

Pronunciation Strategies for Linguistically Diverse College English Language Learners

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Abstract

This qualitative action research study was initiated to investigate and evaluate the effectiveness of an intelligibility and comprehensibility approach to teaching English pronunciation in an online synchronous modality. The curriculum took a three-pronged approach to include segmental aspects, prosody, and suprasegmental features. The participants included 46 first-year ESL students at an urban community college in Brooklyn, New York, with diverse language and educational backgrounds between the ages of 17 and 45. Using a targeted approach, the action steps consisted of planning, curriculum development, observation, and reflection during instruction over two semesters. The data were collected through instructor-created pre-and post-tests, semi-structured attitudinal questionnaires, structured questionnaires, elicited documents, multimodal interactions, and focus group observations. Data analysis included coding, memo writing, and a constant comparative method during open, axial, and selective coding phases. The results revealed that selectivity in course design improved the participants' intelligibility and comprehensibility. Multi-modalities that targeted individual pronunciation needs and communicative goals actively engaged students in virtual learning. Contextualized and socially significant usage of language increased confidence.

Keywords: pronunciation pedagogy, communicative competence, intelligibility, virtual learning processes, linguistic inclusivity, L2 acquisition

Introduction

Intelligibility is the listeners' ability to understand what is being spoken; comprehensibility is the ease with which the listener is understood. Intelligibility is a fundamental requirement for effective communication. Intelligibility is defined as the ease with which speech is perceived by a listener (Munro & Derwing, 2015). Levis and Silpachai (2018) describe intelligibility as the speaker's ability to produce, for a listener, accurately decodable speech. The successful teaching of pronunciation is essential because it affects the ability of language learners to make themselves understood and to understand others (Levis, 2018). The intelligibility principle holds that learners should aim to develop speaking patterns that allow them to communicate with ease, even if their accent retains nonnative characteristics. Comprehensibility determines the ease with which a speaker is understood; it also represents the degree to which a listener

can understand the speaker's meaning and intentions. Intelligibility is the result of speech recognition and the comprehensibility of speech understanding (Levis, 2018).

Faulty pronunciation is one of the most common causes of misunderstanding (Thornbury, 2006). Communicative competence in English is invariably intertwined with sound to the degree that the accent on syllables and tonal utterances can change the intended meaning of a word (Khaleghi et al., 2020). Beginners need to learn that the speaker's most important information, often called the focus word, receives the greatest stress and highest pitch (Chan, 2018). In the meaning-making system of language, syntactic structure and the sound system complement each other. Phonological awareness is a linguistic construct measured by how well learners can perceive the sound structure of the second language. Therefore, to avoid being misunderstood, English learners have to be equally proficient in the elements of phonetics, such as rhythm and intonation in connected speech. Improperly stressed words and phrases can also lead to misunderstanding (Hahn, 2004), so it is important to teach students to hear and produce stress on the correct syllable of multisyllabic words (Chan, 2018). In a study by Franklin and McDaniel (2016), the incorrect pronunciation of certain vowels and consonants caused students to experience undesirable social interactions. This can be extremely demotivating and can cause students to hesitate to speak. For these reasons, English language students typically view pronunciation as a priority in their language education (Cox, et al., 2019).

Pronunciation instruction should be integral to English language classroom activities (Gilakjani & Ahmadi, 2011). Although recognized as important, the teaching of pronunciation remains largely neglected in the field of English language teaching (Foote, Trofimovich, Collins & Urzúa, 2016; Gilakjani & Ahmadi, 2011; MacDonald, 2002; Munro & Derwing, 2006). Despite students expressing a desire for pronunciation instruction, it is often included only as a minor component in English as a Second Language (ESL) classes (Munro & Derwing, 2006). If students do not receive pronunciation instruction, they are often left to self-identify pronunciation problems in their speech (Derwing & Rossiter, 2002). Once a central concern of language teaching, pronunciation was sidelined in response to the Communicative Language Teaching (CLT) approach which emphasized meaning over form rather than grammatical rules and structure (Pennington, 2019). While functional academic aspects of the English language have remained prominent in post-secondary ESL courses, significant pronunciation aspects have been generally neglected. Consequently, many English learners have not received the instruction needed to speak confidently in academic, personal, or professional settings.

However, over the past decade, attention to pronunciation has been revived. There is a greater focus on preparing English language learners (ELLs) for communication in an interconnected world (Pennington, 2021). After an extended period of being on the periphery, instruction in English pronunciation has reemerged as an important subfield within applied linguistics research and language assessment. Pronunciation instruction of English as the target language (TL) is in a state of a resurgence now, reinvigorated by recent studies that investigate the importance of segmental (vowels and consonants), suprasegmental (pitch, voice quality, and length), and prosody (rhythm, stress, and intonation) features (Yenkimaleki & Van Heuven, 2021).

Linguistic Confidence

A lack of communicative intelligibility can result in a lack of confidence and cause ESL students to be passive learners. However, when beginner-level English learners find that their listeners start to understand them, they gain confidence and become more comfortable speaking, which increases their desire to practice and promotes communication (Chan, 2018). Generally defined as the verbal interaction among students and instructors in a learning environment, active participation connotes any remarks or questions students voice (Sedláček & Sedova, 2015). In a language-learning context, active class participation is positively correlated with academic success compared to students who are verbally inactive (Permatasari, 2016; Albertson, 2020). According to Krupa-Kwiatkowski (1998), speaking confidence contributes to individual engagement and participation and accelerates cognitive processes necessary for language learning. Syavenny and Johari (2017) found that overall English language proficiency increased with higher participation. Liu and Jackson (2008) investigated reticence among English learners and their study revealed that the more proficient the students, the higher their participation level. Findings from a study by Crosthwaite et al. (2015) also supported these results by confirming that there was a positive relationship between class participation and language proficiency levels among participants.

Segmental and Suprasegmental Aspects

Explicit instruction of phonological rules makes learners conscious of segmental and suprasegmental rules that play a key role in L2 speech intelligibility (Venkatagiri & Levis, 2007). Segmental features of speech are the smallest segments, consisting of vowels and consonants. Although segmental aspects of pronunciation are crucial (Catford, 1987), certain types of errors carry greater weight than others. However, by only focusing on segmental aspects, progress toward intelligibility is limited since suprasegmental aspects are necessary for comprehensibility (Derwing & Munro, 2009). Suprasegmentals convey a lot of nuances such as certainty or uncertainty, sarcasm or sincerity, and surprise or indifference (Armstrong, 2020; Hussain & Sajid, 2015). Including the suprasegmental aspects of English (pitch, voice quality, and length) in pronunciation instruction contributes to communicative ability.

Prosody relates to various phenomena (including rhythm, stress, and intonation) which are important in conveying the speaker's intent. Stress and intonation are essential aspects of the pronunciation of English words and utterances. Stress in pronunciation is evident in the loudness, length, pitch, and quality of sounds. Intonation is used to convey meaning beyond that which is expressed by words; it is often the difference between asking a question and giving a command. At the pragmatic level, many cues are conveyed through subtle prosodic changes (e.g., the speaker's attitude, emotions, and cues for turn-taking in conversation). Thompson and Taylor (2020) believe that focusing on stress is a fundamental, central element of spoken English; it can change the meaning of a word or a phrase, indicate agreement or disagreement, or be used to correct an inaccuracy or misunderstanding. Prosodic features help listeners make sense of what is being said and often contain key information. When suprasegmental aspects and prosody are used erroneously, there is a higher likelihood that speech may be misunderstood.

Pronunciation Instructional Approaches

Pronunciation skills are a key factor in communication in every language and necessitate accuracy in the production of phonemes, word stress, rhythm, and intonation. Current L2 pronunciation research is based on language learning and teaching theory grounded in second language acquisition (SLA) and on prior research results (Pennington, 2021). Pronunciation instruction attunes listeners to the sound system of the target language and can strengthen processing skills, such as speech segmentation and word identification, which contributes to improved word recognition and speech understanding in the L2 (Kissling, 2018). A holistic multimodal approach involves articulatory, auditory, cognitive, and multisensory activities (Szpyra-Kozłowska, 2014). This approach is more effective than traditional intuitive-imitative tasks since the former caters to the needs of students with different learning styles while the latter is suitable mainly for auditory learners (Szpyra-Kozłowska, 2015). By employing what Szpyra-Kozłowska dubbed a multimodal approach, the pronunciation teaching curriculum should involve the development of sound perception and production and appeal to multisensory speech perception and processing (2014).

Overview of Study and Hypothesis

Research into measurable improvements in pronunciation made by beginner-level college English language students in an online setting is currently limited. Most studies have been conducted with advanced-level English learners in face-to-face environments. Over the past several years, informal observations at the study site revealed that pronunciation was a major impediment to effective communication, active participation, and self-advocacy for many beginner-level students enrolled in the college's ESL program. At present, the program does not offer a course in pronunciation. Historically, the program's Integrative Language Seminar course has focused on grammar and writing. Therefore, an action research approach was implemented to include pronunciation instruction and observe student progress in all areas of English language development. An iterative four- step process was used to ensure quality data collection and analysis to determine valid outcomes. It is hypothesized that by providing intelligibility-based pronunciation instruction that includes opportunities for student interactions, independent speaking practice, and negotiation of meaning, English learners' spoken language will improve along with their confidence levels. The two-fold objectives of this online synchronous classroom-based action research study were to test the efficacy of an intelligibility-based English phono-didactic methodology and to argue for the inclusion of pronunciation instruction in the curricula.

Research Questions

In the context of improving English language skills, the Integrative Language Seminar course was designed to implement a variety of instructional practices that support American English phonology, morphology, and syntax, particularly through social interaction and communication. This study was designed to investigate pronunciation strategies that improve receptive and productive language. The study further invited students to reflect on the importance of communicating confidently and sought to answer the following questions:

1. How do the implemented pronunciation strategies and techniques contribute to the participants' intelligibility, comprehensibility, and confidence in an online setting?
2. What are the participants' attitudes about the importance of English pronunciation in their personal lives, academic experiences, and career goals in relation to their diverse linguistic backgrounds?

Theoretical Framework

Viewed through the philosophical lens of Bandura's (1989) human agency in social cognitive theory, this qualitative research design focused on improving the communicative competence and confidence of linguistically diverse college freshmen students. Bandura's human agency involves the following four core properties: intentionality, forethought, self-reflectiveness, and self-reactiveness (Bandura, 2001). According to Bandura (2001), personal agency operates within a broad network of sociostructurally influences on people as producers as well as products of social systems. This framework distinguishes among three modes of agency applied to the participants' language learning experiences: direct personal agency, a proxy agency that relies on others to act on one's behalf to secure desired outcomes, and collective agency exercised through socially coordinative and interdependent effort (Bandura, 2001).

The online methods of virtual instruction that guided this study provided participants with the opportunities to self-regulate and self-reflect upon their own learning. Teaching pronunciation is a challenging task in an online setting. Face-to-face methods include lip reading, body language, and immediate feedback, which are difficult when teaching in online. Creating speaking opportunities online required the introduction and use of digital tools and technologies. From speech recognition software to incorporating interactive pronunciation applications, ELLs selected from a variety of engaging methods that provided constructive feedback. In an online setting, teaching stress required careful listening exercises and the use of visual aids to demonstrate emphasis, as visual cues were limited. To address challenges with intonation, audio recordings and video demonstrations illustrated various patterns. Furthermore, online learning offered flexibility, allowing learners to practice pronunciation asynchronously and at their own pace. Specifically, pronunciation instruction created agency for learning (AFL) that was intentional, self-generated, and reactive to social factors in the learning community (Code, 2020).

Methods

Participants

Participants included 46 ESL college freshmen students enrolled in two online synchronous course sections at an urban community college in Brooklyn, New York. The study groups were composed of pre-assigned students, as opposed to a random assignment. Though the combined number of students included 46 first-year students at various levels of beginner-level English language proficiency during the academic term, 40 participants attended regularly and actively participated in all parts of the study (n=40). Participants noted a diversity of age, language backgrounds, prior pronunciation instruction, and pronunciation correction preferences as seen in Figure 1. Research also examined differences across gender.

Collectively, participants represented 15 countries and spoke 19 languages. Countries of origin included Bangladesh, Cameroon, China, Colombia, Ecuador, Haiti, Kazakhstan, Kosovo, Mexico, Pakistan, Russia, Saudi Arabia, Sudan, Tajikistan, Ukraine, and Uzbekistan. First language (L1) backgrounds of the multi-lingual participants included Albanian (2%), Arabic (4%), Bangla (6%), Cantonese (6%), Chinese Native Dialect Fuzouese (9%), Creole (6%), French (8%), German (2%), Hindi (2%), Mandarin (8%), Polish (2%), Punjabi (2%), Pushto (2%), Russian (13%), Spanish (9%), Tajik (2%), Ukrainian (8%), Urdu (9%), and Uzbek (2%) as seen in Table 2 below. Equal numbers of male and female beginner-level ELLs verified the generalizability of this study across genders, which included 20 male students and 20 female students.

Despite diverse L1 language and academic backgrounds, participants began at roughly the same starting point. Only 39% of participants reported receiving prior formal pronunciation instruction. For those participants who did receive prior pronunciation instruction in their countries of origin, 37% participated in pattern drills; 18% engaged in language lab practice; and only 6% received instruction in phonetics before arriving in the United States. At the beginning of the study, the participants' self-perceived pronunciation and listening proficiency was lower than that of their reading and writing skill sets. At the start of the semester, most participants viewed their pronunciation as a frequent impediment to communication with English speakers as seen in Table 3 below. Participants responded to an open-ended question on the attitudinal questionnaire. Eight participants offered an honest account of their experiences when they were not understood by English speakers, as follows:

"It happens very often, and it makes me feel very uncomfortable; my face immediately starts to turn red, and my thoughts cannot come together."

"When I arrived in the USA in 2021, there were some confusing situations because of my English. I had a rough accent; that is why people around me didn't understand me sometimes. I never was upset because they were very friendly and tried to help me to speak correctly."

"I often have difficulty being understood, I get nervous, and I will explain more much detail for them."

"Many times, I feel so embarrassed for that; it makes me feel bad sometimes."

"It makes me feel upset because I try hard."

"I will try to explain to the person, and I will feel angry with the person."

"I feel awkward because they misunderstand me, and I need to repeat it."

"When some people are not understanding what I am saying, it makes me so angry and sad."

Figure 1
Age Range of Participants

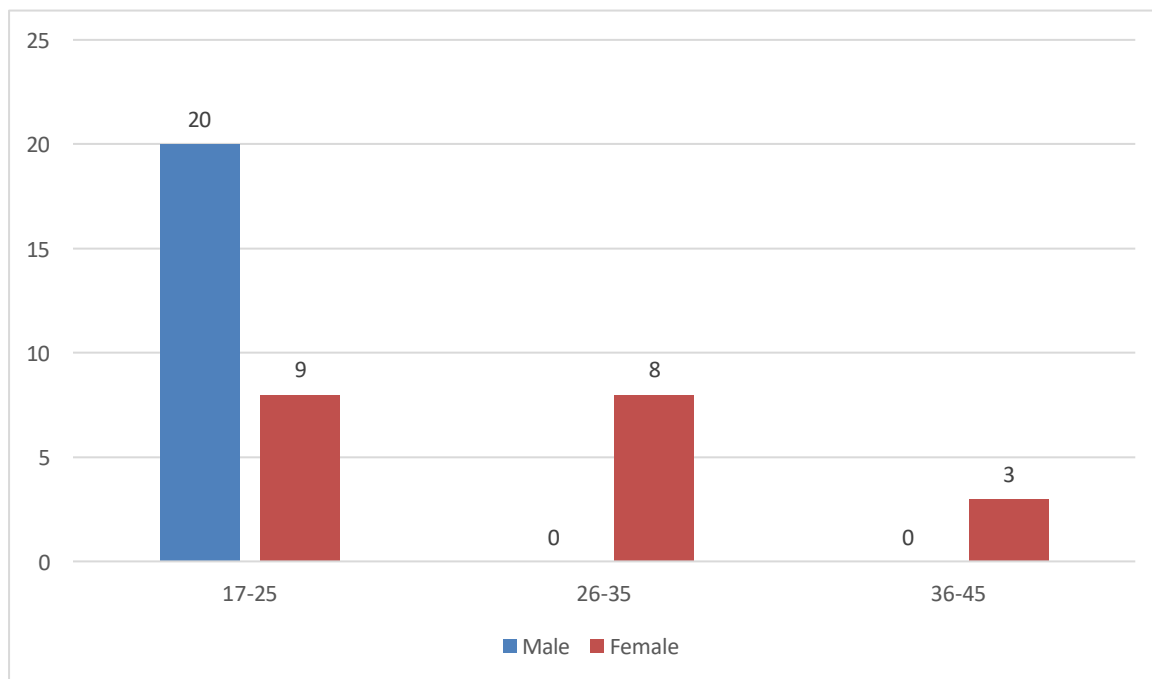
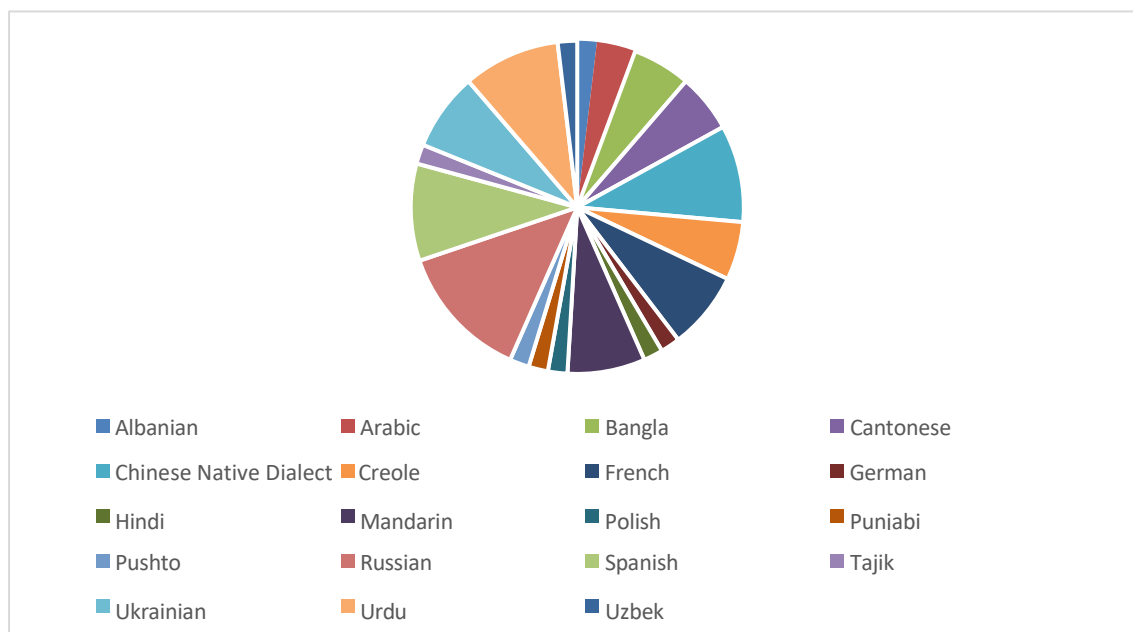


Figure 2
Languages Spoken by Participants



Participants also expressed anxiety and feelings of concern about whether their pronunciation skills would be equal to the task of collaboration and participation in coursework:

"I would like to speak clearer English everywhere without any difficulties. It helps to avoid misunderstanding."

"It is one of my goals to be like a native speaker and speak like it is my first language. The most difficult to communicate for me is slang and pronunciation."

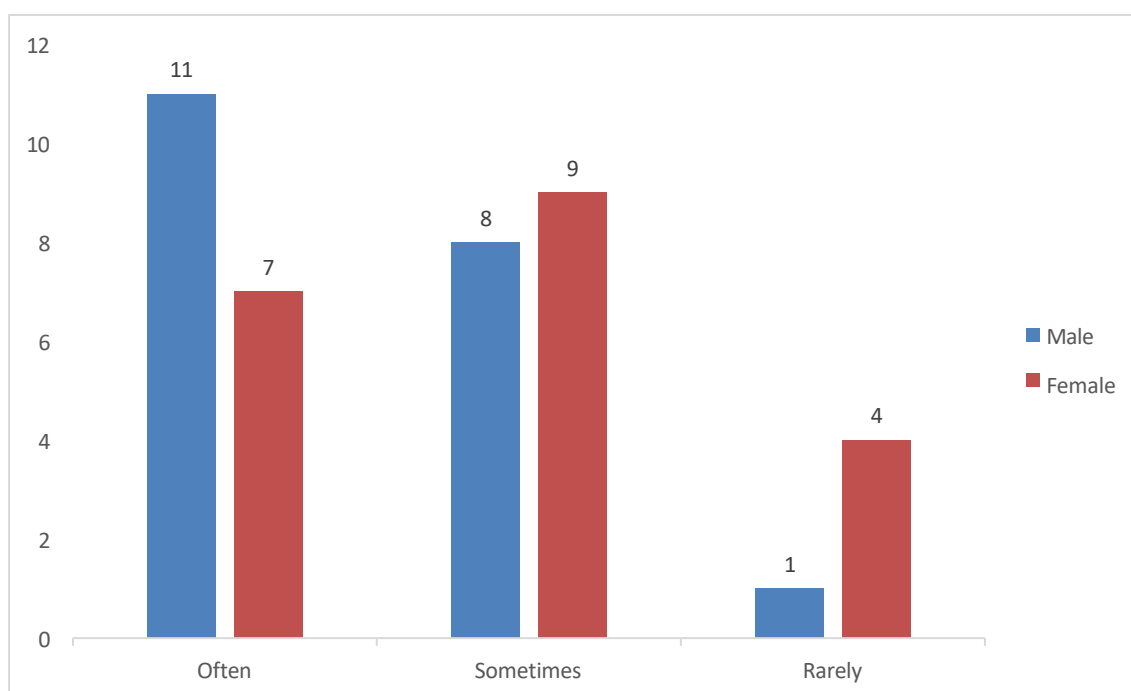
"I would like to speak so listeners can understand. I want to speak in the actual way when I hear others speaking English."

"I want people to understand easily what I say, sometimes people use high-level words, and I don't understand."

"Since the first day I arrived in New York, I felt so uncomfortable that I never wanted to go outside so that people wouldn't speak to me. I felt bad, I even felt inferior to other people. It was not at all easy to know that you wake up every day and hear other people speak a language that you don't know. But day to day, I always make efforts to understand better and communicate better with people even if it is still not easy for me. My goal this semester is to do everything necessary to speak the language."

Figure 3

Reported Frequency of Difficulty Communicating with English Speakers



Students were encouraged to share their attitudes about the importance of pronunciation instruction.

"This class teaches us how to pronounce words. It is one of the most important classes which affects our future pronouncing. Because it helps us to speak clearly and understand other students better. My English language goal this semester is to make my speech and pronounce words clearly."

“In general, I want to improve my speaking skills. This semester I want to learn how to speak English like native speakers. To do this, I really want to improve my pronunciation, and I was very glad when I heard from you that we would work on our pronunciation. My goal is to live in a society with English native speakers and be able to communicate with them without problems.”

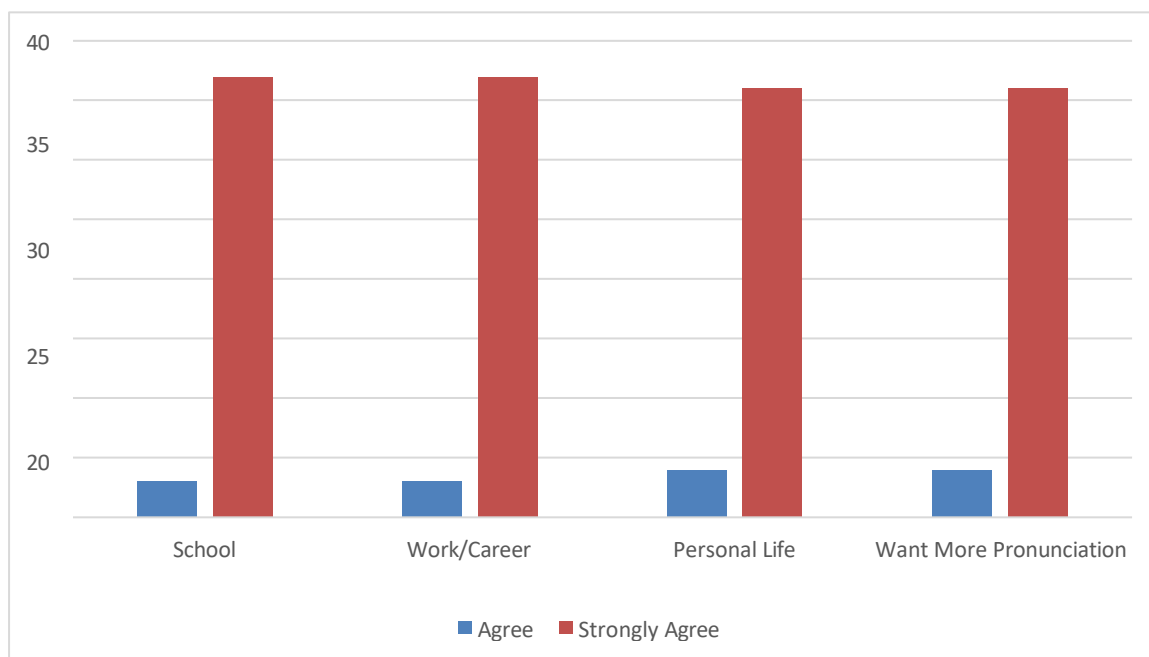
“My first English experience was at school in Moscow in the 3rd grade. I fell in love with English immediately from the first lesson. I wanted to learn more and delve into this language. Therefore, now my goal is to speak without an accent with the correct pronunciation, to think and be like a native speaker.”

“Basically, my English skill is little bit weak, and end of this semester my first main goal is upgrade my English spoken skill.”

“I come from Haiti. When I was in my country I studied English for five years in high school, but it was a bit challenging for me because everyone had their own accent. I also had issues with the pronunciation. That’s why my goal for this semester is to get better in my pronunciation and my grammar.”

Figure 4

Participants’ Attitudes about the Importance of Pronunciation Instruction



Data Collection

Instruments and Data Sets

Action Research Process. Four basic stages were instrumental in the cyclical action research process of this study: reflecting, planning, developing, and observing to continue through the cycle (Dickens & Watkins, 1999). Data were used to evaluate the impact of a targeted intelligibility-based pronunciation pedagogy (inclusive of a segmental and suprasegmental approach). A nonrandomized instructor-created pre-and post-test design was used to focus on particular sounds that were difficult for the learner. Pre-and post-treatment questionnaires with both the Likert scale

and open-ended questions were used to qualitatively assess student attitudes about the perceived benefits of pronunciation instruction. All data was collected as part of the normal course instruction and was completely confidential. Baseline assessments that emphasized the rhythm and flow of English speech determined students' pronunciation strengths and areas for improvement, which influenced curricular priorities. Multi-modalities that targeted individual pronunciation needs and communicative goals actively engaged students in virtual learning. Data analysis included coding, memo writing, and a constant comparative method.

Categories emerged during weekly assessments, which further developed coding during the reflective analysis of all collected data. Questionnaires elicited biographical information and data on language backgrounds and pronunciation learning histories; personal attitudes about the importance of pronunciation instruction; the value of effective communication in their academic, professional, and personal lives; pronunciation correction preferences; and English-speaking confidence. Throughout the semester, students recorded themselves speaking using PowerPoint, Google slides, and their choice of audio software applications. Subtitles were necessary at the start of the semester but not at the end of the semester. The results revealed that course design improved the participants' interactions. Contextualized and socially significant usage of language increased confidence.

Variables. The duration of the twelve-week course was one day per week for 130 minutes. The intervention was divided into three units of study. Pedagogical strategies were the independent variable; the dependent variable was the students' intelligibility and comprehensibility. Formal and informal assessments were conducted throughout each unit of study. This study was guided by learner-related determinants and context-related factors. Reflective questionnaires provided information on the participants' prior pronunciation instruction, English language experience and age of onset, communicative apprehension, degree of motivation, language expectations for the semester, future career goals, and learning styles. A thorough literature review was conducted to determine similarities and differences between the diverse participants' first languages and the English language. Participants were assessed on their ability to respond orally to questions in English via recorded responses. Multimodal sources helped to sensitize the students to the sounds and patterns of English. A variety of oral activities engaged students in practice. All students were provided with a variety of open-access resources that included in-depth practice with individual sounds in Standard American English (SAE).

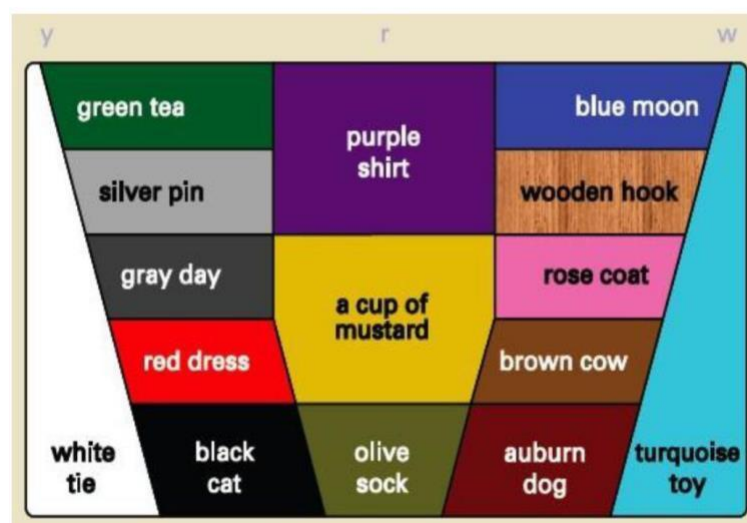
Unit 1: Segmental Features of Pronunciation. In the first unit of instruction, a series of lectures and activities introduced students to the linguistic mix of different languages and phonetic sounds that have contributed to the formation of the English language. The semester began with a pre-test oral assessment of a brief personal introduction of their language goals and a childhood memory that they believe shaped them into the resilient person they have become. Diagnostic speaking activities were conducted formally and informally, and lectures were designed to facilitate active participation. In addition, they were asked to record themselves reading a brief text excerpt. Both readings were recorded privately using the student's choice of recording application and submitted with transcription. The views and perceptions of the learners' confidence and engagement were obtained using qualitative analysis in line with the confidence questionnaire.

An overview of English phonology preceded an explanation of L1 to English transfer comparisons for each demographic. Contrastive analysis was used to categorize aspects of English grammar and phonological patterns that could be challenging for speakers of other languages, namely the participants' L1. Common errors can be predicted by the learner's first language (L1). However, students were encouraged to share common transfer challenges while rejecting a deficit model to empower them to talk about language confidently and inclusively. An interactive online tool for language learning guided the participants through exercises from individual sounds in Standard American English to overarching features like intonation and stress. In collaboration with peers during online breakout sessions, students engaged in conversations and scripted dialogue with those who shared their first language to identify and practice common transfer challenges. In this way, students compared the sounds of the target language with those of their specific L1. In addition, whole group discussions provided opportunities to speak English with students of diverse language backgrounds to foster meaningful intercultural communication and inclusivity in the academic setting.

Interactive Technology. An effective and interactive multimodal tool called The Color Vowel Chart (Thompson & Taylor, 2020) helped participants understand the key sounds of English using colors and keywords to represent the vowel sounds of English. This online resource (<https://www.colorvowel.com/interactive-chart>) provided students with an easy way to describe and practice spoken English words and phrases as shown in Figure 5. The interactive version allowed students to click on the chart, hear the highlighted sound, and practice emphasizing the demonstrated stress when categorizing vocabulary words with similar sounds. Focusing on word stress and phrasal stress was crucial for listening and speaking as participants could repeatedly hear and produce the rhythmical pattern of stressed and unstressed syllables (Thompson & Taylor, 2020).

Figure 5
Interactive Online Tool

The Color Vowel Chart



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Kinesthetic technique. The kinesthetic technique was initiated to demonstrate how to produce segmental aspects (voiced/voiceless vowels and consonants) and use pronunciation patterns appropriately. This distinction was helpful for producing grammatical word endings that convey quantity, possession, and tense. Students were encouraged to think about the shapes they make with their mouths and focus on the phonetic sound of each letter. After practice, students were asked to record themselves speaking.

Voiced consonants. Students also learned to distinguish between letters and sounds, noting that letters are pronounced differently depending on the letters that follow or precede them. A baseline assessment asked students to read a list of words with voiced consonants that highlighted the variations in the pronunciation of /-s/ endings (words, works, watches) and /-ed/ endings (picked, played, planted). The results demonstrated that this particular skill set necessitated further instruction. Providing students with kinesthetic instruction to determine voiced/voiceless sounds was instrumental in developing the appropriate ending sounds. After instruction, students participated in oral exercises to gain accurate control over the sound system and were assessed using the same list of words provided in the baseline task.

Silent letters. In another lesson, students received clarification on words with silent letters that they often mispronounce, e.g., those that feature a silent /b/ (subtle, bomb, dumb, comb); silent /g/ (foreign, sign, champagne); the /a/ (bread) and /h/ (ghost). In breakout sessions, students read aloud a text with silent letters. After listening to the correct pronunciation and applying that knowledge in recorded readings, students successfully omitted the silent letters during a second reading of the text. Using a word list with additional vocabulary featuring silent letter sounds, students correctly identified silent letters. During a third reading of another text, they pronounced all the words correctly. The first unit ended with an introduction to the unstressed, weak schwa sound that occurs in many English words. After explicit instruction, students were given a list of words wherein the schwa was identified for them, along with a creative writing prompt. Students worked in breakout sessions to compose a writing sample using the assigned words. A diagnostic assessment at the end of the first unit revealed improvement in the speech intelligibility of learners who received segmental training followed by production-focused practice.

Unit 2: Prosodic Features of Pronunciation. In the second unit of study, participants added to their knowledge of the schwa sound and developed increased confidence. Students were asked to select a photograph and write a paragraph to describe the visual elements or backstory using a schwa word list (see Figure 6 below). A recorded presentation accompanied the students' written transcription and identification of all the words with a schwa sound. This project provided multiple means of assessment across all areas of language development and was greatly enjoyed by participants.

During the second half of the semester, speaking, listening, and pronunciation continued to be treated as reciprocally interdependent oral language processes. Following an overview of the English sound system, students were introduced to the importance of prosody with a focus on stress in spoken English. Two-syllable words and phrases, suffixes, abbreviations, and stress in numbers were introduced to assess whether students could determine stress patterns. English is a stressed versus syllabic language, i.e., the sounds of written syllables are not easily

recognizable. Participants with syllable-based backgrounds in Spanish, Turkish, and Cantonese required focused practice as syllables in those languages are the same length, and vowels tend to have the same clarity. It was helpful for participants to understand that in English, as in German, Russian, and Farsi, the vowel(s) in the stressed syllable are louder, longer, and clearer; vowels in the unstressed syllable are quieter, shorter, and less clear.

Students were taught to recognize that although single words may have consonants and vowels that are not pronounced, some words are not pronounced or stressed in phrases or sentences. In syllabic languages, like Spanish, the focus is on pronouncing each word, syllable by syllable. To pronounce each sound of each word in English would sound robotic. Students listened to two versions of sentences, (for example, *Your book is on the desk.*) with pronounced separately to hear the difference between robotic speech and fluent, natural speech. In addition, students were taught that when a verb ending with a consonant is followed by an article or preposition that starts with a vowel (an, a, on, at), two words are often linked to sound like one word. This is also true when a word ending with a consonant is followed by a word starting with a vowel. For example, *She's an educator* (*She – za – neducator*). Similarly, two sounds are often combined to form a newly mixed sound. For example, in the fast-paced northeastern part of the United States where these participants live and attend college, *What did you eat?* sounds like *Wha-ja-eat?*

Word stress. It was also important to draw their attention to how word stress can change the meaning (*YOUR* book is on the desk; *Your BOOK* is on the desk; *Your book is ON* the desk; *Your book is on the DESK*). This presented opportunities to discuss the different stress patterns in each utterance and the various hypothetical scenarios the speaker was trying to convey. In the first sentence, the speaker explains whose book is on the desk. In the second sentence, the meaning shifts to suggest that other items might be located elsewhere. The third sentence distinguishes which part of the desk the book can be found. Finally, the last sentence relates that the book is on the desk and not on any other piece of furniture. While the nuance of word stress is intuitive to native English speakers, this is a pronunciation skill that English learners need to learn for clear communication.

Unit 3: Suprasegmental Features of Pronunciation. In the third unit of study, prosody was further explored to develop rhythm and intonation using communicative tasks presented as a subset of both speaking and listening development. After a lesson on correct punctuation usage to signal questions, statements, and exclamations to the reader, students learned there are specific signals that speakers use to help the listener follow their meaning when asking a question, making a statement, or expressing emotions. Participants practiced rhythmic syllables and stress and discussed the ways they affect speech and communicative competence. To gain a practical understanding of the musical elements of the English language, students read dialogue and dramatic excerpts with a focus on the expression of mood, emotion, and intent. Intonation enabled students to know the underlying meaning of the sentence because of its varying pitch.

Minimal pairs. This unit also focused students' attention on pairs of words that have one phonemic change between them. The /sh/ and /ch/ sounds were especially challenging for Chinese students. Practicing minimal pairs was helpful for pronouncing similar sounds correctly. A post-test diagnostic assessed their ability to deliver a brief

monologue or soliloquy using segmental features, prosody, and suprasegmentals appropriate to the task. The recorded project included a written transcription. The end-of-semester post-test assessment demonstrated that English learners surpassed previous scores in terms of comprehensibility and active participation in class discussions due to increased confidence.

Procedure

Throughout the semester, assessments examined the usage of rhythms and pitch patterns that do not exist in their first language. Dramatic readings further developed intonation. In this regard, the participants did not have to focus on creating content and could focus on practicing and pronouncing the text provided to them. A variety of texts required the expression of surprise, confusion, joy, frustration, and anger. Throughout this unit, students were reminded to follow the five basic rules of intonation: falling, rising, choice, list, and double-rise intonation. After a practice reading with instructor feedback, students engaged in a second recorded reading of the same dialogue. Each reading of a piece of spoken text included dialogue, monologue, and soliloquy accompanied by a recording with a focus on fluency.

Data Analyses

Using constructivist grounded theory methodology, qualitative methods evaluated the impact of specific teaching strategies and techniques for achieving course learning objectives, namely pronunciation, English language skills, student confidence, and engagement. Data was collected from participants enrolled in the semester-long course taught by a full-time faculty member of the English department. Semi-structured questionnaires were used to gather data related to student demographics, views on the strategies used to improve pronunciation, and attitudes about the internal factors that affect students' participation. Responses were analyzed through coding, memo writing, and the constant comparative method during open, axial, and selective coding phases to determine categories and themes. The questionnaires are appended.

Results

The findings demonstrate a significant increase in active participation after explicit pronunciation instruction. Based on the results of this study, it can be concluded that pronunciation instruction that includes a combination of segmental, prosody, and suprasegmental aspects contributes to the intelligibility and comprehensibility of English pronunciation. Grounded in interactional and discourse analyses, findings suggest that pronunciation strategies helped students tackle challenging sound systems that had previously impeded communicative competence. Results further indicated that explicit instruction provided equitable opportunities for students to engage in learning.

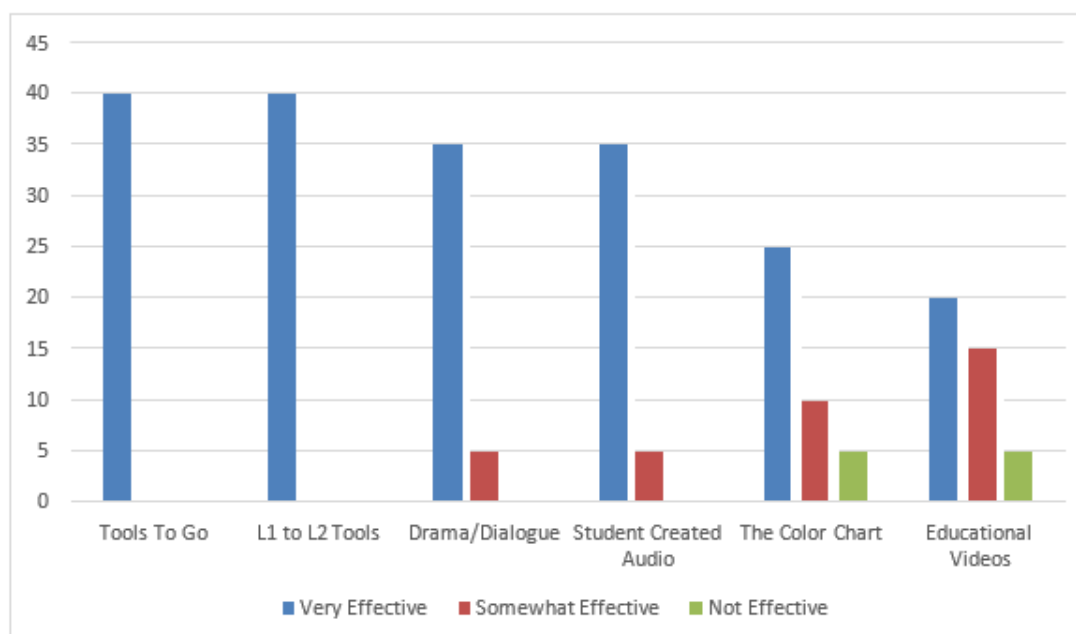
Initially, 95% of the students reported frustration with L1 to L2 transfer issues. However, after being presented with information regarding common transfer issues specific to their first language, students were less self-conscious and better able to isolate and correct L1 transfer challenges. Students unanimously perceived L1 to L2 transfer strategies and CUNY's Baruch College *Tools to Go* website as highly effective. Dramatic dialogue readings and student-created audio presentations were noted as either very effective or somewhat effective. Multimodal tools and production-focused practice in the segmental and suprasegmental aspects of English pronunciation improved speech intelligibility and comprehensibility. Positive outcomes were dependent upon attendance, engagement, and participation.

Discussion

This study investigated strategies to improve the participants' pronunciation proficiency, receptive language, and communicative competence. The study further invited participants to reflect upon their attitudes about the importance of pronunciation. Surveys determined personal, academic, and professional language goals. Methods of instruction included online conferencing, breakout sessions, and whole group discussions. It can be concluded that to maximize the learning of the English sound system for beginner-level ESL students, it is important to start with an overview of common language transfer issues to isolate sounds, speak clearly, and be understood. Visual aids, audio recordings, dialogue, and drama-related activities were found to be ideally suited to students with diverse language and academic backgrounds. Students achieved intelligible communication when they focused on areas they wanted to master and developed skills that empowered them to succeed in all courses. Results indicate no statistical differences between male and female participants. However, a greater number of male participants expressed a preference for private pronunciation correction. Female students preferred an open discussion and immediate correction. To varying degrees, students reported that the various instructional approaches were engaging and appealed to their different learning styles as shown in Figure 6. All participants stated that they valued pronunciation as an important part of language instruction, with 100% expressing a desire for more pronunciation instruction and correction in their coursework.

Figure 6

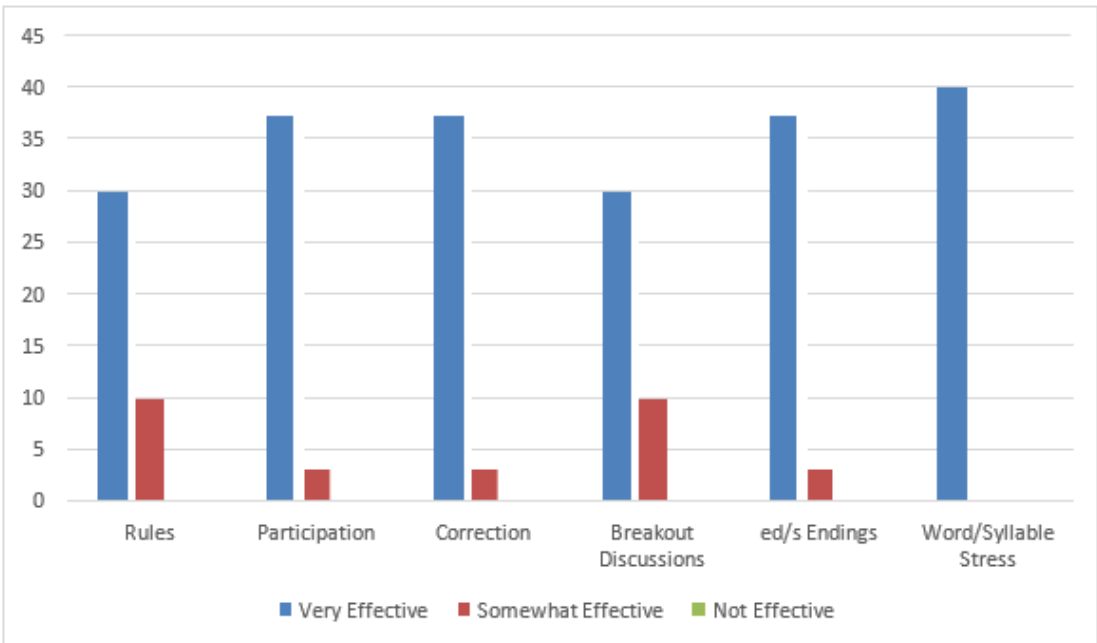
Student Perceptions of Teaching Methods



Participants reported mastery of /-ed/ and /-s/ ending sounds as the most practical and rewarding experience during the semester. Notably, 100 percent of the students identified mastery of syllable and word stress as the instructional technique

that had the greatest impact on pronunciation and intelligibility as seen in Figure 7. Students indicated that being able to apply these skills when speaking was a vital part of oral communication, and all participants wanted to gain a level of proficiency that allowed them to be understood. In addition, 98% of participants revealed they were more confident participating in all their ESL learning community courses than before receiving pronunciation instruction throughout the Integrative Language Seminar course. The other 2% of participants stated continued pronunciation inhibitions preventing them from fully participating in course discussions.

Figure 7
Confidence Enhancing Instructional Methods



The results from diagnostic assessments and exit questionnaires demonstrate that instructional methods used in the study elevated participants' confidence in academic settings and their personal lives as noted in Table 1 below.

Table 1
Reported Increase in Pronunciation Confidence

Participants English Pronunciation Confidence	
<i>Specific Situations</i>	<i>Increased Levels of Confidence</i>
Academic Settings	
Speaking with faculty, staff, students	+14.3%
Professional Settings	
Speaking with your boss or colleagues	+12.3%
Personal Settings	
Speaking English with community members	+14.3%

Table 1 (*Continued*)

Participants English Pronunciation Confidence	
<i>Specific Situations</i>	<i>Increased Levels of Confidence</i>
Ordering food at a restaurant	+12.3%
Speaking with family/friends who speak English	+18.3%
Meeting new people who speak English	+14.3%
Speaking on the telephone	+10.3%

Academically, students reported a 14.3% increase in confidence to engage with the college community, including faculty and staff. An increase in the participants' confidence levels was also demonstrated in their willingness to engage in class discussions during the semester. Verbal participation was measured by tallying the total number of comments made by participants over three-course meetings pre-and post-intervention. The difference between the total number of pre-and post-values is qualified as a gain in student confidence. By the end of the first unit, the average number of verbal responses increased by 1.20 percent. At the end of the second unit, results in the mean gain show an increase of 2.35 percent. During the last course meeting at the end of the semester, student comments and interactions increased by 3.20 percent.

This action research study reinforces the claim that pronunciation pedagogy is an important facet of second language instruction for students at all levels of English language learning. It is especially important for beginner-level college students. The unique feature of this action research is that the study identified the factors and techniques that impacted English language teaching-learning processes specific to pronunciation. This study emphasized confidence-building methods that required active involvement on the part of the students. Instructional practices that promoted students' communicative competence and confidence included:

1. Pronunciation instruction that maximized phonetic input (rhythm, stress, intonation).
2. Collaborative activities with diverse speakers created an environment of inclusivity.
3. Cooperative learning groups encouraged student discussions of strategies that supported mastery of pronunciation in real-life situations.
4. Engagement with multimodal educational resources.

The study reveals that segmental and suprasegmental pronunciation strategies improve comprehensibility and intelligibility when implemented in an online synchronous modality. Based on the results, it may also be concluded that multimodal speaking and listening tools are effective in developing self-correction skills. While listening and speaking varied among students, social interactions contributed to increased dialogue and language acquisition. Findings revealed that in measuring participants' pronunciation proficiency, there was a significant difference between the pre-and post-test performances of the groups. Areas in which students showed the most improvement included pronunciation of stressed and unstressed syllables, words, and phrases to convey meaning. Ultimately, the results of this study are intended to contribute insight into the linguistic benefits of implementing pronunciation instruction

for post-secondary ESL students. An intensive look at the data can serve as the impetus to design an ESL curriculum that includes pronunciation instruction for beginner-level students.

Recommendations

The findings of this online study converge with those of Gordon and Darcy (2016) whose face-to-face results demonstrate that pronunciation instruction, which includes suprasegmental features (stress, rhythm, reductions, linking), is more effective for increasing comprehensibility than instruction limited to segmental features (vowels, consonants). In online and face-to-face learning spaces, linguistically diverse students, who lack speaking confidence and struggle to be understood, may hesitate to participate. The results highlight how participation and engagement can improve with pronunciation instruction that empowers students to speak confidently. Learners at each level of proficiency benefit from having specific pronunciation priorities related to their L1 (Gilbert, 2001; Jenner, 1989; Missaglia, 1999). Various techniques should be developed and integrated into a coherent method of English phono didactics and applied to each targeted pronunciation skill. To empower ESL students to participate fully and to prepare them for careers where English is needed, it is recommended that a course dedicated to pronunciation be included in language teaching. Implementation of a pronunciation curricular component should incorporate the following three principles:

1. Pronunciation instruction is embedded within the curriculum as a whole.
2. Pronunciation is taught as an integral part of second language instruction via grammar, reading, writing, and listening.
3. The curricular component adapts to student priorities and their desire to communicate effectively in English in their academic, personal, and professional lives.

References

- Albertson, B. P. (2020). Promoting Japanese university students' participation in English classroom discussions: Towards a culturally informed, bottom-up approach. *Journal of Pan-Pacific Association of Applied Linguistics*, 24(1), 45-66.
- Armstrong, M. (2020). Children's epistemic inferences through modal verbs and prosody. *Journal of Child Language*, 47(6), 1132-1169. <https://doi.org/10.1017/S0305000919000916>
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147. <https://doi.org/10.1037/0003-066X.37.2.122>
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9), 1175-1184. <https://doi.org/10.1037/0003-066X.44.9.1175>
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1-26. <https://doi.org/10.1146/annurev.psych.52.1.1>
- Baruch College. (2023). *Tools to go*. Tools for Clear Speech. <https://tfcs.baruch.cuny.edu/about-tools-to-go/>.
- Catford, J. C. (1987). Phonetics and the teaching of pronunciation: A systemic description of English phonology. In J. Morley (Ed.). *Current perspectives on pronunciation: Practices anchored in theory*, 87-100. Alexandria, VA: TESOL.

- Chan, M. J. (2018). *Tasks for teaching pronunciation to beginners: Framing the issue. The TESOL Encyclopaedia of English Language Teaching, First Edition*. John Wiley & Sons, Inc.
- Code, J. (2020). Agency for learning: Intention, motivation, self-efficacy and self-regulation. *Frontiers in Education: Educational Psychology*, 5. <https://doi.org/10.3389/feduc.2020.00019>
- Cox, Jenelle L., Henrichsen, Lynn E., Tanner, Mark W., & McMurry, Benjamin L. (2019). The needs analysis, design, development, and evaluation of the 'English pronunciation guide: An ESL teachers' guide to pronunciation teaching using online resources. *TESL-EJ The Electronic Journal for English as a Second Language*, 22(4). <https://eric.ed.gov/?id=EJ1204566>
- Crosthwaite, P., Bailey, D., & Meeker, A. (2015). Assessing in-class participation for EFL: Considerations of effectiveness and fairness for different learning styles. *Language Testing in Asia*, 5. <https://doi.org/10.1186/s40468-015-0017-1>.
- Dickens, L., & Watkins, K. (1999). Action research: Rethinking Lewin. *Management Learning*, 30(2), 127-140. <https://doi.org/10.1177/1350507699302002>
- Derwing, T. M., & Munro, M. J. (2009). Comprehensibility as a factor in listener interaction preferences: Implications for the workplace. *Canadian Modern Language Review*, 66(2), 181-202. <https://doi.org/10.3138/cmlr.66.2.181>.
- Derwing, T. M., Munro, M. J., Foote, J. A., Waugh, E., & Fleming, J. (2014). Opening the window on comprehensible pronunciation after 19 years: A workplace training study. *Language Learning*, 64(3), 526-548. <https://doi.org/10.1111/lang.12053>.
- Derwing, T., & Rossiter, M. (2002). ESL Learners' Perceptions of Their Pronunciation Needs and Strategies. *Science Direct: System*, 30(2), 155-166. [https://doi.org/10.1016/S0346-251X\(02\)00012-X](https://doi.org/10.1016/S0346-251X(02)00012-X)
- Foote, J., Trofimovich, P., Collins, L., & Urzúa, F. S. (2016). Pronunciation teaching practices in communicative second language classes, *The Language Learning Journal*, 44(2), 181-196.
- Franklin, A., & McDaniel, L. (2016). Exploring a phonological process approach to adult pronunciation training. *American Journal of Speech-Language Pathology*, 25(2), 172-182. https://doi.org/10.1044/2015_AJSLP-14-0172.
- Gilakjani, A., & Ahmadi, A. (2011). A study of factors affecting EFL learners' English listening comprehension and the strategies for improvement. *Journal of Language Teaching and Research*, 2(5), 977-988.
- Gilbert, J. (2001). *Clear speech from the start: Basic pronunciation and listening comprehension in North American English*. Cambridge University Press.
- Grant, L. (2016). Pronunciation myths: Applying second language research to classroom teaching. *TESL-EJ The Electronic Journal for English as a Second Language*, 20(3), 42-55.
- Hahn, L. D. (2004). Primary stress and intelligibility: Research to motivate the teaching of suprasegmentals. *TESOL Quarterly*, 38(2), 201-223.
- Hussain, S., & Sajid, S. (2015). Applications of suprasegmental in EFL classroom: A short review. *International Journal of Scientific and Research Publications*, 5(9), 318-323.

- Jenner, B. (1989). Teaching pronunciation: The common core. *Speak Out!* 4, 2-4
- Khaleghi, M., Batobara, M., & Saleem, M. (2020). A case for teaching pronunciation to adult EFL learners using metrical versification. *International Journal of Learning, Teaching and Educational Research*, 19(3), 460-474.
- Kissling, E. M. (2018). Pronunciation instruction can help improve L2 learners' bottom-up processing for listening. *Latin American, Latino, and Iberian Studies Faculty Publications*. 150. <https://scholarship.richmond.edu/lalis-faculty-publications/150>
- Krupa-Kwiatkowski, M. (1998). "You shouldn't have brought me here!": Interaction strategies in the silent period of an inner-direct second language learner. *Research on Language and Social Interaction*, 31(2), 133-175. https://doi.org/10.1207/s15327973rlsi3102_1
- Larsen-Freeman, D., & DeCarrico, J. (2010). *An introduction to applied linguistics*. Routledge.
- Lee, J., Jang, J., & Plonsky, L. (2015). The effectiveness of second language pronunciation instruction: A meta-analysis. *Applied Linguistics*, 36(3), 345-366. <https://doi.org/10.1093/applin/amu040>
- Levis, J. (2018). Intelligibility, comprehensibility, and spoken language. *Intelligibility, Oral Communication, and the Teaching of Pronunciation*. Cambridge Applied Linguistics, 11-32. Cambridge University Press.
- Levis, J. M., & Silpachai, A. O. (2018). Prominence and information structure in pronunciation teaching materials. Proceedings of the 9th Pronunciation in Second Language Learning and Teaching conference, ISSN, 2380-9566.
- Liu, M., & Jackson, J. (2008). An exploration of Chinese EFL learners unwillingness to communicate and foreign language anxiety. *The Modern Language Journal*, 92(1), 71-86. <https://doi.org/10.1111/j.1540-4781.2008.00687.x>.
- Luttrell, W. (2010). Interactive and reflexive models of qualitative research design. W. Luttrell (Ed). *Qualitative educational research: Readings in reflexive methodology and transformative practice*. 159-163. Routledge.
- Macdonald, S. (2002). Pronunciation-views and practices of reluctant teachers. *Prospect*, 17(3), 3-18.
- Missaglia, F. (1999). Contrastive Prosody in SLA: An Empirical Study with Italian Learners of German. In *Proceedings of the XIV ICPhS, San Francisco 1.-7.8.1999*, (pp. 551-554). https://www.internationalphoneticassociation.org/icphs-proceedings/ICPhS1999/papers/p14_0551.pdf
- Munro, M. J., Derwing, T. M., & Thomson, R. I. (2015). Setting segmental priorities for English learners: Evidence from a longitudinal study. *International Review of Applied Linguistics*, 53(1), 39-60. <https://doi.org/10.1515/iral-2015-0002>.
- Pennington, M. C. (2019). 'Top-Down' pronunciation teaching revisited. *RELC Journal*, 50(3), 371-385. <https://doi.org/10.1177/0033688219892096>
- Pennington, M. C. (2021). Teaching pronunciation: The state of the art 2021. *RELC Journal* 2021, 52(1) 3-21. <https://doi.org/10.1177/00336882211002283>

- Permatasari, R. (2016). *What do the studies say about the factors obstructing EFL/ESL students' participation?* Paper presented at the 5th English Language Teaching, Literature, and Translation International Conference 2016. Faculty of Languages & Arts State University of Semarang.
- Scarcella, R. C., & Oxford, R. L. (1994). *The tapestry of language learning: The individual in the communicative classroom*. Heinle & Heinle.
- Strauss, A. (1987). *Qualitative analysis*. Cambridge University Press.
- Sedláček, M., & Sedova, K. (2020). Are student engagement and peer relationships connected to student participation in classroom talk? *Learning, Culture, and Social Interaction*, 26. <https://doi.org/10.1016/j.lcsi.2020.100411>.
- Syaveny, N., & Johari, I. (2017). *The correlation between class participation and students' English learning achievement at SMA Negeri 12 Padang KEC*. Naggalo West Sumatera. International Seminar on Language, Education, and Culture Proceeding, 208-211.
- Szpyra-Kozłowska, J. (2014). *Pronunciation in EFL instruction: Pronunciation inside and outside the classroom: A holistic multimodal approach*. Channel View Publications Ltd., Bristol Blue Ridge Summit.
- Szpyra-Kozłowska, J. (2015). *Pronunciation in EFL instruction: A research-based approach*. Multilingual Matters.
- Strauss, A., & Corbin, L. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. SAGE Publications, Inc.
- Taylor, K., & Thompson, S. (2020). *American English: Teaching spoken English with the color vowel chart*. United States Department of State. Creative Commons. <https://americanenglish.state.gov/resources/color-vowel-chart>
- Thomson, R. I., & Derwing, T. M. (2015). The effectiveness of L2 pronunciation instruction: A narrative review. *Applied Linguistics*, 36(3), 326-344. <https://doi.org/10.1093/applin/amu076>.
- Thornbury, S. (2006). *An A-Z of ELT*. Macmillan Press.
- Venkatagiri, H.S., & Levis, J. (2007). Phonological awareness and speech comprehensibility: An exploratory study. *Language Awareness Journal*, 16(4), 263-277. <https://doi.org/10.2167/la417.0>.
- Weasonforth, D. (2013). Palomar education. Language transfer chart. <https://www.palomar.edu/pages/eminamide/wp-content/uploads/sites/36/2013/02/Language-Transfer-Chart-ESL.pdf>
- Yenkimaleki, M., & Van Heuven, V. (2021). Effects of attention to segmental vs. suprasegmental features on the speech intelligibility and comprehensibility of the EFL learners targeting the perception or production-focused practice. *System*, 100. <https://doi.org/10.1016/j.system.2021.102557>.

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