’s study (1987) as cited in Dávila (2018) found that -VC word endings were difficult to acquire by first grade Spanish speakers because of the limited number and type of consonants allowed at the end of words in Spanish. Rauber and Baptista (2004) as cited in Dávila (2018) agreed with Lee’s finding by adding that English permits consonant sounds at the end of words in a wider range of places and manners of articulation compared to Spanish. Helman (2004) cited in Dávila (2018), for instance, affirmed that learners acquiring English might find some difficulties in the following word-final phonological environments: [-rd], [-st], [-ng], [-sk], [-z], [-t], and [-mp] because Spanish prohibits these realizations at the end of words.

As stated by Uribe-Enciso et al., (2019), this also happens because learners are prone to use familiar sounds and patterns of their L1 in the L2. These differences in both languages might be one of the reasons that leads students to fossilise pronunciation errors even in advanced levels. As Ellis (1994) states, transferring errors are more common in the phonological and lexical levels of language, and they are more common in adult learners. Thus, raising phonemic awareness is crucial, especially, when teaching adults who have had little or no exposure to English as a foreign language. These sounds are similar to the Spanish ones but different at the same time. Phonemic awareness can also allow learners to learn the difference between sounds and letters that in English are much more marked that in Spanish, and put this into practice in the context of pronunciation of the -ed inflectional ending in past simple regular verbs. Therefore, teachers should consider the role of consciousness and awareness-raising in L2 acquisition, as many EFL learners are not aware of their pronunciation problems. (Couper, 2016).

In Uribe-Enciso et al., (2019)'s views, other differences between English and Spanish, as a Romance language, are that the English sound system possesses unique sounds, that English does not have one-to-one grapheme-phoneme correspondence and the various accents depending on the countries in which English is spoken. All these features might hinder the learning process of pronunciation.

Besides, Underhill (1994) argues that the main purpose in teaching individual sounds is the promotion of fluent speech. Thus, mispronunciation of –ed inflexional ending affects connected speech and most importantly it may lead to misunderstanding in communication with speakers of the target language.

There are an important number of EFL learners in the context of this study that state the need to improve their English pronunciation because they have meetings with speakers of English as the target language. In this setting, time constraints often occur, therefore, there is no time to ask for repetition. Consequently, their exchanges must be as accurate as possible in order to avoid misunderstandings that might lead to negative consequences for their companies.

Particularly, in the setting of this action research study, adding the extra syllable sound /ɪd/ at the end of the regular past simple verbs affects students' overall marks in their oral reports and final interviews due to the fact that pronunciation according to each level is assessed and considered within the criteria as well as spoken production and spoken interaction.

2.1.1.1 Pronunciation challenges for Spanish Speakers

EFL Spanish learners face a number of challenges pronouncing this language, mainly due to interference and the differences in English and Spanish phonological systems.

Uribe-Enciso et al., (2019) citing Wells (2000) argue that there are differences that produce interference in the L2 learning process. This happens because the learners are prone to use the familiar sounds and patterns of their L1 in the L2. However, there are ways to overcome this difficulty such as giving explicit instruction

in articulation and training learning in sound perception, minimal pairs and orthographic representation.

Major, cited by Setter & Jenkins (2005), shows how interference is more prevalent in initial stages of phonological acquisition, where a learner copes by using a similar L1 phoneme, but this interference slowly decrease over time, to be overtaken by developmental factors as learning takes place and sufficient input is received.

One of these interferences are clusters in different positions within a word. This poses a problem for EFL learners as English allows a larger number of complex syllable, with up to three consonants allowed in initial position and four in final position (Setter & Jenkins, 2005). In the same vein, Dávila (2019), states that Spanish learners of English as a foreign language are likely to have some difficulties with complex consonant clusters in word final position due to the absence of such clusters in Spanish.

Similarly, Abushihab (2010), as cited in Dávila (2018), observed that English syllable structure may contain up to four consonants in word-final position, -V (CCCC). It was also observed that English may permit word-final position combinations such as -VC, -VCC, -VCCC, and –VCCCC. On the other hand, Spanish allows only -VC word endings wherein the last element is optional (Harris, 1983) as cited in Dávila (2018). English word-final consonant sounds tend to be difficult in the beginning stages for Spanish speakers acquiring English, mainly because complex word-endings are disallowed in Spanish (Dávila, 2018). In this light, it can be predicted that the affix –ed will present a certain level of difficulty to Spanish speakers because it occurs mostly in word-final complex clusters. This is because Spanish allows fewer word-final consonants than English, which explains why the acquisition of English word-final clusters may be difficult for Spanish speakers. Thus, in the process of acquiring English word-final clusters, native Speakers of Spanish might employ some repair processes to acquire word-final complex consonant combinations, such as compensatory vowel lengthening, deletion of clusters, or vowel epenthesis (Dávila, 2018). Uribe-Enciso et al. (2019) also mention that in views of authors such as Case (2012), Hernandez, Gonzales and Algara (2011) L2 learners are prone to mispronounce consonant clusters in initial and final positions.

Additionally, Uribe-Enciso et al., (2019) suggest that clusters are different in both phonological systems. According to these authors clusters are defined as a sequence of two or more consonants at the beginning of a syllable (e.g. /spl æʃ/ in splash) or the end of a syllable (e.g. /sts/ in tests). Regarding Spanish, Gonzales (2012, p.9) as cited in Uribe-Enciso et al. (2019) shows the tendency to break clusters into syllables. For example: en-ci-ma; in-cre-í-ble, ins-pi-rar, ins-tru-ment. However, from Coe's (2001) point of view, consonant clusters in Spanish as well as in Catalan occur less frequently than in English, at least in initial position. Adding to this, Gorman and Kester (n.d) conclude that English /sp/, /sk/ and /st/ initial

consonant clusters can only occur in Spanish if preceded by the letter “e” like in espacio [es’paθjo], escalera [eska’lera] and strella [es’treʎa]. (Uribe-Enciso et al.,2019).

Another difficulty faced by EFL Spanish learners is the vowel systems in both languages. In the English system, there are twelve pure vowels, eight diphthongs and twenty-four consonants. In contrast, in the Spanish language there are five pure vowels, five diphthongs and nineteen consonants. Focusing on vowels, Coe (2001) as cited in Uribe-Enciso et al., (2019) argue that Spanish-speaking English learners find difficulty in differentiating between English vowels, especially when length is a part of the difference. Typically, at least two English vowels share the ‘phonetic space’ occupied by one Spanish vowel, so one-to-one correspondences are practically impossible. On the other hand, there are some consonant sounds like /z/, /s/, /v/, /θ/, /ɜː/, /ʃ/,/ʒ/, and /dʒ/ which either can differ in manner and place of realization or are inexistent in Spanish. To exemplify the later, in Latin-American Spanish the phoneme /z/ does not exist; thus, learners tend to interchange /z/ by /s/ in English; for instance, they will pronounce /su:m/ for ‘zoom’ instead of / zu:m/. The sound /r/ in Spanish can be voiced, alveolar, and vibrant simple or multiple depending on the syllabic position. That is, if the sound /r/ is found as vowel+/r/+vowel, it is vibrant simple, as in the case of cara [‘kara]; in contrast, if it is found as consonant+/r/+vowel and in initial position, it is vibrant multiple as in Israel [isřa’el]. On the other hand, the sound /r/ in English is retroflex, post- alveolar approximant in almost all syllabic contexts (Uribe-Enciso et al.,2019).

2.1.2 Teaching pronunciation

Teaching pronunciation as a subskill is not popular with teachers due to a number of different reasons. According to Ng and Lim (2005) and Pourhossein (2011) pronunciation tends to be the most neglected of all the skills. Ur (1996) adds that there is a lack of knowledge when the teacher is inexperienced, although experienced teachers lack phonetic training (Dauer, 2005). Roach (2009) states that this unpopularity stems from the belief that in teaching pronunciation, learners must try to speak perfect RP. He adds that teaching pronunciation is seen as an outdated activity. “To claim this mixes up models with goals: the model chosen is RP, but the goal is normally to develop the learner’s pronunciation sufficiently to permit effective communication with native speakers” (Roach, 2009, p. 6).

In the same line, Underhill (1994, p.171) argues that the aim when working with pronunciation is to enable learners to achieve ‘comfortable intelligibility’. This means that they can be understood comfortably, without undue effort by the listener, and that they can understand comfortably the speech of native and non-native speakers without undue effort on their own part.

A survey on English Pronunciation Teaching conducted by Henderson et al. (2012) in European countries revealed that most respondents, who were non-native teachers of English, rated their own mastery of English pronunciation favourably.

However, the majority felt they had little or no training in how to teach pronunciation. These findings suggest that teacher training in relation to the teaching of English pronunciation was inadequate, according to the majority of participants. Murphy (1997) as cited by Henderson et al (2012) found that less than 50% of MA TESOL programmes had modules devoted to phonology. This lack of training should be considered, as pronunciation is a major component to be developed in a communicative approach. Pardede (2018) argues that pronunciation instruction has long been ignored and excluded from teaching programmes. This problem is important as Sardegna et al (2012) affirm the critical role that teachers play in scaffolding their students' efforts for successful pronunciation practice. In the same line, Gordon et al (2012) corroborate a call for more explicit phonetic instruction within a communicative methodology. Similarly, Dávila (2018) suggests that the curriculum devoted to the teaching of English as a foreign language should include instructional methods that focus on explicit pronunciation besides focusing on communication skills. However, one of the difficulties here is that research has given teachers little guidance as to how they should teach pronunciation, (Couper, 2006). This has meant that some teachers do not consider the effectiveness of teaching pronunciation, while others lack the skills and confidence to tackle it in their classes (Macdonald 2002; Breitkreutz, Derwing and Rossiter 2002 as cited by Couper (2006). As Turgujeff et al (2012) state, EFL teachers in various European countries and ESL teachers in the USA, Canada and Australia feel they lack training in how to teach pronunciation. In consequence, "this would seem to be a global problem, leading us to reflect on how to improve teacher training programmes." Turgujeff et al (2012, p.36)

Furthermore, North & Piccardo (2016) add that specific attention to the pedagogical dimension of phonology in second/foreign language is a recent phenomenon and so is a specific focus on assessment, which appears to be even less frequent. Likewise, the resources for those teachers who intend to teach pronunciation are limited. Moreover, Topal, (2019) states that language teachers, who also are language learners, should develop phonological awareness and competence for better pronunciation, thus communication. Therefore, this study might also help teachers have a tool or resource that can be used in teaching pronunciation. In doing so, EFL teachers should consider the students' L1 phonetic system interference, the adjustment of learners' speech organs to English articulatory movements in order to realise the phonemes, and the understanding of how pronunciation works and need to be taught (Kelly, 2000 as cited in Uribe-Enciso et al., 2019).

In Chile there are 34 ELT training programmes that do not require a minimum English proficiency level to enrol. However, all graduates should reach a C1 level before graduation. Phonetics and Phonology courses focus on pre-service teachers' pronunciation improvement, not on how these could be taught to future learners. Besides, there is a lack of connection between pronunciation instruction and intelligibility development, (Villablanca, 2022).

2.2 Phonemic Awareness

Phonemic awareness is a relatively new construct that implies the awareness that the speech stream consists of a sequence of sounds, specifically phonemes, the smallest unit of sound that makes a difference in communication. (Yopp & Yopp, 2020). Phonemic awareness is a type of phonological awareness, which is, in turn, part of metalinguistic awareness that entails thinking about one's language or metacognition. According to Miller (2013), developing metacognition in L2 learners is essential for attention to be drawn to correct language uses as they perform better than unaware learners.

Phonemic awareness is part of Phonological competence that involves a knowledge of, and skill in the perception and production of the sound-units (phonemes) of the language and their realisation in particular contexts (allophones); the phonetic features which sistinguish phonemes (distinctive features, e.g. voicing, rounding, nasality, plosion); the phonetic composition of words (syllable structure, the sequence of phonemes, word stress, word tones); sentence phonetics (prosody); sentence stress and rhythm; intonation; phonetic reduction; vowel reduction; strong and weak forms; assimilation, and elision (CEFR, 2018).

The importance of phonemic awareness is stated by Roknman et al, (2020), who argues that phonemic awareness strengthens the prediction by segmenting the word, so the listener will recognise the exact word being heard. It also contributes to both English receptive and productive skills. Moreover, Pourhosein et al. (2011) mentioned that learning to pronounce a language is cognitive rather than physical as it has to do with the way raw sound is categorised or conceptualized in using speech. Therefore, if teachers want to change the way a learner pronounces words, we have to change the way they think about the component sounds of words. (Pourhossein, 2011).

According to Roknman et al., (2020), phonemic awareness can enhance EFL learners' skill on processing word through identification of sound, blending, and segmentation skill. However, without enough exposure given, foreign language learners will not have adequate knowledge of phonemic awareness. Although there is research on how phonemic awareness influences word processing skill, the investigations tend to be done in kindergartners level, but little is known about higher education level (Roknman et al., 2020). English phonemic awareness is fundamental to equip students mastering the language skills. It can be said that the ability to produce spoken or written word comes from awareness of phoneme and its letter representation. Phoneme segmentation skill that provides decoding skill will assist EFL learners in comprehending words while listening by identifying its sound that has been simultaneously segmented to its smallest part. The ability to identify English phonemes is proven to be a skill that supports EFL learners on their productive and receptive skills since the ability to comprehend English word comes from the ability to identify the word firstly (Roknman et al., 2020).

2.2.1 Explicit Instruction Strategies for phonemic awareness

Underhill (1994) argues that the main purpose in teaching individual sounds is the promotion of fluent speech; nevertheless, sounds and words are the building blocks for connected speech, and specific and detailed work can be done at these levels without losing touch with the fluent speech from which the parts have been abstracted. Thus, mispronunciation of –ed inflexional ending affects connected speech and, most importantly, it may well lead to misunderstanding in communication, especially in conversation with speakers of English as a target language. This statement supports the use of explicit instruction as an effective tool to improve pronunciation in general. In the same line, a research study conducted by Morgan (2016) suggests that the provision of explicit input on vowel length would help students recognise the different sounds in context and improve their effectiveness in communication. It is necessary to focus on this issue in order to develop a set of strategies that would be of use inside the classroom so that the teaching-learning process of pronunciation has the attention required. Nevertheless, as stated by Couper (2005), there have been very few studies into the effectiveness of pronunciation despite its importance in successful communication.

Regarding explicit strategies applied to the pronunciation of past simple regular verbs, Dávila (2018) suggests that teachers should, first, help their students notice the differences in pronouncing the three variants of past simple regular verbs and then provide adequate and continuous practice and corrective feedback as a strategy to reach the expected pronunciation. In the same vein, Marchena (2020) suggests drilling and colour coding – a visual support for categorising and discriminating sounds – can be used as explicit strategies.

The use of technology as an explicit strategy to teach pronunciation is also a tool worth the attempt. Benítez et al (2020) suggest the use of Audacity software as an effective tool that improve learners' pronunciation and favours the practice of English in a free and relaxed environment. This action research will use The Sound of Speech Application as an explicit strategy to help EFL learners raise phonemic awareness in pronunciation of –ed inflectional ending of past simple regular verbs.

2.2.2 The Sound of Speech application as an explicit strategy for phonemic awareness.

Currently, there is a variety of applications and platforms that could support students' autonomous pronunciation practise such as Elsa Speak, English Pronunciation, Language Two, ImmerseMe, The Phonetics 3D, The Sound of Speech, among others.

The current action research considered The Sounds of Speech application since it includes animated articulatory diagrams for each sound, annotated descriptions of how each sound is produced, a facial view video, and an audio sample of each sound that can be played in slow motion or higher speed. The user can select the manner, place, or voice of consonants to read a short description of the sound. Once a category is chosen, the phonetic transcription for each sound is

provided, along with words in initial, medial, and final positions. Users can also follow a step-by-step annotation of how the sound is produced.

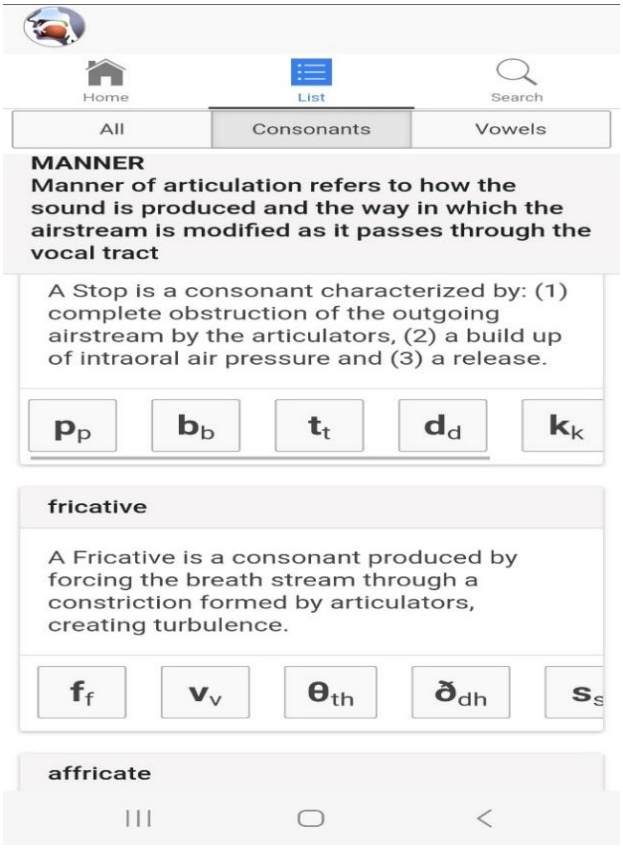
According to Neri et al's (2002) guidelines cited by Fattany & Elnegahy (2019), the Sounds of Speech application successfully achieves the goal of offering users comprehensive input for the sounds of the three languages offered. In addition, they state that literature in L2 pronunciation teaching has supported the positive outcome of explicit phonetic instruction. This is clear in the Sounds of Speech application by the detailed description of the segmental features and the explanation of how to produce the sounds via the animated articulatory diagram and the step-by –step annotation. In addition to providing input in a written form, it also presents the sounds in audio and audio-visual modes, which helps learners to get an essential information about the different aspects of L2 pronunciation.

Therefore, this tool was used as part of the explicit strategy that may arise learners' phonemic awareness by using a holistic approach that includes the use of The Sounds of Speech application, the Phonemic Chart and the use of traditional activities as a way of providing instruction in the problematic pronunciation.

Considering this, the solution that may improve and tackle this critical sub-skill, which in fact, is not taught properly in our context, is to raise learners' phonemic awareness, which is defined as the ability to understand and notice how the sound is produced. To raise this phonemic awareness, students need, first, to familiarize themselves with their own vocal tract. In doing so, learners may notice that English and Spanish sounds are produced similarly but differently at the same time. Then, teaching explicit, overt input on the troubled sounds mentioned above would help students notice the differences amongst them and eventually, learners would easily produce the sound without adding an extra syllable. In this way, learners should go from unconscious unskilled user to unconscious skilled one.

Figure 1

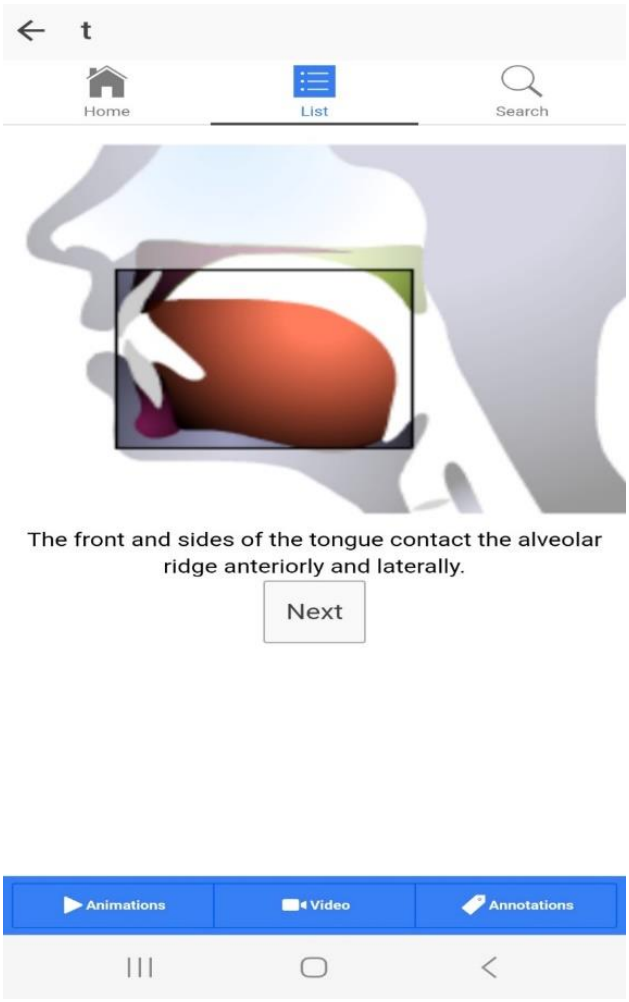
Screenshot of the description of sounds can be seen on the screen



Note. Taken from the Sound of Speech application

Figure 2

A description of what is actually happening when the sound is produced can be seen and each movement explanation can be read as watching



Note. Taken from the Sound of Speech application

3. Method

3.1 Type of research

This research study is based on the qualitative paradigm, particularly following the action research (hereafter AR) design. This type of research, according to Burns, (2005)

> Offers a means for teachers to become agents rather than recipients of knowledge about second language teaching and learning, and thus to contribute towards the building of educational theories of practice. (p.251)

The current AR intends to address a particular phenomenon in a specific time and place by a teacher-researcher who has observed a repeated teaching-learning issue related to the production of certain sounds. Thus, this research aims at systematically investigate this issue inside the classroom in order to better understand the aspect being researched and to find out a possible solution by collecting and analysing the gathered data in a limited period of time (Burns, 1999). Specifically, this intervention aims at shedding some light on the process and strategies behind the pronunciation of the –ed inflectional ending in the past simple tense regular verbs in A2 level students in a language institute from Concepción.

As this AR is focused on the production of certain sounds and the way EFL learners produce them, the most suitable intellectual puzzle is mechanical since a novel strategy has been introduced and the expected outcome is being analysed in order to determine its contribution to the production of the above-described sounds.

3.2 Research problem

CEFR states that A2 level students should be able to talk about past and personal experiences. Pronunciation of familiar words is expected to be clear, although stress, intonation and rhythm may affect intelligibility. At this level, mispronunciation is expected and a greater effort from the interlocutor might be needed in order to understand specific sounds. Consequently, pronunciation of the –ed inflectional ending in past simple regular verbs becomes crucial in achieving intelligibility and comprehensibility.

In the context of this action-research, mispronunciation of the –ed inflectional ending of past simple regular verbs was tackled. It has been observed that after a short period or after some classes, EFL adult learners continue adding an extra syllable /ed/ at the end of the word when pronouncing past simple regular verbs. Even in more advanced levels, when EFL learners have become more fluent and have made their English more complex by adding more advanced vocabulary and structures, they continue struggling with the expected pronunciation of the -ed inflectional ending in past simple regular verbs. This affects intelligibility and may affect their listening comprehension.

3.3 Research Questions and Objectives

Research question:

"To what extent does the use 'The sounds of Speech application' as a phonemic awareness strategy influence A2 level learners' pronunciation of the –ed inflectional ending in past simple regular verbs?"

General Objective:

To explore the influence of the use of "The sounds of Speech application" as a Phonemic awareness strategy on the A2 learners' ability to pronounce –ed inflectional ending in past simple regular verbs.

Specific Objective 1:

To analyse students' pronunciation of –ed inflectional ending in past simple regular verbs when using "The sounds of Speech application" as a phonemic awareness strategy.

Specific Objective 2:

To identify the A2 learners' perceptions of the use of "The sounds of Speech application" as a phonemic awareness strategy to support pronunciation of –ed inflectional ending in past simple regular verbs.

3.4 Participants

The participants of this study are four A2 level university learners who come from different backgrounds and are doing a 54-hour-English course from March to July 2022, with two-one hour-45 minute-sessions per week. They have had previous instruction in English both at their private and subsidised non-bilingual schools and at their universities. Their ages vary from 19 to 27. All of them have been placed in this class after an entrance interview. This is the first time they are studying in this language institute and their main interest is to go further in their knowledge of the English language as it will be needed to access better job opportunities in their fields. Therefore, this is a non-probability sample since this action research "intends to examine a real-life phenomenon" (Yin, 2003) and a purposive sample as the students were chosen "deliberately in order to provide important information that cannot be obtained from other choices" (Maxwell, 1996).

The setting where this AR will be conducted is an institution that offers English courses for all ages that are divided into four categories: Infants, Juniors, Teenagers, and Adults. These courses are also structured into Beginner, Basic, Intermediate, Higher Intermediate, Upper Intermediate, and Advanced levels. At the end of the programme, students must sit an international exam that leads them to obtain B1 or B2 level.

3.5 Stages of the action research study

This intervention lasted six sessions of 45 minutes in a period of six weeks. It considered a pre-intervention test and post- intervention test, which were carried out before and after the intervention itself, as well as a rating scale and a focus group.

Table 2

Action Research Stages

Step 1	• Pre-intervention test. • Task: Recording the containing twelve regular verbs in the past simple tense with the three pronunciation endings.
Step 2	**Six sessions of 45 minutes each were delivered.**
	• Difference between sounds and letters. • Recognition of the vocal tract. • Introduction to "The Sound of Speech" application. **S1**
	• Sounds practice. • Recognition of the vocal tract involved in the sounds being practised. **S2**
	• Practise voiced and voiceless sounds using "The Sound of Speech" application. • Practise discrimination of voiced and voiceless sounds. • Check sounds using the application. **S3**
	• Explanation of the three different ways of pronouncing the –ed inflectional ending. Listen to the three different endings. • Classify –ed endings in the correct column. **S4**
	• Creation of a dialogue using regular verbs given in the past simple tense • Dialogues presentation • Dialogues recording **S5**
	• Creation of a short story using some regular verbs given in the past simple tense. and then they read their short stories, recorded and received feedback from their classmates who used a check list. • Reading aloud and recording

	• Feedback from classmates. **S6**
Step 3	• Post-intervention test. • Task: Recording a text containing twelve regular verbs in the past simple tense with the three pronunciation endings
Step 4	• A rating scale was administered, and a focus group was conducted

The stages of this action research study were implemented as follows:

Step 1: A pre-intervention test was administered before the intervention itself. The participants had to read aloud and recorded a text containing fifteen regular verbs in the past simple tense with the three pronunciation endings.

Step 2: Six sessions of 45 minutes each were delivered.

1st session: The difference between sounds and letters was introduced as well as the recognition of the vocal part. “The Sounds of speech” application was shown, and the participants practised the sounds /t/ and /d/.

2nd session: Some sounds are shown in normal speed and slow motion. The participants imitated the sounds and recognised the parts of the vocal tract involved. The teacher and participants checked their answers by reading the explanation on how the sounds being practised are produced step by step along with the animation.

3rd session: Using “The Sounds of Speech” application, the participants practised the sounds /t/ and /d/ in initial, middle, and final position. Then, they watched how the vocal cords work when producing these sounds. Teacher elicited the difference between voiced and voiceless sounds. The participants discriminated the voiced/voiceless by touching their own throats and checked the sounds by watching the animation.

4th session: An explanation of the three different ways of pronouncing the –ed inflectional ending was given. A short audio that focused on –ed endings was played. The participants were given a handout, and then they listened to another list and put the verbs in the correct column.

5th session: The participants made up a dialogue using some regular verbs given in the past simple tense, and then, they presented it orally. The dialogues were recorded.

6th session: The participants created a short story using some regular verbs given in the past simple tense, and then they read their short stories, recorded and received feedback from their classmates who used a checklist.

Step 3: A post-intervention test was administered after the intervention itself. The participants had to read aloud and recorded a text containing fifteen regular verbs in the past simple tense with the three pronunciation endings.

Step 4: A rating scale was administered, and a Focus Group was conducted.

3.6 Data Collection Techniques

Three data collection instruments were used in this research study: recording of the adapted texts and the transcriptions, a checklist in the form of Can Do Statements with a section for participants' comments, and a Focus Group. A description of these are below:

3.6.1 Pre and Post-Intervention Tasks (Appendix A)

Participants were asked to record an adapted text by reading aloud before and after the intervention to quantify and compare the data. These texts contained twelve past simple regular verbs. Four per each pronunciation ending (/t/, /d/, /ɪd/). The texts were taken from the textbook English File Elementary and Pre-Intermediate and were adapted in order to have the same number of verbs and the same number of –ed pronunciation endings.

3.6.2 Self- assessed Checklist in the form of Can Do Statements (Appendix C)

This checklist considered two dimensions: phonemic awareness and production of –ed inflectional ending in regular past simple verbs. The statements covered the participants' understanding of the vocal tract, the parts of vocal cords involved in the production of the sounds /t/ and /d/, and the ability to produce regular past simple verbs using the expected pronunciation. A section for participants' comments was added. This instrument is aligned with specific objective 2 that intends to identify the A2 learners' perceptions of "The Sounds of Speech" application.

3.6.3 Focus Group (Appendix D)

A Focus Group was conducted to gather information about participants' perceptions of "The Sounds of Speech" application. This is aligned with the specific objective 2. Two dimensions were considered: Strategy Usefulness and Practice Time. This Focus Group lasted around 20 minutes, and it was conducted in English and Spanish as participants naturally chose to answer the questions using one or another. The four participants could be part of this instance. They were able to express their views and opinions on the intervention in a relaxing atmosphere. The data collected here was recorded via audio and transcribed.

3.7 Data analysis techniques

3.7.1 Pre- and post-intervention test checklist

For analysing the pre- and post-intervention test data, frequency analysis and quantification were used. The recordings were transcribed, and the past simple verbs of each text were transcribed using IPA. Afterwards, the results were analysed by ending and by participant**.** After the participants recorded the text chosen and adapted for this purpose, the transcription and audio files were analysed. Therefore, the expected verb ending pronunciation was assigned a value of 1, and the non-expected verb ending pronunciation (other) was assigned a value of 0. The text contained 12 regular verbs in past simple: four regular verbs per each ending pronunciation, namely **/ɪd/, /t/**, **/d/**. **Total** stands for the number of expected verb endings pronunciation each participant actually produced. Only the endings were considered when deciding if the verb pronunciation was deemed expected pronunciation or non-expected pronunciation (other). The verbs chosen are aligned with the participants' A2 English level.

Table 3

Example of Pre-and post-intervention test checklist

Endings	Verbs	P1	PP
/ɪd/	Wanted	0	ˈwɒnted

3.7.2 Can Do Statement Checklist

This Checklist was analysed using frequency. The comment section included here was also analysed using Thematic analysis.

The checklist was designed as a Can Do Statement Checklist and was organised according to four statements that tackle two themes, which are Phonemic Awareness and Production of –ed inflectional ending in regular past simple verbs. In regards to Phonemic Awareness, three statements were designed and one statement was designed to explore participants' perception of their actual ability to produce the –ed inflectional ending after the intervention. It was added a comment section so that participants could make comments on the statements.

3.7.3 Focus Group

Thematic analysis defined as a systematic procedure of assignment of categories to portions of text (Mayring, 2014, p. 31) was used to analyse the data gathered in the Focus Group. In order to narrow down the data collected, Coding data was used to define categories and sub-categories. Two themes emerged from the Focus Group to identify the usefulness of the **"**The sounds of Speech" application as an explicit phonemic awareness strategy, Strategy usefulness and **Practice Time.** The latter was not considered at the design stage; however, it emerged from the Focus Group.

4. Findings

In this chapter, the data collected during the pre and post-intervention will be presented considering each research specific objective.

4.1 Specific Objective 1: To analyse students' pronunciation of –ed inflectional ending in past simple regular verbs when using "The sounds of Speech application" as a phonemic awareness strategy

Findings for SO1 respond to a descriptive analysis of the collected data from the pre and post-intervention test.

After the participants recorded the text chosen and adapted for this purpose, the transcription and audio files were analysed. Thus, the expected verb ending pronunciation was assigned a value of 1, and the non-expected verb ending pronunciation was assigned a value of 0. Only the endings were considered when deciding if the verb pronunciation was deemed expected pronunciation or non-expected pronunciation. The verbs chosen are aligned with the participants' A2 English level.

Table 4 below presents the score results of the pre-intervention test considering expected and non-expected ending pronunciation by participant.

Table 4

Score by participant in Pre-intervention test. Expected and non-expected –ed verb endings pronunciation

Endings	Verbs	P1	PP	P2	PP	P3	PP	P4	PP
/ɪd/	Wanted	0	ˈwɒnted	0	ˈwɒnted	1	ˈwɒntɪd	1	ˈwɒntɪd
/ɪd/	Chatted	0	tʃeɪted	1	ˈtʃætɪd	0	tʃætəd	0	tʃeɪted
d/	Needed	1	ˈniːdɪd	1	ˈniːdɪd	1	ˈniːdɪd	1	ˈniːdɪd
/ɪd/	Posted	0	pɒsted	1	ˈpəʊstɪd	0	pɒsted	0	pɒsted
/t/	Typed	0	taɪped	1	ˈtaɪpt	0	taɪped	0	taɪped
/t/	Relaxed	0	relæksed	0	relæksed	1	rɪˈlækst	0	relæksed
/t/	Looked	0	luːked	1	luːkt	0	luːked	1	luːkt
/t/	Stopped	0	stəʊped	1	stɒpt	0	stɒped	1	stɒpt
/d/	Arrived	0	æraɪved	1	æˈraɪvd	1	æˈraɪvd	1	æˈraɪvd
/d/	Called	0	Kæled	1	kɔːld	1	kɔːld	1	kɔːld
/d/	Listened	1	ˈlisend	0	lɪsəned	0	lɪsəned	0	lɪsəned
/d/	annoyed	0	ænɒɪed	1	æˈnɔɪd	0	ɑnɒɪdə	0	ænɒɪed
Total		**2**		**9**		**5**		**6**	

***P = Participant** ****PP = Participant's Pronunciation**

Participant 1 scored the lowest, with only two verb endings pronunciation as expected, compared to participant 2 who had the highest score, with 9 out of 12 expected verb endings pronunciation. Participant 3 scored 3 expected verb endings pronunciation, and participant 4 scored 5 expected verb endings pronunciation.

Non-expected pronunciation can be described as the extra syllable that participants added when producing the endings. This extra syllable is **/ed/**, except for the verb *annoyed* that participant 3 produced as **/ɑnɒɪdə/,** with only the /**ə/** was added. The verb *chatted* was also produced by adding **/əd/**, **/tʃætəd/** by participant 3.

Table 5 below shows the total number of expected endings pronunciation by each participant in the post - intervention test.

Table 5

Score by participant in Post-intervention test. Expected and non-expected –ed verb endings pronunciation

Verbs	**P1**	**PP**	**P2**	**PP**	**P3**	**PP**	**P4**	**PP**
Wanted	1	ˈwɒntɪd	1	ˈwɒntɪd	1	ˈwɒntɪd	1	ˈwɒntɪd
Started	1	stɑːtɪd	1	stɑːtɪd	1	stɑːtɪd	1	stɑːtɪd
Decided	1	dɪˈsaɪ.dɪd	1	dɪˈsaɪ.dɪd	0	dɪˈsaɪd	1	dɪˈsaɪ.dɪd
Headed	1	ˈhed.ɪd	1	ˈhed.ɪd	0	ˈheded	0	ˈheded
Looked	0	luːked	1	ˈluːkt	1	ˈluːkt	1	ˈluːkt
Stopped	0	stɒpəd	0	stɒpəd	1	stɒpt	0	stɒpəd
Relaxed	0	reˈlæksed	1	rɪˈlækst	1	rɪˈlækst	0	reˈlæksed
Experienced	0	eksˈpɪrɪen sed	0	ˈɪkspɪrɪen səd	0	ˈɪkspɪrɪensə d	0	eksˈpɪrɪens ed
Stayed	1	steɪd	1	steɪd	1	steɪd	0	əsˈteɪded
Played	0	pleɪed	1	pleɪd	1	pleɪd	1	pleɪd
Called	0	kælɪd	1	kɔːld	1	kɔːld	1	kɔːld
Listened	0	lɪstenəd	1	ˈlɪsend	1	ˈlɪsend	0	ˈlɪsened
	5		**10**		**9**		**6**	

***P = Participant** ****PP = Participant's Pronunciation**

Participant 1, who had the lowest score in the pre-intervention test, increased the expected pronunciation to 5 in the post-intervention test. Participant 2, who scored the highest in the pre-intervention test, with 9 expected verb endings pronunciation, had 10 expected verb endings pronunciation in the post-intervention test. Participant 3 increased the expected pronunciation from 4 to 9 in the post-intervention test, and participant 4 scored 6 expected pronunciations, remaining with the same in the post-intervention test.

Figure 3

Compared Expected Pronunciation by Participant in Pre-Intervention test v/s Post-intervention test

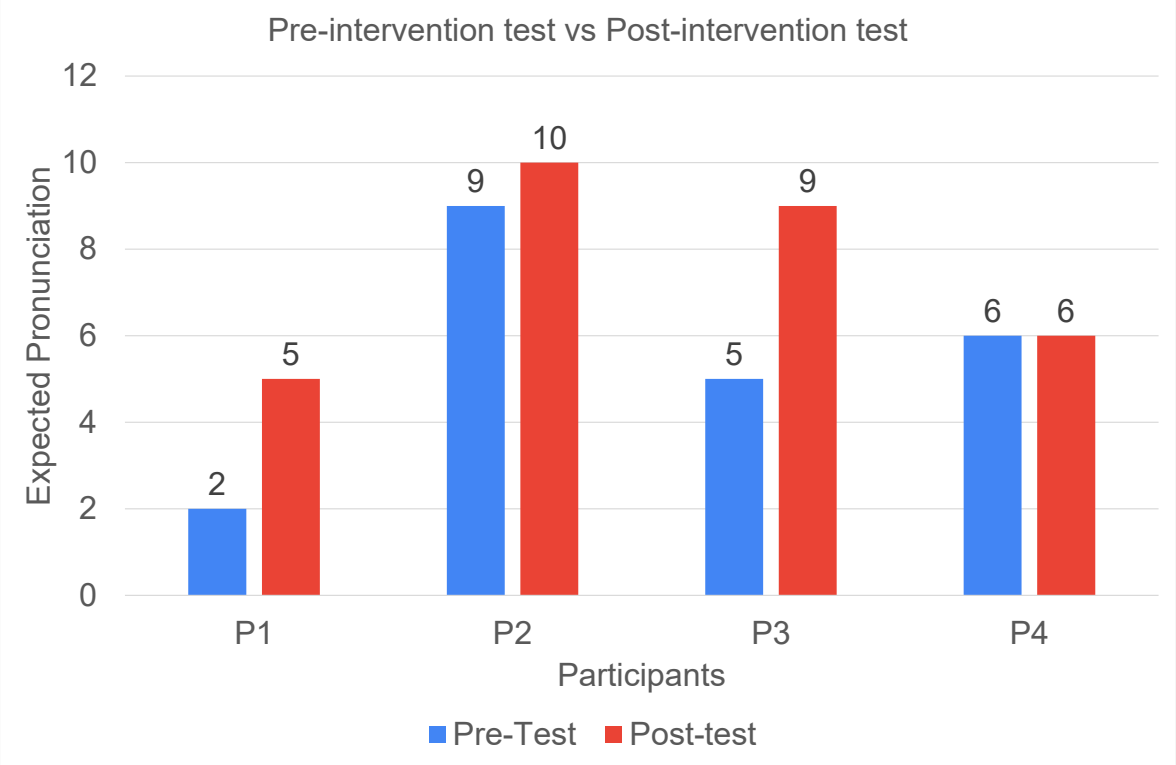


Figure 3 shows the compared results of the expected pronunciation of –ed endings between the pre-and post-intervention tests. Global scores are displayed by participant. Participant 3 achieved the highest improvement, going from 5 to 9 expected endings pronunciation in the post-intervention test; participant 1 achieved the second highest improvement, going from 2 to 5 expected endings pronunciation. Participant 2 improved expected endings pronunciation in 1 point, going from 9 to 10, and participant 4 remained with the same score in both tests.

Figure 4

Expected pronunciation by endings in pre and post-intervention tests

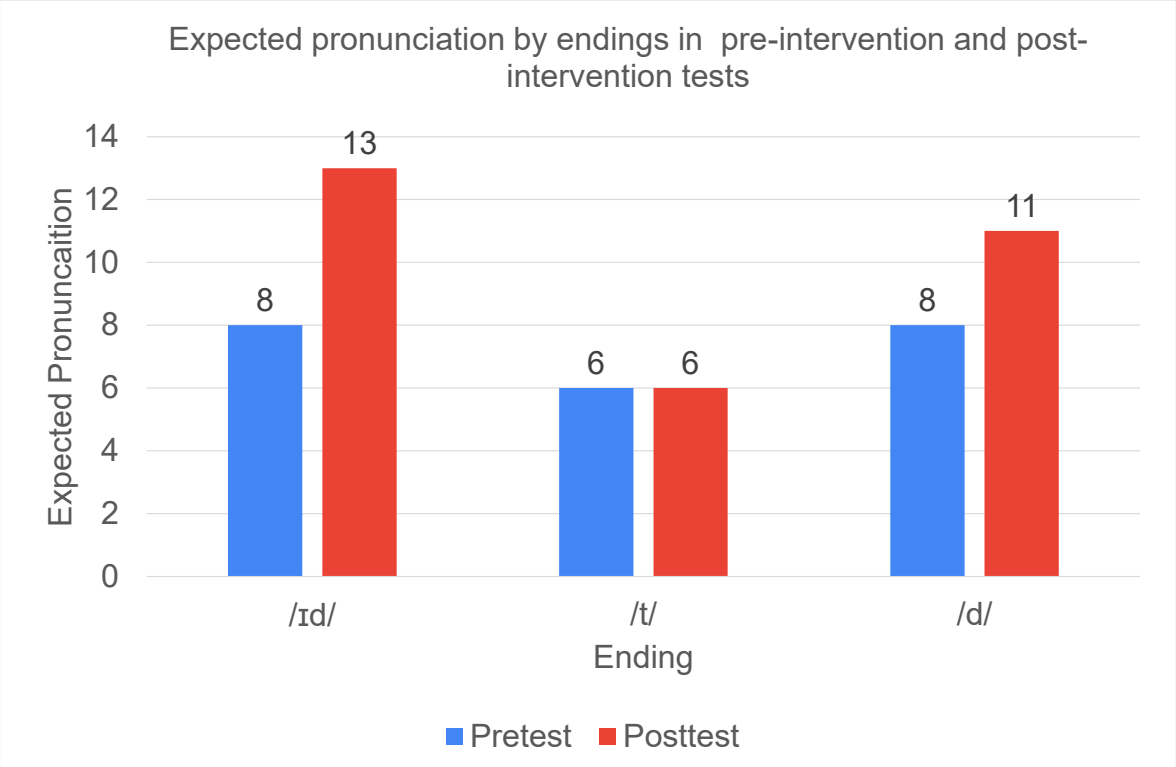
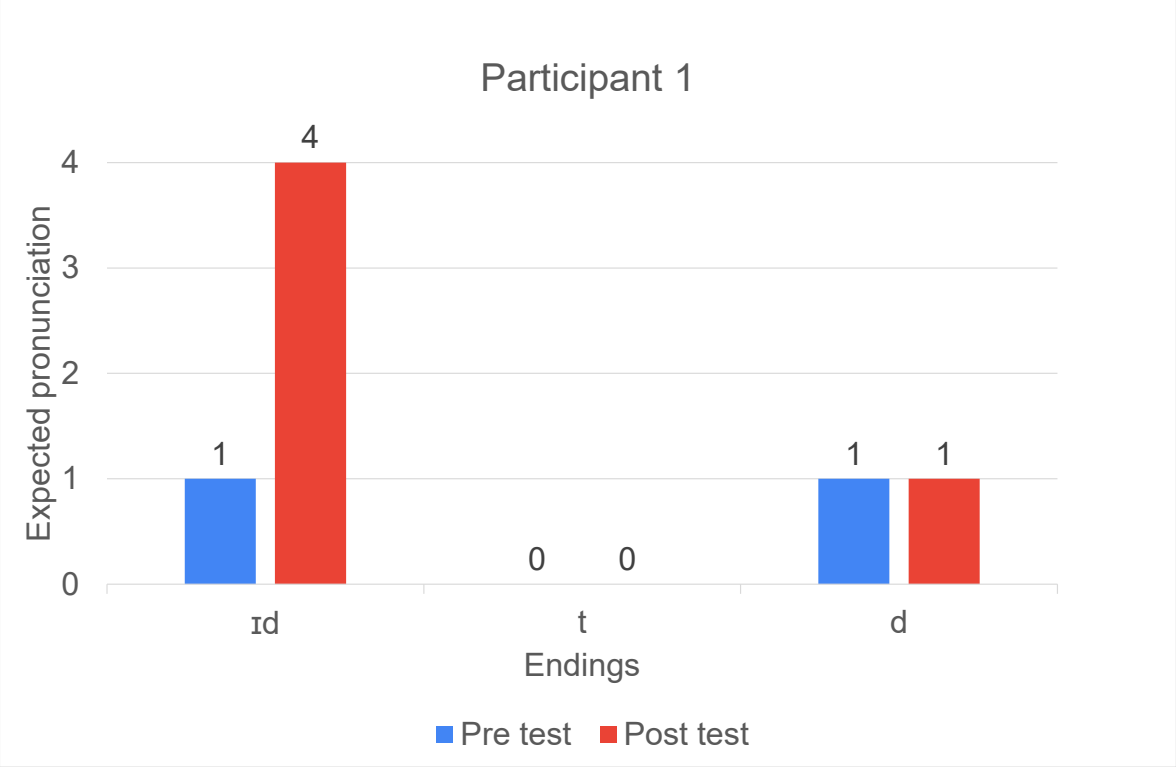


Figure 4 displays compared expected endings pronunciation between pre and post-intervention tests. It shows a significant improvement in /**ɪd/** ending, which increased from 8 to 13 expected endings pronunciation; **/d/** ending rose from 8 to 11, and **/t/** ending remained the same.

In regards to the progress made by each participant, the following figures illustrate this by participant and by ending.

Figure 5

Participant 1's Compared expected endings pronunciation in pre-intervention and post- intervention tests.



Concerning the **/ɪd/** ending, participant 1 produced this ending just once in the pre-intervention test: only the verb *needed* was produced as expected /ˈ**niːdɪd/**; while wanted, /ˈ**wɒnted/**, *chatted*, **/tʃeɪted/** and posted, **/pɒsted/** were produced by adding the extra syllable **/ed/** compared to four times in the post-intervention test in which the four verbs were produced by adding the **/ɪd/** ending: wanted, /ˈ**wɒntɪd/**; started, **/stɑːtɪd/**; decided, **/dɪˈsaɪ.dɪd/**; headed, ˈ**hed.ɪd/**.

With respect to the **/t/** sound ending, participant 1 added the extra syllable **/ed/** to the four verbs: *typed*, **/taɪped/** *relaxed*, **/relæksed**/; *looked*, **/luːked/**, and *stopped*, **/stəʊped/** in the pre-intervention test. The results of this sound in the post-test are as follows: *looked*, **/luːked/**; *stopped*, **/stɒpəd/**; *relaxed*, **/reˈlæksed/;** *experienced*, **/eksˈpɪrɪensed/.** As it can be observed, participant 1 added the extra syllable **/ed/** to the verb endings, except for the verb *stopped* in which the extra syllable is shorter, as the **/e/** sound is closer to a **/ə/**. Comparing these results with his /t/ sound endings production in the pre-intervention test, no difference could be observed.

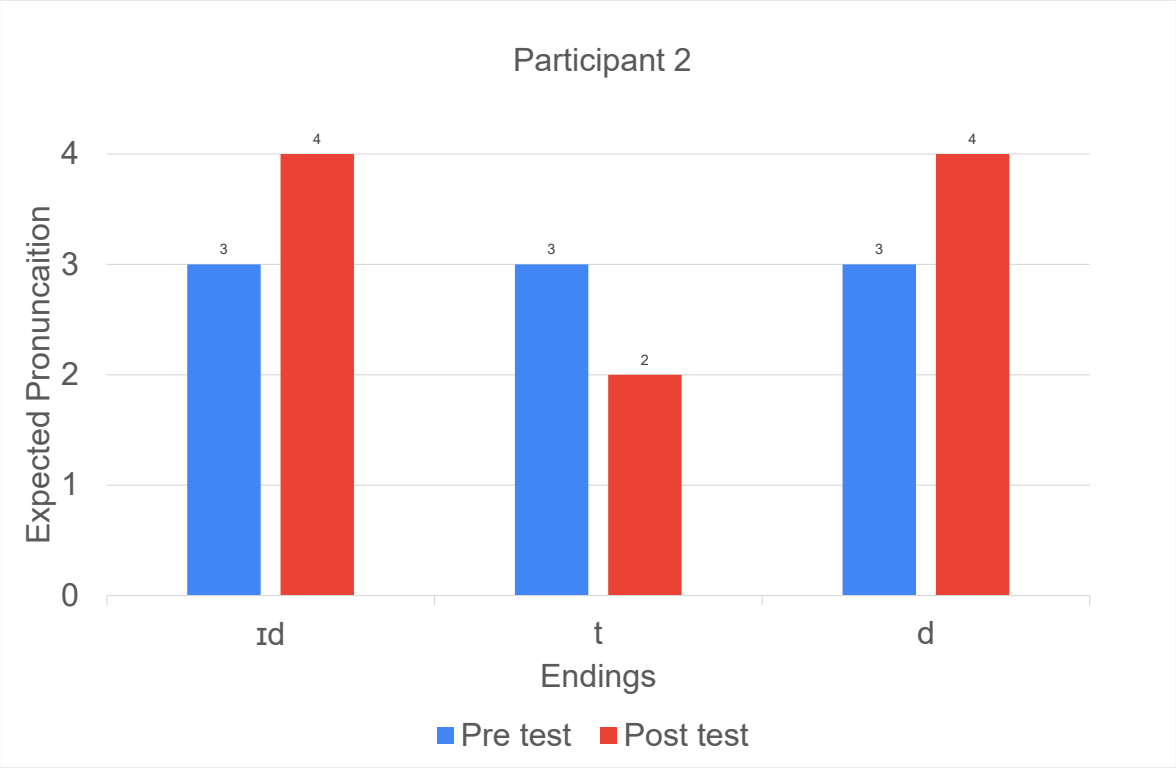
Concerning the **/d/** ending, participant 1 produced one **/d/** ending as expected: *listened* /ˈ**lisend/** in the pre-intervention test**,** and added the extra syllable **/ed/** in the verbs *arrived, /ærəɪved/; called, /kæled/*, and *annoyed, /ænɒɪed/*. Comparing these results with the post-intervention test, this participant also produced one **/d/** ending,

stayed **/steɪd/** as expected, and added the extra syllable **/ed/** to the verbs *played,* **/pleɪed/.** For the verb *called*, **/kælɪd/,** this participant added **/ɪd/** ending and for *listened* **/ɪstenəd/** a **/əd/** syllable was added.

As we can see in Figure 3 above, definite improvements are shown in the **/ɪd/** ending in the post-intervention test whereas the **/t/** and **/d/** endings remained with no variation in terms of score.

Figure 6

Participant 2's Compared Expected endings pronunciation in pre-intervention and post- intervention tests



With respect to **/ɪd/** ending, Participant 2 produced three **/ɪd/** endings in the pre-intervention test: *chatted*, /ˈ**tʃætɪd/;** *needed,* /ˈ**niːdɪd/;** *posted*, /ˈ**pəʊstɪd**/; while wanted, /ˈ**wɒnted/** was produced by adding the **/ed/** syllable. Comparing these results to the post intervention test, participant 2 produced the four verbs as expected: *wanted,* /ˈ**wɒntɪd/;** *started*, **/stɑːtɪd/;** *decided,* **/dɪˈsaɪ.dɪd/**; *headed* /ˈ**hed.ɪd/.**

Regarding the **/t/** sound ending, participant 2 produced three **/t/** endings as expected in the pre-test: *typed*, /ˈ**taɪpt/**; *looked*, **/luːkt/**; *stopped*, **/stɒpt/**. The verb *relaxed* was produced as **/relæksed/**; whilst in the post intervention test, this participant produced only two **/t/** sound endings as expected: *looked*, /ˈ**luːkt/**, and *relaxed*, **/rɪˈlækst/** and the verbs *stopped*, **/stɒpəd/** and *experienced***,**

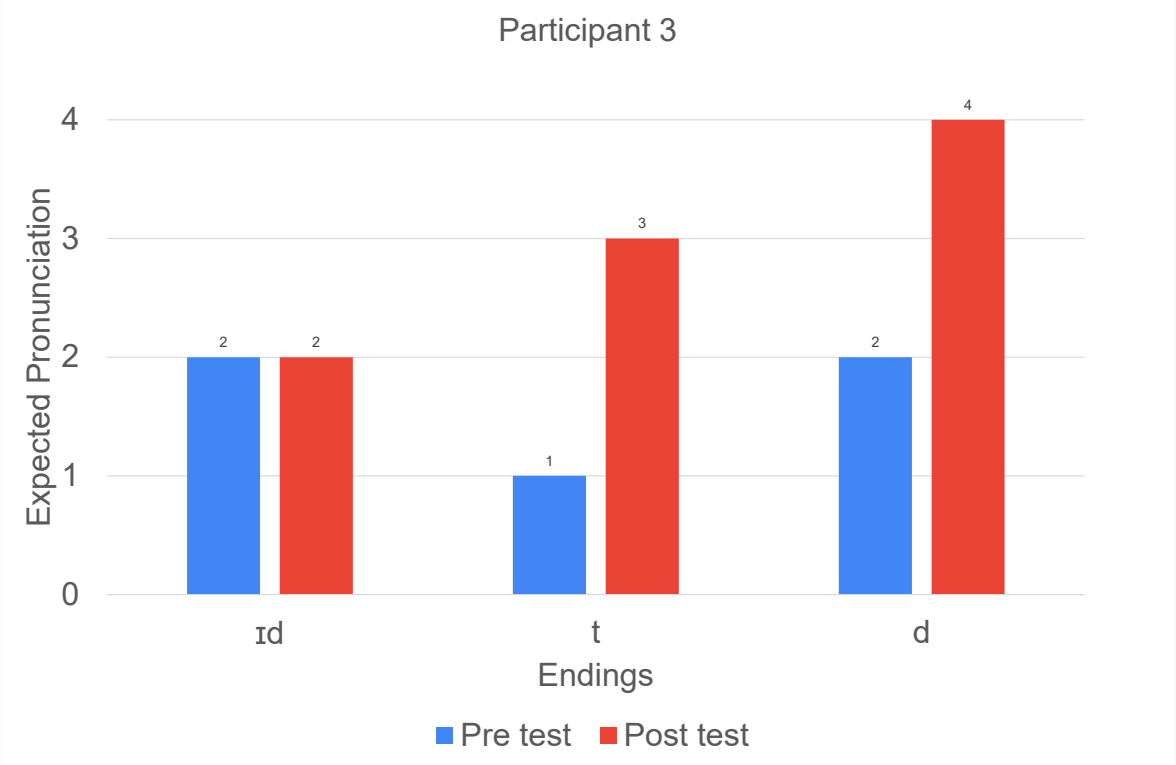
/ˈɪkspɪrɪensəd/ were produced by adding **/ed/** with the **/e/** sound resembling the /**ə/** sound.

Respecting **/d/** ending, this participant produced three **/d/** endings as expected in the pre-intervention test: ***arrived,*** ***/***æˈ**raɪvd/,** *called*, **/kɔ:ld/**, and *annoyed,* **/æˈnɔɪd/** and added the extra syllable **/ed/** in the verb *listened,* **/lɪsəned/.** While in the post-intervention test this participant produced the 4 **/d/** ending verbs as expected*: stayed*, **/steɪd/** *played*, **/pleɪd/** *called*, **/kɔ:ld/** and *listened* /ˈ**lɪsend/.**

As we can observe in figure 4, there were some improvements in **/ɪd/** and **/d/** endings, whilst **/t/** ending decreased from 3 to 2 expected endings pronunciation in the post-intervention test.

Figure 7

Participant 3's Compared Expected endings pronunciation in pre-intervention and post- intervention tests



With reference to **/ɪd/** ending, participant 3 produced two **/ɪd/** endings in both tests. In the pre intervention test the verb endings produced as expected were *wanted*, /ˈ**wɒntɪd/,** and *needed*, /ˈ**ni:dɪd/**. The verb *chatted,* /**tʃætəd/** was pronounced by producing **əd** and *posted*, /**pɒsted**/ by adding the syllable **/ed/.** With regard to the post intervention test for this sound, participant 3 produced two verb endings as expected: *wanted*, /ˈ**wɒntɪd/** and *started,* **/stɑ:tɪd/**. For the verb *decided*, this participant did not produce the extra syllable but the sound **/d/** (**/dɪˈsaɪd/**). With

regard to the verb *headed*, Participant 3 added the extra syllable, however, the sound produced was **/ed/** (/ˈ**heded**/).

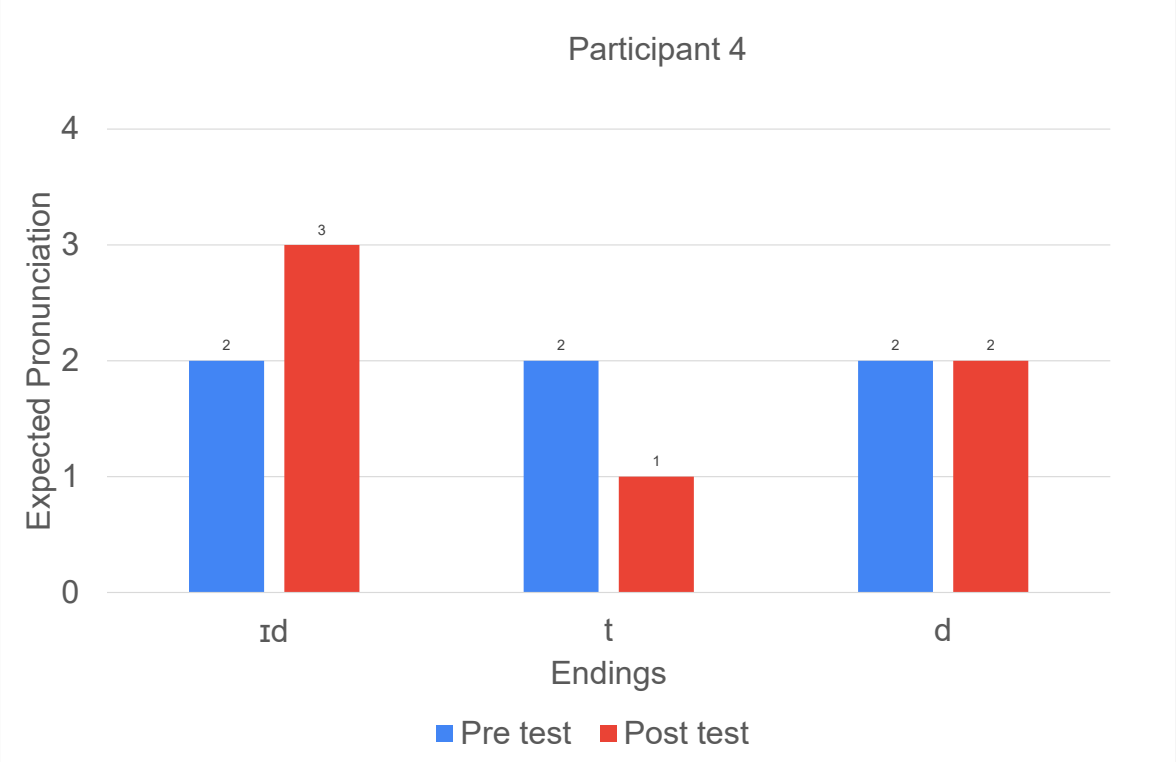
Regarding **/t/** ending, this participant produced one **/t/** ending as expected in the pre-intervention test: *relaxed*, **/rɪˈlækst/** and added the extra syllable **/ed/** in the verbs *typed,* **/taɪped/**; *looked,* **/lu:ked/** and *stopped,* **/stɒped/***.* In the post-intervention test, he produced three **/t/** endings as expected: *looked*, /ˈ**lu:kt/; *stopped*, **/stɒpt/**; *relaxed*, **/rɪˈlækst/** and added the extra syllable **/əd**/ for the verb *experienced* /ˈ**ɪkspɪrɪensəd/***.*

As regards **/d/** ending, participant 3 produced two **/d/** endings as expected in the pre-intervention test: arrived, **/æˈraɪvd/;** called, **/kɔ:ld/** and added the extra syllable **/ed/** in the verb *listened,* **/lɪsəned/***;* he also added the **/ə/** at the end of *annoyed*, **/ɑnɒɪdə/***.* In the post-intervention test, this participant produced the 4 **/d/** verb endings as expected*: stayed,* **/steɪd/** *played,* **/pleɪd/** *called,* **/kɔ:ld/** *listened* **/ˈlɪsend/.**

Figure 5 illustrates that this participant obtained improvement in **/t/** and **/d/** endings; however, no changes were observed in **/ɪd/** endings when comparing both tests.

Figure 8

Participant 4's Compared Expected endings pronunciation in pre-intervention and post-intervention tests



Regarding **/ɪd/** ending, participant 4 produced two **/ɪd/** endings as expected in the pre-intervention test: *wanted*, /ˈ**wɒntɪd/**; *needed*, /ˈ**niːdɪd/** and added the extra syllable **/ed/** to the verbs *chatted, /***tʃeɪted/,** and *posted, /***pɒsted/***;* while in the post-intervention test, three **/ɪd/** endings were produced as expected: *wanted*, /ˈ**wɒntɪd/**; *started*, **/stɑːtɪd/**; *decided*, **/dɪˈsaɪ.dɪd/,** yet the verb *headed* was produced by adding the syllable **/ed/** (/ˈ**heded/**).

Regarding **/t/** ending, two expected **/t/** endings were produced in the pre-intervention test: *looked*, **/lu**ː**kt/;** *stopped* **/stɒpt/**. This participant added the extra syllable **/ed/** in the verbs *typed* **/taɪped/***,* and *relaxed, /***relæksed/**. By contrast, in the post-intervention test this participant produced only 1 **/t/** ending as expected*: looked*, /ˈ**luːkt/,** and added the extra syllable **/ed/** to the verbs *stopped,* **/stɒpəd/;** *relaxed,* **/re**ˈ**læksed/**, and *experienced,* **/eks**ˈ**pɪrɪensed/.**

As for **/d/** ending, Participant 4 produced two **/d/** endings as expected in the pre-intervention test: *arrived*, **/æ**ˈ**raɪvd/**; *called*, **/kɔːld/**, and added the extra syllable **/ed/** in the verbs *listened,* **/lɪsəned/** and *annoyed. /***ænɒɪed/.** Similarly, in the post-intervention test this participant produced two **/d/** expected endings: *played,* **/pleɪd/**, and *called,* **/kɔːld/** and added the extra syllable **/ed/** to the verbs *stayed, /***əs**ˈ**teɪded/**, and *listened,* /ˈ**lɪsened/.**

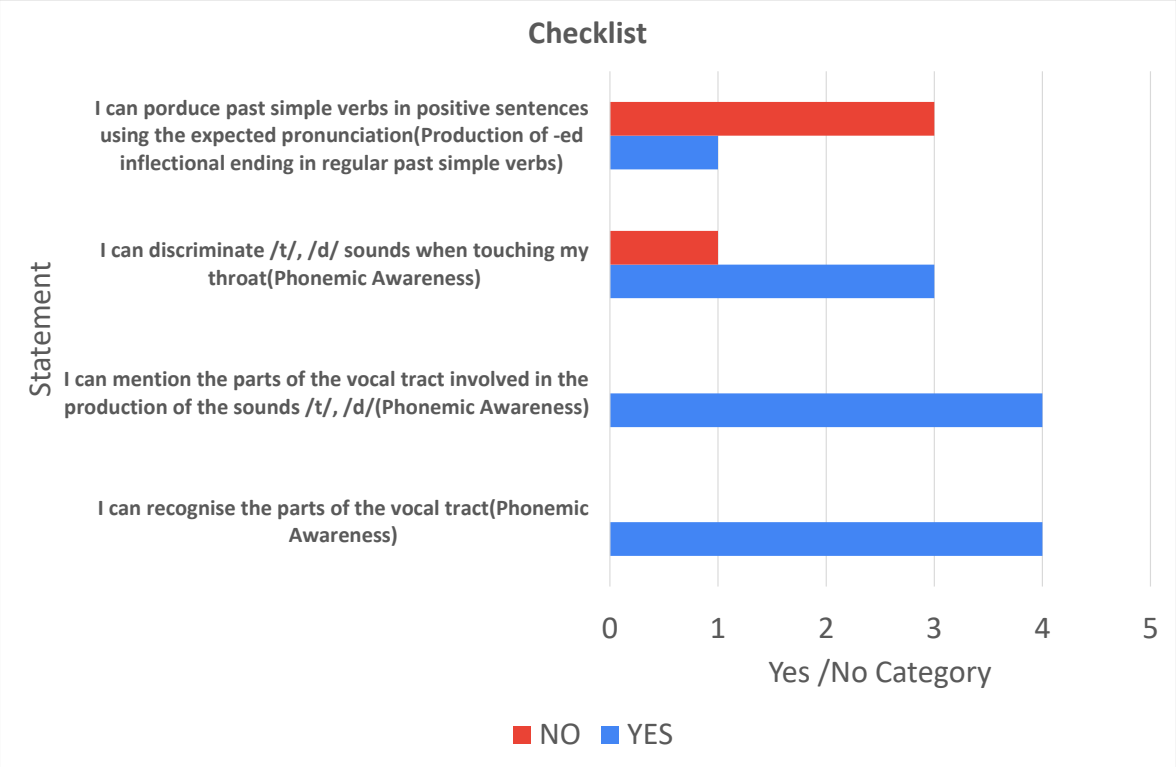
Figure 8 illustrates slight improvement in **/ɪd/** ending for participant 4**.** By contrast, **/t/** ending slightly decreased in the post intervention test, and **/d/** ending remained the same.

4.2 Specific Objective 2: To identify the A2 learners' perceptions of the use of "The sounds of Speech" application as a phonemic awareness strategy to support pronunciation of –ed inflectional ending past simple regular verbs.

In order to collect data on this specific objective, a Focus Group and a Checklist were applied. The findings consider these two instruments as data sources and four themes of analysis, namely: Phonemic Awareness, Production of -ed inflectional ending in regular past simple verbs, which were gathered using a Checklist, and Strategy Usefulness, Practice Time, which emerged from the Focus Group.

Figure 9

Summary of answers from the Can Do statement checklist



The checklist was designed as a Can Do Statement Checklist and was organised according to four statements that tackle two themes, which are Phonemic Awareness and Production of –ed inflectional ending in regular past simple verbs. In regards to Phonemic Awareness, three statements were designed and one statement was designed to explore participants' perception of their actual ability to produce the –ed inflectional ending after the intervention. It was added a comment section so that participants could make comments on the statements.

It can be observed that participants' perception of producing the expected ending dropped notably considering that three out of four participants increased the frequency of expected pronunciation in the post-test intervention and one of them remained with the same score.

4.2.1 Phonemic Awareness

Phonemic Awareness, defined as the ability to understand and notice how the sound is produced, was broken down into three statements addressing in the Checklist. Regarding the statement about the recognition of the parts of the vocal tracts, the 4 participants considered they were able to do it; however, Participant 2 pointed out that some parts are difficult to remember but he was certain he could

recognise them as it can be observed in the following extract form the checklist comment:

“Algunas son difíciles de recordar, pero estoy seguro que puedo reconocerlas”. Participant 2

With respect to their ability to name the parts of the vocal tract involved in the production of the sounds /t/, /d/, the four participants answered positively, although Participant 4 stated that he could only mention the vocal cords. The extract below shows his comment:

"Sólo las cuerdas vocales". Participant 4

Regarding the third statement about discriminating /t/, /d/ sounds when touching the throat, three of the participants considered they could do it, except for Participant 3 who stated he could not discriminate these sounds when touching his throat. However, this participant improved the expected pronunciation from 5 to 9 in the post-intervention test. Participant 2 added:

"Poner atención a las vibraciones"

Which means he could decide if the sound was voiced or voiceless depending on the vibrations of his vocal cords.

These three statements have a direct connection with the first part of the intervention as it was meant to make participants aware of the way the phonatory apparatus works. Based on these findings, it could be argued that exposing students to overt, explicit strategies would help develop phonemic awareness, since participants were able to recognise the vocal cords and understand how sounds are produced, which is part of the development of their phonemic awareness. Besides, their perception of the strategy used during the intervention seems to be useful. They identified the difference between a voiced and a voiceless sound, which is crucial at this stage as this helped them to grasp that there are differences amongst sounds, letters, and syllables in English.

Participants were able to recognise the features of /t/ and /d/ sounds and produce them. In this way, they learnt the mechanics and the underlying reasons why an extra sound – not an extra syllable- must be added when producing a past simple regular verb and not only the rules that are usually learnt by heart.

4.2.2 Production of-ed inflectional ending in regular past simple verbs.

In regards to ascertain participants’ perceptions on the actual production of the regular verbs in past simple, only Participant 2 answered “yes”, showing he felt certain about him being able to produce the –ed inflectional ending in regular past simple verbs, which actually matched with his post intervention test results since he scored 10 out of 12 expected ending pronunciation sounds. While the rest of the participants showed themselves uncertain about the production of –ed inflectional ending as it can be seen in the following examples taken from the Checklist comments section:

-"Some of them, not all" Participant 1.

-"Just a few words". Participant 3.

-"I'm not sure", Participant 4.

4.2.3 Strategy Usefulness

Participants found the application useful as it showed clearly, via animated diagrams and videos, how the vocal cords actually worked. It also displayed the position of the tongue and lips when producing the sounds. This helped them understand the reasons behind the pronunciation of –ed past simple regular verbs.

This theme is exemplified here using the quotes from the data:

- “Creo que sí fue útil porque era más intuitivo ir viendo el símbolo, como se pronuncia y ver cuál es el gesto que se hace para poder pronunciarlo bien…” Participant 2

- “Encuentro que antes yo lo hacía como más de memorización… pero al menos saber que algo es así porque es así, no por memorización es importante”. Participant 1

- “A mí me pareció útil porque prestarle atención a los sonidos de forma precisa, centrándose en ellos y en las partes de la boca que se utilizan para hacerlos hace que sea más fácil cuando se escuchan y producirlos.” Participant 4

Participant 2 considered it was useful as it was more intuitive to see the symbol, how it is pronounced and see the actual production of the sound to be able to pronounce it correctly. This participant referred to the animated articulatory diagrams, and facial videos reproducing the sounds studied in the intervention that were included in the application. During the intervention period, participants could practice the sounds along with the videos that displayed what actually happens in the phonatory apparatus while the sound is being produced. Participant 2 highlighted the reasons behind the pronunciation rules. Even though, it is still hard for him to, knowing these reasons is relevant. Participant 3 considered the application useful because he could pay attention to the sounds and to the way these are produced. According to him, this makes easier when it comes to listening and producing the sounds.

4.2.4 Practice Time

The current intervention was designed considering 6 sessions of 45 minutes each. The intervention itself started after 10 sessions since the beginning of the course. However, three participants mentioned that more time devoted to practice was needed.

Participant 2 considered more time or sessions were needed so that the underlying reasons or rationale behind the pronunciation pattern could be settled down and be applied afterwards. He added that in this case we started the intervention when the course was well advanced in time. Obviously, if it is done from the very beginning, it will go much better.

“Yo creo que más tiempo, o sea hacerlo durante más clases para que se asiente bien la base y después poder aplicarlo. En este caso, lo hicimos bastante bien adelante del curso. Entonces, si se hace desde el inicio, obviamente va a ser mejor”. Participant 2

5. Discussion

In this chapter, these findings are explored in the light of literature, and the implications and limitations of this research study are discussed. This discussion has been organised by specific objectives.

5.1 Specific Objective 1: To analyse students' pronunciation of –ed inflectional ending in past simple regular verbs when using "The sounds of Speech application" as a phonemic awareness strategy.

After analysing the findings, it can be observed that the explicit phonemic awareness strategy used in this intervention improves pronunciation of –ed inflectional ending in regular verbs past simple. This is clearly seen as three out of four of the participants could improve the frequency of expected pronunciation after the post-intervention test. More concretely, participants could identify the difference between sounds and letters, which helped them stop adding the extra syllable –ed as an ending when pronouncing past simple regular verbs. These findings are aligned with Morgan (2016) and Dávila (2018) whose research has also suggested that the provision of explicit input and strategies in teaching sound differences would assist learners in reaching the expected pronunciation.

Regarding endings improvement analysis, namely /ɪd/, /t/, /d/ sounds, it can be seen that the /ɪd/ ending obtains the highest improvement, going from 8 to 13 expected endings pronunciation in the post-intervention test, followed by /d/ ending that shows an improvement of 3 points, going from 8 to 11 expected endings pronunciation in the post-intervention test. The /t/ ending, however, remains with the same score for both tests. Given these results, it might be assumed that the /ɪd/ phoneme was easier to understood, identified and produced as expected when encountering an -ed ending as it is composed of two sounds, while /t/ and /d/ phoneme endings might have required more effort to be identified, and translate the syllable –ed into the corresponding sound. Furthermore, it might have been more challenging due to differences in both languages such as sound-to-letter-correspondence (Uribe-Enciso et al., 2019). This might stem from the features of Spanish as a language, which is considered a syllable-timed language in which the sounds of each syllable have roughly the same duration. Besides, syllables in Spanish are easily recognisable and mostly pronounced as they are written without a marked difference between weak and strong syllables as opposed to English language, which is a stress-timed language (Roach, 2009; Clark & Yallop, 1990); therefore, words are not always pronounced the way they are spelt. These might mislead learners to read and pronounce English as though they do in Spanish.

The attainment of the highest improvement in /ɪd/ ending coincides with what Uribe-Enciso et al., (2019) argue regarding repair processes that EFL learners use when facing –ed inflectional endings pronunciation. This phonological structure results more familiar as it is easy for EFL learners to add /ɪd/ at the end of a verb and create a new syllable. Spanish allows this –VC pattern in final position as in *pared, red, césped.* Thus, EFL learners might easily relate this final pattern with the

/ɪd/ ending in past simple regular verbs and less effort might be required after some exposure and instruction during the intervention.

In Regards to the results of /d/ ending, this had an improvement of 19% in the post-intervention test, which can be explained since some past simple regular verbs with /d/ ending have a vowel sound, which is a voiced sound, therefore, the pattern is –VC, which is a familiar pattern for EFL Spanish learners. Concerning the last ending, /t/, which remained with no variation, can be explained by the lack of sound-spelling correspondence that leads to an "epenthetic vowel" (e.g. fixed, /fɪksɪd/, instead of /fɪkst/). Essentially, this is an over-generalised rule transferred to English. (Carranza Marín, 2008, as cited in Marchena et al., 2020)

5.2 Specific Objective 2: To identify the A2 learners' perceptions of the use of "The sounds of Speech" application as a phonemic awareness strategy to support pronunciation of –ed inflectional ending past simple regular verbs.

Participants' perceptions of the usefulness of "The Sounds of Speech" application result in a notable development of phonemic awareness in regards to –ed endings pronunciation of past simple regular verbs as the participants perceived they could recognise the parts of the vocal tract involved in the production of /t/ and /d/ sounds. They also expressed they could discriminate the /t/ and /d/ sounds when touching their throats. Besides, the participants could watch animated diagrams and videos of the sounds being studied so that they could understand the mechanics of the sounds, the exact moment in which the sound is produced, and the organs involved in the process. They also perceived that they could practise the sounds and then whole words as the same time as they were watching them. According to them, this helped them understand the underlying reasons behind the pronunciation rules of past simple regular verbs, which the participants had already learnt by heart through different grammar exercises and games in the previous academic semester.

However, when it comes to the production of past simple verbs endings in positive sentences, the participants perceived they could not produce those endings. Nevertheless, they did improve their results of –ed inflectional endings pronunciation in past simple regular verbs in the post-intervention test with a significant improvement in / ɪd / ending pronunciation. This mismatch between perception and production might be stemmed from in the fact that pronunciation is the result of two different processes: perception refers to the cognitive process by which sounds are heard and categorized; while, production refers to the output of the cognitive system mediated by physical control of speech gestures. This mismatch between perception and production is in part due to physiology, since speaking is a physical activity while perception is cognitive Therefore, pronunciation is an umbrella term capturing both perception and production processes. (Thomson, 2022). This author argues that conscious noticing when learning speech could trigger a change in mispronunciation. However, input from different sources and interlocutors are also important. Consequently, more training and exposure would be needed to match

learners' accurate perception and production. This is in line with what participants stated that they required more practice using the application.

Pourhosein et al., (2011) also suggest that learning to pronounce a foreign language is primarily a cognitive process that requires "appropriate opportunities", therefore, if what is being looked for is to change the way a learner pronounces words, we need to change the way a learner thinks about the component sounds of those words. Thus, practice time might have been needed in order to make participants more aware of their progress.

5.3 Implications

Considering the findings of this study, it could be implied that an overt strategy used to raise phonemic awareness of –ed inflectional ending pronunciation supports EFL learners' pronunciation of past simple regular verbs. Specifically, the use of an application that allows learners to watch how the sounds –vowels and consonants- are produced, helps them to better understand and identify the rules behind the pronunciation. Hence, this teacher-researcher could conduct similar action research studies in the same field of Phonetics and Phonology, considering difficulties that have been encountered in her work context. Particularly, production of vowel sounds, some cluster consonant sounds, and some sounds that share some similarities in both languages but that they are pronounced differently, which might hinder effective communication and listening comprehension. These are some of the subject matters susceptible of being implemented in future action- research studies.

Teaching pronunciation as a subskill has not been popular with teachers due to a number of reasons: lack of knowledge, considered an outdated activity, lack of phonetic training, and misbeliefs that learners must speak perfect RP (Ur, 1996; Dauer, 1995; Roach, 2009). Nevertheless, I consider teaching pronunciation in general, and teaching pronunciation strategies in particular, are paramount for learners in developing intelligible connected speech and avoiding or diminishing misunderstanding when communicating.

Another implication that can be argued in this action-research study is the development of autonomy in EFL learners since they could acquire the knowledge of how the sounds are produced, therefore, they should be able to apply this knowledge to other sounds whenever in doubt.

The pre-intervention test results and the comments made by the participants, who had already studied the past simple regular verbs pronunciation, suggest that EFL teachers – novice and experienced ones - need more training in this field that has been neglected. Despite not being in vogue as the traditional skills, more research in this field is needed as well as better initial training. Tergujeff, et al (2012) in a survey conducted in different European countries aiming at exploring the issue of pronunciation teaching within an EFL setting from a teachers' perspective found that the teachers are critical of the training they received. In the same line, Thomson (2013) stated that although pronunciation instruction was an important feature of

many language teaching methods in the 20th century, the advent of Communicative Language Teaching (CLT) in the 1980s led many teachers to believe that a focus on form, including pronunciation, was unnecessary. This might be another reason why pronunciation has been neglected.

In another line, the making of this process as a teacher-researcher has allowed me to develop a more analytical, inquisitive and reflective mind not only when facing my class planning and organisation but also when dealing with the academic and administrative decision-making process that my duties involve at work.

I consider this research study a hard but enriching learning process that undoubtedly has contributed to my professional development since it has provided me with practical tools that can be applied at work on a daily basis. It has also encouraged me to work more systematically and considered sharing this piece of work with my community and hopefully, it will help create a community able to share their teaching experiences.

5.4 Limitations

This intervention was designed considering six sessions of 45 minutes each; however, the participants stated that more time was needed in order to practise using the application so that the new knowledge would have settled down in a better way. Thus, the intervention would have been more fruitful, if more time had been Prosody devoted to sessions in order to instil more confidence in the participants as the findings show a mismatch between their post-intervention results and their own perceptions of what they were able to produce. On the other hand, this intervention was limited to only the expected pronunciation of the endings of the past simple regular verbs. Prosody elements were not considered as well as mispronunciation of the verbs other than the –ed inflectional endings.

This study was conducted in a non-conventional educational institution with only four EFL young adult learners. However, it would be interested to conduct a similar study in different institutions with students of different ages since children and young learners develop phonemic awareness differently.

These results cannot be generalised to other educational settings as it only represents my own particular context in which there were no classroom management difficulties and participants were willing to take part in this project and actively participated in the class activities. They also were well aware of the importance of English as a useful tool in their future professional careers. Therefore, they were self-motivated, which helped create a warm and ideal atmosphere to develop any kind of learning.

6. Conclusion

6.1 Summary of main findings

The data collected from this action research study suggests that the use of an explicit strategy to raise phonemic awareness, specifically in the production of –ed inflectional endings in regular past simple verbs seems somehow helpful in the light of the findings of this action research study. Particularly, the use of "The Sounds of Speech application" shows a significant increase in the frequency of expected pronunciation after the intervention. The attainment of this increase was possible after the participants were exposed to 6 sessions of 45 minutes each. The intervention allowed the participants to structurally and consistently be exposed to the way the sound is formed and produced. By controlled modelling first, the participants were able to identify the parts of the vocal tract involved in the production of the sounds being practised. Then, they could imitate the sounds by watching how the sound was produced, and finally they recorded an adapted text containing 12 past simple regular verbs, which was the post-intervention test.

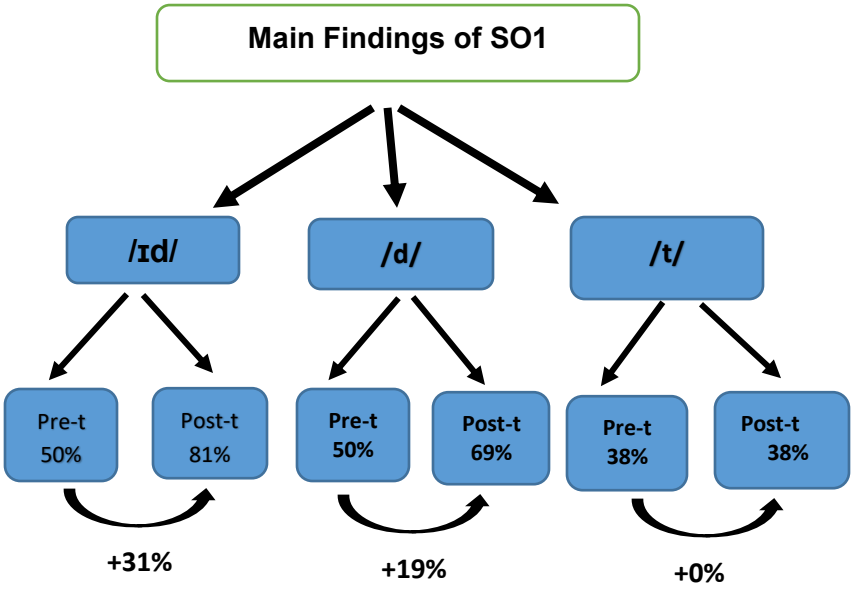
This study's findings also explore the participants' perceptions of the usefulness of this strategy in terms of its contribution to their –ed ending regular verbs pronunciation and the analysis of practice time as a theme that emerged from the Focus Group.

This research study aiming at exploring the influence of the use of "The sounds of Speech application" as a Phonemic awareness strategy on the A2 learners' ability to pronounce –ed inflectional ending in past simple regular verbs, found that using this application as an explicit strategy helped the participants raise phonemic awareness. The results showed a clear improvement in the frequency of expected pronunciation after the intervention. This is evidently seen as three out of four of the participants could improve the frequency of expected pronunciation after the post-intervention test.

Regarding endings improvement analysis, namely /ɪd/, /t/, /d/ sounds, it can be seen that the /ɪd/ ending obtains the highest improvement, going from 8 to 13 expected ending pronunciation in the post-intervention test, followed by /d/ ending that shows an improvement of 3 points, going from 8 to 11 expected endings pronunciation in the post-intervention test. The /t/ ending, however, remains with the same score in both tests.

Figure 10

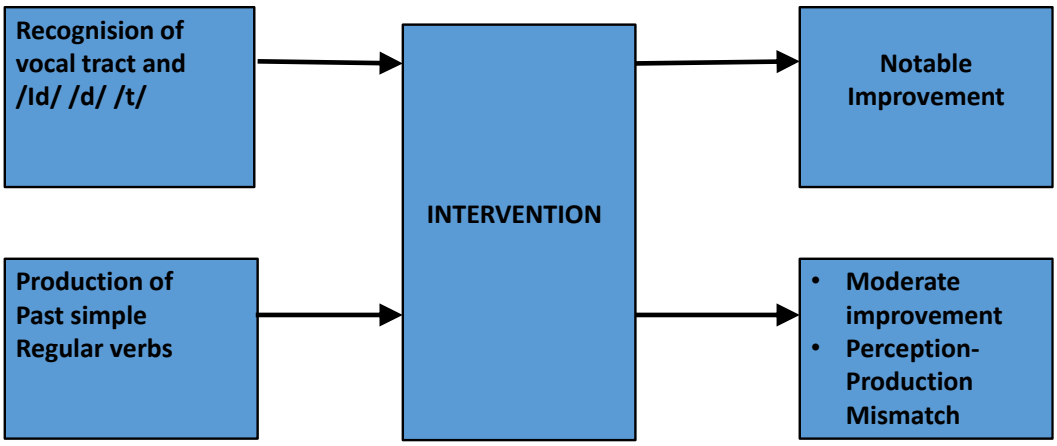
Summary of main findings of SO1



Participants' perceptions of the usefulness of "The Sounds of Speech" application result in a notable development of phonemic awareness in regards to –ed endings pronunciation of past simple regular verbs. The participants thought they could recognise the parts of the vocal tract involved in the production of /t/ and /d/ sounds. They also expressed they could discriminate the /t/ and /d/ sounds when touching their throats. However, when it comes to the production of past simple verbs endings in positive sentences, the participants perceived they could not produce those endings or they could partially produce some of them as expected. Nevertheless, they did improve their results of –ed endings pronunciation of past simple regular verbs in the post-intervention test.

Figure 11

Summary of main findings of SO2



6.2 Personal reflection.

From a personal view, in these challenging pandemic or post-pandemic times, this action research has been somehow a daunting task that has required enormous determination, resolution, and conviction. It has also demanded intellectual, mental, and physical effort and strength. It has been a stony path leading to self-doubt, and self-questioning. In turn, at times, it has led to the necessary self-belief, self-discipline needed to fulfil each stage of this action-research project.

Considering my professional development, this project has greatly contributed to the betterment of my analytical mind and skills: being able to gradually comprehend and use the information I had gathered during the pre and post intervention tests; summarise, synthesise and clearly explain data, compare and contrast figures, foresee, prioritise and organise data. Being able to discriminate what is important for the project and what is aligned with the research objectives and what is not, force myself to be consistent, systematic, well-organised and coherent, have all been part of the writing and construction process of this project.

Without a shadow of a doubt, this research project has also contributed and benefited my job for I have been able to put the above - mentioned skills into practice in several decision-making instances upon I have to actively participate. Throughout this process, I am becoming a better listener, attentive one, enable to ask pertinent questions and discuss various issues using arguments and ideas and focusing on reasons regardless of individuals. In other words, I am consciously aware of making informed decisions, pursuing the well-being of my community. I acknowledge,

though, that this process is difficult and requires an enormous effort and self-awareness because as human beings, we hold biases.

My teaching practice has also been benefited from this project. Incorporating more carefully designed tasks into the classroom. Taking advantage of the application used in this research project has led me to start thinking and working on other aspects of troublesome areas of the pronunciation field, namely: difficulties in recognition of vowel length, how to integrate pronunciation in each lesson, how important might be for EFL learners to be taught and recognised phonetic symbols as a tool to work on articulatory awareness, manage an adequate time to teach pronunciation without neglecting contents and the development of the other skills, as well as how and when to correct students' pronunciation; how effective this might be. These thoughts have accompanied me during this second semester and have allowed me to observe my teaching and my students' learning process more attentively. Unquestionably, I have enjoyed this semester course, and so have my students.

6.3. Recommendations

I would recommend exploring and incorporating effective ways to teach pronunciation in our regular lessons. Integrating pronunciation as a natural component of the learning process as part of our lessons would contribute to the process of raising metalinguistic awareness and support effective communication. Besides, pronunciation should be integrated as an early stage as possible in the lessons as a way of avoiding fossilisation of errors.

Nowadays, pronunciation is an underrated, neglected skill, considered hard to learn by undergraduates who feel unprepared to teach pronunciation as it is not taught in undergraduate programmes. Therefore, there is a lack of teaching training in this area. Teacher scaffolding in pronunciation is another aspect worth exploring. How English teachers give proper feedback when correcting pronunciation. Whether or not teachers correct their students' pronunciation, and how relevant pronunciation is for English teachers are elements that would contribute to better understanding of what is happening in our classrooms.

The purposeful use of technology in class can be beneficial to teaching some aspects of pronunciation, especially segmental phonetics, allowing going beyond drilling, repetition or reading aloud. This would help learners communicate in a more successful way.

Pronunciation assessment is another aspect that requires attention. Considering aspects that are behind intelligibility and how this can be assessed according to learners' levels would also be beneficial to developing better understanding in this area.

References

Bailey, A. A., & Brandl, A. (2012, August). Incorporating pronunciation in the first-year Spanish classroom: An early intervention. In *Proceedings of the 4th Pronunciation in Second Language Learning and Teaching Conference* (pp. 207-223).

Benitez-Correa, C., Cabrera-Solano, P., Solano, L., & Espinoza-Celi, V. (2020). Improving Past Tense Pronunciation of Regular Verbs through the Use of Audacity: A Case Study of EFL Undergraduate Students in Ecuador. *Teaching English with Technology*, *20*(1), 3-20.

Bettoni-Techio, M. (2008). STATE OF THE ART DISCUSSION ON THE INFLUENCE OF AGE ON SLA. *Todas As Letras: Revista De Língua E Literatura*, *10*(1).

Council of Europe. Council for Cultural Co-operation. Education Committee. Modern Languages Division. (2001). *Common European framework of reference for languages: Learning, teaching, assessment*. Cambridge University Press.

Council of Europe (2018). *Common European Framework of Reference for Languages: Learning, Teaching, Assessment. Companion Volume with New Descriptors*. Cambridge University Press.

Couper, G. (2006). The short and long-term effects of pronunciation instruction. *Prospect: An Australian journal of TESOL*, *21*(1), 44-64.

Davila, A. M. (2018). Pronunciation Acquisition of the Inflectional Morpheme–ed in English by Nicaraguan Spanish Speakers. *Open Science Journal*, *3*(1).

Dauer, R. M. (2005). The lingua franca core: A new model for pronunciation instruction? *TESOL Quarterly*, *39*(3), 543-550.

Gordon, J. (2012). Extra-linguistic factors in the teaching and learning of pronunciation in an ESL class. *Pronunciation in Second Language Learning and Teaching Proceedings*, *3*(1).

Henderson, A., Frost, D., Tergujeff, E., Kautszch, A., Murphy, D., Kirkova-Naskova, A., & Curnick, L. (2012). English pronunciation teaching in Europe survey: Selected results. *Research in language*.

Marchena, P. C., Vargas, S. S., & Sánchez, G. Z. (2020). Language Teaching Techniques for Pronouncing the Past Tense Phonemes/t/,/d/, and/ɪd/ in Regular Verbs When Reading Aloud. *Revista Ensayos Pedagógicos*, *15*(2), 277-300.

Marks, J. (2007). *English pronunciation in use: Elementary*. Cambridge Cambridge University Press.

Miller, J. S. (2013). Improving oral proficiency by raising metacognitive awareness with recordings. *Pronunciation in Second Language Learning and Teaching Proceedings*, *4*(1).

Morgan, G. The role of vowel length in comprehension during cross-cultural communication: An action research project. *Journal of Advances in Linguistics*, *7*(1).

North, B., & Piccardo, E. (2016). Developing illustrative descriptors of aspects of mediation for the Common European Framework of Reference (CEFR): A Council of Europe project. *Language Teaching*, *49*(3), 455-459.

Pardede, P. (2018). Improving EFL Students' English Pronunciation by Using the Explicit Teaching Approach. *Journal of English Teaching*, *4*(3), 143-155.

Pavez Ramírez, F. (2021). *Explicit pronunciation instruction and second language motivational self-system* (Doctoral dissertation, Universidad Andrés Bello).

Pourhosein Gilakjani, A., & Ahmadi, M. R. (2011). Why is pronunciation so difficult to learn. *English Language Teaching*, *4*(3), 74-83.

Roach, P. (2009). *English phonetics and phonology paperback with audio CDs (2): A practical course*. Cambridge university press.

Rokhman, M. F., Lintangsari, A. P., & Perdhani, W. C. (2020). EFL learners' phonemic awareness: A correlation between English phoneme identification skill toward word processing. *JEES (Journal of English Educators Society)*, *5*(2), 135-141.

Sardegna, V. G. (2012). Learner differences in strategy use, self-efficacy beliefs, and pronunciation improvement. In *Social factors in pronunciation acquisition. Proceedings of the 3rd Pronunciation in Second Language Learning and Teaching Conference* (pp. 39-53). Iowa State University.

Setter, J., & Jenkins, J. (2005). State-of-the-art review article. *Language Teaching*, *38*(1), 1-17.

Tergujeff, E., Frost, D., Henderson, A., Kautzsch, A., Levey, D., Murphy, D., & Waniek-Klimczak, E. (2012). Teachers'views on their Professional Training and Assessment Practices: Selected Results From The English Pronunciation Teaching In Europe Survey. *Pronunciation and Assessment*, 29.

Thomson, R. I. (2022). Perception in Pronunciation Training. *Second Language Pronunciation: Bridging the Gap Between Research and Teaching*, 42.

Topal, İ.H. (2019). CEFR-oriented probe into pronunciation: Implications for language learners and teachers. *Journal of Language and Linguistic Studies, 15*(2), 420-436.

Villablanca, P. (2022). Pre-and In-Service Teachers' Cognitions About Pronunciation Teaching: An Exploration of the Chilean Context. *Pronunciation in Second Language Learning and Teaching Proceedings*, *12*(1).

Underhill, A. (2005). *Sound foundations*. Macmillan Education.

Ur, P. (1999). *A course in language teaching trainee book*.

Uribe Enciso, O. L., Fuentes Hernandez, S. S., & Rey Pabón, A. S. (2019). Problematic Phonemes for Spanish-Speakers' Learners of English. *GIST Education and Learning Research Journal*, *19*, 215-238.

Watts, P., & Huensch, A. (2013). Integrated speaking, listening and pronunciation: Are textbooks leading the way? *Pronunciation in Second Language Learning and Teaching Proceedings*, *4*(1).

Yopp, H. K., & Yopp, R. H. (2000). Supporting phonemic awareness development in the classroom. *The Reading Teacher*, *54*(2), 130-143.

Appendices

Appendix A: Adapted texts

Pre- Intervention test Text

The taxi driver

Charles Spencer, Princess Diana's brother, has three daughters, 18-year-old Kitty, and 15-year-old twins Eliza and Amelia. They live in Althorp, a large country house near Northampton, about 85 miles (136 kilometres) north of London.

One of the sisters and her friend **wanted** to go to a football match in London. It was a Premier League match between Chelsea and Arsenal at Stamford Bridge. They **called** a taxi because they **needed** it to take them to London and back. The taxi **arrived** and the driver **typed** Stamford Bridge into his satnav. The girls **relaxed** in the back of the car. They probably **chatted**, **listened** to music **posted** on Instagram, and **texted** their Friends. They didn't talk to the taxi driver.

Two hours later the taxi **stopped**. They **looked** out of the window. It was a Street with pretty houses. The girls **argued** with the taxi driver. They **annoyed**.

The girls were a bit surprised, and they **asked** the taxi driver where they were. 'In Stamford Bridge,' he said. 'Where did you want to go?'

Post-test Intervention Text

The place is perfect, the weather is wonderful, but if you're with the wrong person, a holiday can be a disaster…
Joe 28, a flight attendant
Last October I went on holiday to Thailand for two weeks with my girlfriend, Mia. The holiday **started** well. (We **relaxed** a lot.) We spent two days in Bangkok and saw the Floating Market and the Royal Palace. But things went wrong when we left Bangkok. I **wanted** to stay in hostels, which were very basic but clean, but Mia said they were too uncomfortable and so we **stayed** in quite expensive hotels. I **experienced** the local atmosphere but Mia just **wanted** to go shopping. I thought I knew Mia very well, but you don't know a person until you travel with them. It was awful! We **argued** about everything.
For our last four days, we **headed** for Ko Chang, a beautiful island. It was like being in Paradise. The weather was lovely and the beaches were wonderful, but we just **played with our phones** without speaking and **texted** our friends. I also **called** my family and Mia **listened** to music. We spent our last night back in Bangkok and we went for a drink with some Australians. They were really friendly and Mia **started** flirting with one of the boys and **looked** at them. That was the end. When we **arrived** at Heathrow airport, the next day we **stopped** talking each other and **decided** to break up.

I took hundreds of photos, but when I got home, I didn't show them to anyone.

Appendix B: Pre-test / Post-test Intervention Checklists

Pre-intervention test Checklist

Verbs	Expected	Other	Observation
/ɪd/			
Wanted			
Chatted			
Texted			
Needed			
Posted			
/t/			
Typed			
Relaxed			
Looked			
Stopped			
Asked			
/d/			
Called			
Arrived			
Listened			
Argued			
Annoyed			

Post-test Intervention Checklist

Verbs	Expected	Other	Observations
/ɪd/			
Wanted			
Started			
Decided			
Headed			
Texted			
/t/			
Arrived			
Looked			
Stopped			
Relaxed			
Experienced			
/d/			
Stayed			
Argued			
Played			

Called			
Listened			

Appendix C: Checklist (Can Do Statement)

Dimension	Statement	YES	NO	Comments
Phonemic awareness	I can understand the parts of the vocal tract			
Phonemic awareness	I can mention the parts of the vocal tract involved in the production of the sounds /t/, /d/.			
Phonemic awareness	I can discriminate /t/, /d/ sounds when touching my throat			
Production of –ed inflectional ending in regular past simple verbs	I can produce past simple verbs in positive sentences using the expected pronunciation.			

Appendix D: Focus Group

Diego, you can start. Tell me about your background, your English background?

I studied in a particular subvecionado.

T: What was that schools?

Diego: Liceo La Asunción. I had English classes from primero básico a cuarto medio.

T: How many hours did you have? Do you remember?

D: 2 hours till 4th medio. And I had English 1 and English 2 at university. But it is for my career. It is noot normal English.

T: It´s not communicative English.

D: Es muy técnico.

T: Cuántos años tienes?

D: 21

T: What about you, Diego Inzunza?

DI: I started learning English at school in Colegio Creación, since Kinder. I also had two hours per week. The most I learned was the Internet and listening to music and this is my first course since school. At university, I haven't got like English classes yet, but I want to eximirme de ellas cuando me toque.

T: Ok, Bastián. It is your turn.

B: Yo estudié en el colegio Brasil. Creo que empecé a aprender inglés desde primero medio

T: No en la básica?

B: Tuve, pero es que no aprendí mucho, como si aprendí de primero a cuarto.

T: ¿Por qué?

B: No sé, Creo que la profesora de primero medio era muy buena, siento que aprendí mucho con ella.

T: Y tenían una vez a la semana, dos veces a la semana?

B: Una vez a la semana.

T: Una vez. Ya después en la universidad en Inacap, no mucho porque como no eran ramo de la carrera, la verdad es que no tenía mucha exigencia.

T: So, This is your first English course?

B: Yes.

T: What about you, Hugo?

H: Tuve inglés de primero a cuarto medio en el colegio Metodista, particular subvencionado. Antes, estaba en otro, municipal, pero ése no tenía inglés.

T: ¿No tenías inglés en la básica?

H: No. Después en la universidad no tuve inglés.

T: And you studied History…

H: Nope. Pedagogía en español.

T: How many hours did you have in Media?

H: 4 horas a la semana.

T: Now I would like to talk about the strategy we tried to use, The application that we used "The sounds of speech". The idea of this was that you understand the difference between sounds and letters.

What do you think of "The sounds of Speech" application as a phonemic awareness strategy? Como una estrategia de conciencia fonémica.

DI: Yo creo que sí fue útil porque era más intuitivo ir viendo el símbolo, como se pronuncia y ver cual es el gesto que se hace con la boca para poder pronunciarlo bien. Entonces, es mejor que estar como repitiéndolo y tratar de uno imaginarse todo lo que hay que hacer por dentro de la boca.

D: Igual como dice Diego, encuentro que antes yo lo hacía como más de memorización, acordarme lo que se decía en cada frase, y ahora aunque igual me cuesta porque yo soy malo reconociendo si el sonido vibra o no, entender esa parte, osea, la entiendo pero me cuesta identificar, pero al menos saber que algo es así porque es así, no por memorización es importante porque en algún momento sé que lo voy a poder hacer, por así decirlo.

B: Creo que sí es útil, pero aún así es complejo de poder reproducir el sonido.

H: A mí me pareció útil porque prestarle atención a los sonidos de forma precisa, centrándose en ellos y en las partes de la boca que se utilizan para hacerlos hace que sea más fácil cuando se escuchan y producirlos.

T. The second question: What would you improve on the implementation of this strategy?

DI: Yo creo que más tiempo, osea hacerlo durante más clases para que se asiente bien la base y después poder aplicarlo. En este caso, lo hicimos bastante bien adelante del curso. Entonces, si se hace desde el inicio, obviamente va a ser mejor. Pero, el método en sí me parece bueno.

T: And the last question: What else can you say about the use of this strategy?

DI: Lo mejor como para aprender es poder visualizar que hay que hacer, como gestualizar para poder producir un sonido porque usualmente, como decía Diego uno trata de aprenderse las palabras de memoria no más… esta palabra se pronuncia así y se pronuncia así no más, pero aquí ahora como que uno es consciente al estar hablando, de cómo se pronuncia cada sílaba o sonido en realidad.

D: Yo igual encuentro que por ejemplo que hicimos como 3 o dos clases en las que mostraron las imágenes y practicamos lo del tracto vocal por así decirlo. Entonces, hacer más eso porque eso encuentro que es la parte más difícil de aprender porque entender el concepto en sí no es tan difícil, sino que practicarlo es como lo complejo, hacerlo palabra por palabra.

B: Yo igual creo que necesitamos más práctica porque así también lo podemos familiarizar, internalizar.