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The Effects of English Pronunciation Instruction on Listening Skills among Vietnamese Learners

Nguyet Nguyen

A Thesis Submitted to the Graduate Faculty of GRAND VALLEY STATE UNIVERSITY

In

Partial Fulfillment of the Requirements

For the Degree of

Master of Arts in Applied Linguistics

Department of English

Abstract

Listening has been a neglected skill in both second language research and teaching practice (Khaghaninejad & Maleki, 2015; Nowrouzi, Tam, Zareian & Nimehchisalem, 2015) and recent research has shown that second language (L2) listening difficulties might relate to phonological problems besides syntactic and lexical knowledge (e.g., Suristro, 2018). There have been some empirical studies examining the effects of phonetic instruction on perceptual skills showing promising results (e.g., Aliaga-Garcia & Mora, 2009; Linebaugh & Roche, 2013). This study contributes to this area with a focus on investigating the impacts of English pronunciation instruction on listening skills among Vietnamese English as a Foreign Language (EFL) learners, targeting the four English phonemes: word-final stop consonants /t/-/d/, the lax high front vowel /ɪ/ and the tense high front vowel /i/. Particularly, it examines whether pronunciation instruction would have effects on (a) students' abilities to listen to and distinguish target phonemes, and (b) students' abilities to listen to and dictate monosyllabic words containing the target sounds. To examine the effects of mere explicit pronunciation instruction on perception, the study excluded perceptual training from the treatment. Sixteen Vietnamese learners were recruited to join the study, divided into two groups: an experimental group (n=10) and a control group (n=6). Only the experimental group received a five-hour online phonetic instruction emphasizing the four English target phonemes and other distractors. A pre-test and a post-test in listening skills measured the difference between and within groups. In addition, a post-instructional survey was administered to collect qualitative data in an attempt to explain the study results. Non-parametric tests (Wilcoxon rank sum and Wilcoxon signed rank tests) were used to analyze the quantitative data. The study results revealed that there was no difference in listening performance between the two groups, and within each group, which might suggest unclear impact of pronunciation instruction on

perceptual skills. Perceptual training, which has often been used in research on pronunciation instruction, is discussed and suggestions for future research are made.

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Chapter 1: Introduction

Listening skill plays an important role in communication; however, it has been a significant challenge to many English as a Foreign Language (EFL) learners and often receives less attention in EFL curricula relative to other skill areas (Khaghaninejad & Maleki, 2015; Nowrouzi, Tam, Zareian & Nimehchisalem, 2015). This is due to the fact that EFL schools in many global contexts heavily focus on English grammar and productive skills while neglecting listening skills (Denham, 1992; Scovel, 2005; Solak & Altay, 2014). Sutrisno (2018) found that problems in speech perception of EFL learners could be associated with phonetic and phonological factors in addition to lexical or syntax knowledge. His study showed that students performed listening comprehension tasks more successfully in the condition when the listening transcript was provided rather than in the condition without transcript, suggesting that perception problems were more related to the phonological decoding process. The speech perception test results (dictation tasks) indicated that learners' listening difficulties were associated with the inability to recognize stress patterns and connected speech in the English language.

From my years of teaching English communication and pronunciation to Vietnamese EFL learners, I believe that a significant reason for Vietnamese learners' lack of competence in English listening skills originates from the differences between the Vietnamese and English phonological systems. There are several well-documented phonemic differences between English and Vietnamese (Hwa, Hodson, & Edward, 2002; Luu, 2010) that cause learners to commonly mistake certain English sounds for other Vietnamese sounds with similar articulatory properties. For example, the English sound [1] as in "it" is pronounced as the sound [i] in Vietnamese, which is somewhat similar to the English sound [i] as in "see". As a consequence, Vietnamese learners might struggle with

distinguishing the phonemes [1] and [i] in English speech. Furthermore, Vietnamese word-final consonants are limited to voiceless consonants and nasals, and word-final voiceless consonants are not aspirated in Vietnamese (Hwa, Hodson, & Edward, 2002; Luu, 2010). As a consequence, Vietnamese learners of English have a hard time perceiving English word-final consonants, especially the voiced consonants. For example, they might have problems differentiating the word-final voiceless stop consonant [t] as in "but" with the final voiced stop consonant [d] as in "bud".

Pronunciation training has played an important role in enhancing speech production among second language (L2) learners (e.g., Lee, Jang, & Plonsky, 2015; Saito, 2007; Saito, 2011). However, not much empirical attention has been paid to the relationship between pronunciation teaching and perceptual skills. Over the past decade, there has been some research evidence that explicit pronunciation training could be beneficial in enhancing learners' listening abilities (e.g., Garcia & Mora, 2009; Khaghaninejad& Maleki, 2015; Kissling, 2015, Mihara, 2015; Souza, 2017). However, such research has been limited to learners with certain L1 backgrounds, such as Spanish, Iranian, Arabic or Japanese.

Therefore, this study is the first that aims at examining the impacts of pronunciation training on listening skills among Vietnamese learners. One of the main purposes behind this project is to expand on the empirical evidence that can provide support for methodology in enhancing listening competence for Vietnamese students, thus, helping them improve scores on standardized tests, get ahead in their careers and feel confident communicating with English speakers globally.

Currently the most popular method in teaching listening skills in Vietnam is the Comprehension Approach, in which training on listening skills focuses on providing students with maximal exposure to the target spoken language (Nguyen, 2018). In light of

that Vietnamese teachers could employ in teaching English listening skills based on explicit phonetic training. Teaching English pronunciation for Vietnamese learners, therefore, might be more than a way to improve speech intelligibility, and thus may deserve greater consideration of integrating it into curriculum as to its value for Vietnamese EFL learners (Khaghaninejad & Maleki, 2015).

Chapter 2: Review of Literature

Explicit Pronunciation Instruction and Speech Intelligibility

Pronunciation Teaching Approaches

There are two prevalent approaches accounting for most pronunciation training: The Intuitive-Imitative and the Analytic-Linguistic approaches. According to Celce-Murcia, Brinton, & Goodwin (2010), the Intuitive-Imitative Approach "depends on the learner's ability to listen to and imitate the rhythms and sounds of the target language without the intervention of any explicit information" while the Analytic-Linguistic Approach "utilizes information and tools such as a phonetic alphabet, articulatory descriptors, charts of the vocal apparatus, contrastive information, and other aids to supplement listening, imitation, and production" (p.2). The authors also suggest that the Intuitive-Imitative approach be incorporated into the practice phase of a typical form-focused lesson, which means the two approaches be combined. Likewise, Hashemian and Fadaei (2011) indicated a combination of analytic and structural approaches on English vowels. In their study, they compared the effects of English vowel teaching among 40 EFL learners, using the two different approaches: the Intuitive-Imitative and the Analytic-Linguistic approaches. Based on the ratings of native speakers on L2 learners' voice recordings of single words, the results showed that the participants in the Analytic-Linguistic group outperformed in the ratings of pure vowel words while the Intuitive-Imitative group showed better improvement in pronouncing diphthongs. Although the study proposed a combination of both approaches, the study results were not clearly explained. Notwithstanding, Kissling (2013) questioned the effect of mere explicit instruction on speech production when she conducted a study on 95 Spanish EFL students, focusing on the Spanish stop consonants (/p, t, k/), approximants

([b, \eth , \mathfrak{r}]), and rhotics (/r/, r/). The participants were split into two groups: one control group receiving input, practice and feedback and one treatment group receiving explicit phonetic instruction on the target phonemes. Both groups performed tasks on computer interactive modules. The control group listened to speakers talking on a variety of topics, completed transcription exercises, then repeated after the speakers producing Spanish phrases until their pronunciation approximated the native speakers while the experimental group received additional explicit phonetic instruction. Pre and post-speaking test results (the word-reading aloud task) showed equal improvement in both groups. As a result, it could be possible that the combined effects of input, practice, and feedback, rather than explicit phonetics instruction, led to improvement in students' pronunciation.

Explicit Pronunciation Instruction in EFL contexts

There is growing empirical evidence that explicit pronunciation instruction enhances speech intelligibility among L2 learners (e.g., Lee, Jang, & Plonsky, 2015; Setter & Jenkins, 2005), which is beneficial to learners' language improvement (Magro, 2011; Saito, 2011; Saito, 2013). Explicit pronunciation instruction is claimed to be useful in EFL contexts where learners do not have daily life communication with English native speakers (Saito, 2007; Saito, 2013). To illustrate, Saito (2007) compared two groups of students: the control and the experimental group. Only the experimental group received one-hour explicit phonetic training on the English sound /æ/ (using the aid of Pratt software, with minimal pair practice). The study employed two tests, before and after the instruction, focusing on reading individual words containing the target phoneme. Based on Pratt speech analysis software, participants in the experimental group showed significant improvement after the training while the control group did not, which supported the positive effects of explicit phonetic instruction. However, this study was conducted on a small sample of six EFL

students. As more research on a larger population was necessary, in 2013, Saito continued to examine the acquisition of the English sound /1/ among 49 Japanese EFL learners. In this study, participants were divided into three groups: two experimental groups and one control group. Both experimental groups received form-focused instruction (FFI) while the control group received meaning-oriented lessons without any FFI. One experimental group received explicit instruction on the sound $\frac{1}{2}$ (EI) with pronunciation-focused recast – a type of FFI. Students in this group listened to the teacher exaggerate both English sounds /x/ and /l/ to perceive their phonetic difference because the sound /l/ is similar to the Japanese tap /r/. The initial perceptual activity was followed by the articulatory instruction of the target sound /1/. After that, participants practiced producing and perceiving minimal pairs and sentences containing the target sound. The other experimental group received only pronunciation recast as form-focused instruction (reactive FFI without EI). Based on the pre and post production test results, the study revealed that both FFI groups made improvement in their pronunciation of the English /1/ sound as compared to the control group. However, while the FFI-only group showed moderate improvement in controlled production task (reading aloud), the group that received both FFI with EI showed considerable improvement in both the controlled production and spontaneous production tests (e.g. describing pictures).

Explicit Pronunciation Instruction in ESL contexts

Explicit pronunciation instruction gained positive results not only in EFL contexts, but in English as a Second Language (ESL) environments as well (Gordon & Darcy, 2016; Magro, 2011; Saito, 2011). Saito (2011) conducted a study on 20 Japanese learners in an ESL setting where participants in the experimental group received four-hours of phonetic instruction on the English sounds that Japanese learners often struggled with, particularly the phonemes $[x, f, v, \theta, \delta, w, l, I]$ while the control group did not receive any instructional treatment. The phonetic training provided students with articulatory instructions on the target phonemes, perceptual training (identification and discrimination tasks) and production exercises (sentence-reading and picture description) with corrective feedback from the instructor. Pre and post-test results on production tasks (sentence-reading and picture description tasks) showed that students in the experimental group progressed in their English oral production, which made them sound more comprehensible to native English listeners, even though their perceived foreign accent was not reduced. Likewise, ESL Brazilian learners significantly improved in their production of the English initial plosive /p/ after receiving explicit instruction on the target sound and after receiving corrective feedback from their teachers (Alves & Magro, 2011). In 2016, Gordon and Darcy continued this line of research investigating whether rapid improvement in speech comprehensibility could be made through explicit pronunciation instruction. They put thirty ESL students into three groups: two experimental groups who received 4 hours of pronunciation instruction (one group on suprasegmental features and the other on the four vowels i/i, i/i, i/k, and i/k), and one control group who did not receive any instruction. By rating participants' speech comprehensibility before and after instruction (through the sentence reading task), the researchers found that only the experimental group with suprasegmental instruction gained

significant improvement while the other two groups did not show any progress. They then concluded that in a short period of time, focusing on suprasegmental features could lead to quick improvement in learners' speech production while it might take some more time with segmental features. One reason that might explain the study results is that the group with segmental instruction received training on only a limited number of English vowels while the group with suprasegmental instruction received a wide range of suprasegmental features.

The Role of Feedback in Pronunciation Instruction

Communicative Language Teaching (CLT) is the dominant method in modern language teaching, which could consist of a wide variety of activities, including listening and imitating, phonetic training, minimal-pair drills, contextualized minimal pairs, and corrective feedback (Celce-Murcia, Brinton, & Goodwin, 2010). Regarding corrective feedback, Pennington (1998) suggested that explicit feedback together with phonetic instruction helped learners raise awareness of their own pronunciation problems. However, the role of corrective feedback in pronunciation instruction remains unclear. Saito (2015) examined the effects of corrective feedback on both perception and production skills of the target phoneme /1/ among 49 Japanese native learners of English in an EFL context. To illustrate, he divided participants into three main groups: two experimental groups who received form-focused instruction (FFI) in 4-hour meaningful lessons (one with recast as a form of corrective feedback and the other without recast), and one control group who only received lessons without FFI. By using pre and post-tests in perception skills (identification tasks on minimal pair /J/-/l/) and production skills (reading words in both controlled and spontaneous contexts, in both trained and untrained contexts). The results showed that the two experimental groups outperformed the control groups in both perception and

production tasks. The role of corrective feedback yet remained unknown as the group with FFI showed significant improvement in both tasks while the group with FFI and corrective feedback showed improvement only in production tasks. From that result, Saito purported that beginners who did not have much phonetic knowledge should learn through receptive FFI mode, without focusing too much on modified output (recast as a form of corrective feedback).

Additionally, the types of corrective feedback to adopt remains controversial (Aranguiz & Espinoza, 2016; Karimi & Esfandiari, 2016). Aranguiz and Espinoza (2016) investigated audio-recorded lessons from five EFL teachers in Chile to find out what corrective feedback strategies were employed in classrooms and their efficacy in student oral performance. The study showed that explicit corrective feedback helped learners "notice the difference between their production and the target language" (p.126) and teachers tended to focus more on giving feedback on pronunciation errors. Among various feedback strategies, explicit correction and recast showed higher rate of self-repair among students. Karimi and Esfandiari (2016) suggested that recasts might have better effects on students' performance on suprasegmental pronunciation than explicit corrective feedback. They studied 60 EFL learners in an English institute in Iran and divided them into three groups: two experimental groups (one was treated with explicit corrective feedback and one with recast) and one control group (with no corrective feedback). Focusing on testing students' knowledge of English stress patterns (in both word and sentence levels) using pre and post-tests, the study revealed that students in the experimental groups outperformed the control group. Interestingly, the group with recast performed better than the group with explicit corrective feedback. Possible explanations for the results were mentioned in the study. As recast attracted focus on form from students without embarrassing them or

interrupting flow of communication, it could also yield more positive effects on students pronunciation development. It was possible that stress patterns illustrated in recasts would make it easier for students to imitate. Nevertheless, this study did not clarify which types of tests were used to test students' knowledge of English stress patterns.

Explicit Pronunciation Instruction and Listening Skills

Listening Problems among L2 Learners

L2 listening "remains the least researched of all four language skills" (p.191, Vandergrift, 2007). Research in L2 studies showed that one common listening problem is often associated with decoding skills. Goh (2000) investigated the real-time listening difficulties experienced by L2 listeners and analyzed these difficulties in light of three-phase model of perceptual processing, parsing and utilization. He suggested that perception problems were related to listeners' inability to recognize words and to distinguish the sounds or words in a stream of speech. Misperception of speech sound may occur in syllables, words, or the relationship between words in a sentence, which might commonly occur in EFL oral communication (Sutrisno, 2018). For example, in a study by Nowrouzi and his colleagues (2015), they questioned 100 Iranian EFL learners and found that mistaking one word for the other was one major listening problem among these learners.

Among strategies employed to enhance listening skills, dictation, the activity of writing down what is orally said or read, has been empirically studied and shown to enhance learners' abilities to decode words (Afsharrad & Benis, 2014; Kiany & Shiramiry, 2002; Navidinia, Alidoost, Hekmati, & Shirazizadeh, 2016). Kiany and Shiramiry (2002) compared a control group and an experimental group of 60 EFL students in Iran at the elementary level. The experimental group who studied Headway listening with additional dictation exercises outperformed the control group in the final listening test. According to

them, dictation makes students "aware of different aspects of pronunciation and the sound system of English" (p.62). Similarly, Afsharrad and Benis (2014) examined the effects of dictation training on listening comprehension. They studied thirty-one Iranian EFL learners of elementary levels, dividing them into two groups (control and experimental) for a duration of twenty listening sessions. The experimental group was asked to do the transcription exercises of the listening coursebook, and then got corrected in class while the control group was assigned to listen for comprehension at home, without any transcription tasks. Subsequently, the experimental group performed better than the control in the partial dictation listening post-test. From that, the authors recommended that dictation exercises should be assigned as homework to boost beginning-level students' listening comprehension. However, the study did not clarify whether control group students got any correction for their listening comprehension homework assignments, and the training course details were not clarified. Positive impact of dictation exercises not only shows among students at elementary levels but also at higher proficiency levels. For instance, Navidinia and his colleagues (2016) conducted a research on thirty intermediate-level Iranian EFL students, putting them into two groups of control and experiment. The control group studied following the course book of twenty-five sessions (with two hours for each session) while the experimental group received additional dictation exercises. Through IELTS (International English Language Testing System) pre and post-listening tests, students in the treatment group scored better than the control group. The authors then argued that teachers should integrate transcribing as a strategy to teach listening comprehension as "in listening comprehension, by transcribing what they listen to, students can focus more on sounds, words, and sentences and identify the problematic areas instead of getting the overall meaning" (p.116).

Explicit Pronunciation Instruction and Sound Perception

As mentioned above, pronunciation teaching has long been established as useful in enhancing students' speech intelligibility. However, not much research has focused on how pronunciation training improves perceptual (i.e., listening) skills among L2 learners. Over the past decade, there has been some limited research on the effects of pronunciation training on English speech perception, mainly focusing on problematic sounds for L2 learners of certain population.

Explicit instruction first showed effects on L2 perception of vowels. Cenoz and Lecumberri (1999) examined the effects of phonetic training on the discrimination of English vowels among 109 university students who were native speakers of Basque and Spanish. The training consisted of 28 hours phonetic instruction of English sounds, 28 hours of listening discrimination tasks and International Phonetic Alphabet (IPA) transcription, a pre- and a post-listening task testing students' ability to listen and discriminate certain English vowels. The test results showed that students performed better after the instruction, which affirmed positive effects of phonetic training on perception skills. Later on, more research was conducted to investigate the potential relationship between phonetic instruction and listening skills (Garcia & Mora, 2009; Kissling, 2015; Linebaugh & Roche, 2013). Positive effects of a six-week explicit phonetic training on perception and production of the English oral stops /p/-/b/, /t/-/d/ in word-initial position and the four vowels /æ/-/ Λ/, /i/- /ı/ were observed among advanced Catalan/Spanish bilingual learners of English (Garcia & Mora, 2009). In this study, only the experimental group received the phonetic training, which involved various production (e.g., reading aloud, imitation, dialogues) and perception tasks (identification, discrimination, phonetic transcription, and exposure to native speakers' sounds) while the control group did not

receive any instruction. Scores from the pre-test and post-test in both perception (minimal pair identification) and production (delayed sentence repetition task) showed that participants in the experimental group perceived and produced the target phonemes more correctly. In a similar study, Linebaugh and Roche (2013) studied the effects of phonetic training on listening skills of Arabic L1 learners of English. Arabic learners often encountered problems distinguishing the English phonemes /b/ and /p/ as the Arabic language had the voiced bilabial stop /b/ but not the voiceless equivalent /p/. The pre and post listening test results suggested that Arabic learners, with a short articulatory training on the two sounds /p/ and /b/ (which involved phonetic training, listening and repeating minimal pairs) performed better in differentiating these two sounds as compared to learners with only exposure to sounds in the non-form focused intuitive-imitative approach. However, this research only examined pre-intermediate level students and the single contrast of English phonemes /p/ and /b/.

More recently, Kissling (2015) studied how phonetic instruction improved English L1 learners' perception of subtle phonetic differences between eight Spanish phones [p, t, k, β , δ , γ , r, r] with their analogous English phones. These phonemes were considered as being acquired late among English L1 learners of Spanish. The study was conducted among learners of Spanish as a foreign language in a public school in the United States across three different levels: basic, intermediate and advanced. Participants were divided into control and experimental groups, both receiving training on four computer interactive modules, including listening to and repeating words or sentences. However, the experimental group received additional phonetic training on eight Spanish phones - detailed articulatory explanation between analogous English and Spanish phonemes together with some identification exercises. The results showed that participants in the experimental group

outperformed their peers in the control group in the identification and discrimination tasks, which provided further evidence for the promising effects of phonetic instruction on learners' perceptual skills targeting L2 Spanish.

Explicit Pronunciation Instruction and Listening Comprehension

Pronunciation training exhibits its impact on not only perception of specific phonemes but also in general listening comprehension (Gorbani, 2011; Khaghaninejad & Maleki, 2015). Iranian EFL learners experienced progress in their listening comprehension after receiving seven weeks of explicit pronunciation instruction (Khaghaninejad & Maleki, 2015). In this study, 57 intermediate students were divided into two experimental groups and a control group. The control group followed a normal schedule of English classes, focusing on the four skills: reading, writing, speaking and listening, without any explicit pronunciation training. The two experimental groups received regular activities in the same coursebook with additional explicit pronunciation instruction. One experimental group received segmental training while the other group received supra-segmental pronunciation instruction. The training included explicit pronunciation instruction on target features, listening to related audio clips, pronouncing words using their phonemic transcriptions and listening to the audio clips again to reinforce listening abilities. The group with segmental pronunciation instruction performed better than the group with suprasegmental instruction in the listening test. In the same way, another study by Gorbani (2011) confirmed that pronunciation instruction followed by the use of phonemic transcription enhanced listening comprehension skills among Iranian high school learners of English.

Contrary to the positive results from these above-mentioned studies, Silveira (2004) did not see great effects of phonetic instruction on perceptual skills. Particularly, she investigated the effects of pronunciation instruction on both production and perception

skills, among twenty-two Spanish EFL learners at elementary proficiency level. She divided them into two groups: an experimental and a control group. The experimental group received 45 hours of training on pronunciation, focusing on the target word-final consonants: /p/, /b/, /t/, /d/, /k/, /g/, /f/, /v/, /d3/, /m/, /n/, /n/. The pronunciation lessons consisted of (a) description and analysis; (b) listening discrimination; (c) controlled practice and feedback; (d) guided practice with feedback; and (e) communicative practice and feedback. The production test required learners to read sentences containing the target consonants, while the perception tests included discrimination tests (of monosyllabic words ending in a consonant (e.g., fog) and disyllabic words ending in the same consonant followed by /i/ (e.g., foggy)). The test results showed that the positive effects of pronunciation instruction were greater at the production level than at the perception level as students in the experimental group did not perform significantly better in the perception tests as compared to the control group. One highlighted implication of Silveira's study was that teachers should integrate more listening exercises into pronunciation lessons to offer more opportunities for students to listen to and discriminate phonemes, from which their listening comprehension could be improved. So, it could be inferred that adequate amount of time devoted to perceptual training might play a role in helping learners make progress in listening skills.

In brief, positive influences of explicit phonetic instruction on perceptual skills have been affirmed in most recent studies (Cenoz & Lecumberri, 1999; Garcia & Mora, 2009; Gorbani, 2011; Kissling, 2015; Khaghaninejad & Maleki, 2015; Linebaugh & Roche, 2013) Notably, explicit phonetic instruction in these bulk of studies emphasized both oral production and sound perception tasks. Therefore, it might be unclear the extent to which the progress students made in their listening skills was the direct effect of explicit

pronunciation instruction or of perceptual training. Agostinelli (2013) cast doubt on the effects of mere explicit instruction on L2 learner's perceptual skills. She investigated the effects of mere explicit phonetic instruction on perceptual skills of novel L2 contrast among English native speakers learning Spanish as L2. L2 novel contrast in this study was understood as the glottal fricative which resulted in Spanish from the suppression buccal gestures of /s/ in the word-medial coda position. The participants were split into three groups: two experimental groups (one with teacher-led lessons and the other in lab settings), and one control group who didn't receive any instruction. Instruction involved explanation of the novel L2 contrast and listening to sample words, without any minimal pair identification tasks to avoid interference of perceptual training. The pre- and post-listening tests (using the identification task) showed that the phonetic instruction did not lead to more accurate perception of L2 novel contrasts.

Additionally, the direct effects of production on perception remain unclear, as demonstrated in Couper (2011). He examined the effects of socially constructed metalanguage (SCM) and critical listening (CL) in teaching pronunciation among Mandarin and Korean speakers living in New Zealand. Four groups of high-intermediate levels were studied: group 1 (SCM-, CL-). Group 2 (SCM-, CL+), group 3 (SCM+, CL-), and group 4 (SCM+, CL+). SCM+ was understood as teachers use L1 to explain L2 syllable codas, which helped L2 students know how they sound to native speakers and provided them with corrective feedback. CL+ was defined as a way to compare and contrast different speech productions and assess if they were acceptable or not. SCM- and CL- focused only on declarations of metalinguistic rules. This study suggested that the last group (SCM+, CL+) has significant improvement in both speaking production (tough phrases test) and listening perception (critical listening and listening discrimination tests). The second group (CL+,

SCM-) improved in listening tests while the third group (CL-, SCM +) performed better in the speaking test. It was concluded that better sound perception led to better listening skills while better awareness of how L2 learners sound to native speakers resulted in better production. It could be inferred from the study that if students were trained to listen and discriminate sounds, their chances of word recognition in listening would be enhanced. It was, though, unclear whether better speech production resulted in better sound perception or vice versa.

Effects of Perceptual Training on L2 Perception and Production

Gains in perceptual skills among L2 learners in a bulk of research studies on the effects of phonetic instruction on perception remains questionable, whether it is associated with explicit pronunciation or with perceptual training (e.g., Cenoz and Lecumberri, 1999; Garcia & Mora, 2009; Kissling, 2015). As a matter of fact, perceptual training has been suggested in many studies to help improve either perceptual skills, or both perception or production skills. Flege's Speech Language Model (SLM) (Flege, 1995a) suggested L2 perception could improve after sufficient exposure, and that accurate perception is necessary to target -like production. Bradlow and his colleagues (1996) confirmed this notion in a study examining the effects of /r/-/l/ perceptual training on the /r/-/l/ production among Japanese EFL learners. Though the pre- and post-listening tests (identification tasks) and production task (the repetition task), students showed significant improvement in perceptual and productive skills, which supported the positive impact of perceptual training in both listening and speaking skills. On the other hand, Wang (2002) claimed that perceptual training alone might lead to perceptual gains but might not be sufficient for production gains. Wang examined the impacts of perceptual training on perception and production of English vowels contrast among 16 native Mandarin and Cantonese speakers

residing in Canada. Participants received perceptual training through identification tasks, focusing on three minimal vowels pairs (lax and tense vowels): /i/-/t/, /u/-/v/, and /ɛ/-/æ/. Pre-test and post-test in listening discrimination task and production task (reading minimal pairs) illustrated that participants gained significant improvement in the perception task, but not in the production task.

Although the positive impact of perceptual training on perception seems to be supported in some studies (e.g., Bradlow, Pisoni, Akahane-Yamada, & Tohkura, 1997; Wang, 2002), its effects on productional gains remains unclear. In a meta-analysis of perception studies within the last 25 years, Sakai (2018) investigated the effects of perceptual training on production gains. He suggested that "perception-only training leads to small-sized production gains" and there is no "statistically significant relationship between perception gains and production gains" (p.212, Sakai, 2018). Additionally, the results indicated five features of perception-only training that encourage production gains: "second language contexts, beginner-level of L2 experience, training at home, a short training, and the existence of phonetic instruction" (p.212, Sakai, 2018). According to the study, it is not clear whether perception must precede production or whether production increases as perception increases.

The Vietnamese and English Phonological Systems

The Contrastive Analysis Hypothesis (CAH) assumes that difficulties in L2 learning could be predicted by a comparison of the differences between L1 and L2 (Lado, 1957; Setter & Jenkins, 2005). According to this theory, dissimilarities could cause difficulties for L2 learners while similarities could support acquisition. Although recent research has shown that L2 difficulties might result from both differences and similarities between L1 and L2 (e.g, Cai & Lee, 2015), CAH is still considered a meaningful way of explaining

potential errors that L2 learners might make (Ohata, 2004) as most researchers today would agree that negative transfer is a "significant factor in accounting for foreign accents" (Celce-Murcia, Brinton, & Goodwin, 2010).

In fact, many studies of various language contrasts have focused on the phonological differences between L1 and L2 to predict problems that L2 students might encounter in communication (e.g., Han, 2013; Mu'in, 2017; Soozandehfar, 2011). Shifting focus to the Vietnamese context, research has shown that certain problems in Vietnamese learners' speech could be attributed to the linguistic differences between English and Vietnamese. Hwa, Hodson and Edward (2002) studied phonological differences between Vietnamese and English and gave explanations to some common problems Vietnamese speakers met when speaking English. For example, as Vietnamese language had only voiceless oral stops and nasal sounds in the coda, Vietnamese learners of English commonly had problems aspirating word-final consonants such as the word-final stop consonants /t/ and /d/. Additionally, there were some English phonemes that did not exist in the Vietnamese language such as the short vowel [1], [æ], which often confused the learners.

Transfer from L1 not only affects L2 production skills but also affects L2 perception. Chang & Heift (2015) examined the effects of L1 background on perceptual skills among twenty-six beginning learners of German with Mandarin or English L1 background, by doing sound-perception exercises throughout the semester (filling in missing sounds in German sentences) in a Computer-Assisted Language Learning (CALL) environment. The study results indicated a positive transfer effect on the German listening skills for L1 English speakers, whereas L1 Mandarin speakers seemed to encounter more difficulties in perceptual skills.

Research Questions

Outlined above, pronunciation studies have revealed that explicit pronunciation training has certain positive effects on listening comprehension, but research has been limited in terms of learner and L1 backgrounds. As there is, to date, no published research on the direct impact of English phonetic training on perceptual skills among Vietnamese learners, the current study aims at examining this potential effect. As most studies in the field incorporated listening into the pronunciation instruction (e.g., Cenoz and Lecumberri,1999; Garcia & Mora, 2009; Kissling, 2015), it was not clear whether perceptual gains were the direct effects of explicit phonetic instruction or of perceptual training. Therefore, the current study excluded listening activities from the pronunciation treatment to examine the mere effects of pronunciation instruction on listening skills.

The present study focuses on examining the four phonemes that typically cause troubles to Vietnamese speakers of English: the tense and lax high front vowel /i/~/ı/, the word-final voiceless and voiced alveolar stop consonants /t/~/d/ (Luu, 2010). As mentioned in Hwa, Hodson and Edward (2002), the Vietnamese phonemic system does not have the lax high front vowel /ı/ and word-final voiced stop consonants. As a consequence, Vietnamese learners might have problems distinguishing the difference between the long vowel /i/ and the short vowel /ı/, as well as the difference between the word-final voiceless stop consonant /t/ and the word-final voiced stop consonant /d/. This was confirmed in a study by Luu (2010). Through the use of questionnaires and analysis of participants' voice recordings using Praat software, Luu found out the common mistakes in English pronunciation among Vietnamese students. According to that study, failing to differentiate short and long vowels, voiced and voiceless consonants, and omitting word-final consonants were three common mistakes that Vietnamese learners of English often made.

As listening problems among L2 learners are often associated with the inabilities to distinguish words and sounds in a stream of speech and to recognize words they know (e.g., Goh, 2000; Nowrouzi, Tam, Zareian, & Nimehchisalem, 2015; Wilson, 2003), it is possible that if learners could improve their ability to distinguish sounds and better recognize known words in a stream of speech, their listening comprehension would be likewise enhanced. The current study examines both sound discrimination and word recognition skills, as measures of perceptual skills. In listening comprehension, learners have to be able to distinguish between certain sounds to perceive the segments correctly (Hu, 2017). For example, they have to be able to distinguish "hit" and "heat" to get the correct words in listening. Besides, the ability to decode phonemes in spoken language and convert into sounds (word recognition skills) in dictation plays a role in listening skills as dictation is considered a useful method in helping EFL learners achieve better listening comprehension (Hu, 2017; Kiany & Shiramiry, 2002; Navidinia, Alidoost, Hekmati, & Shirazizadeh, 2016).

This research aims at answering three questions:

- 1. Will explicit pronunciation instruction enhance Vietnamese students' perceptual skills to differentiate long/short vowels /i/-/ɪ/ and the word-final voiceless/voiced stop consonants /t/-/d/?
- 2. Will explicit pronunciation instruction enhance students' perceptual skills in listening and dictation tasks for monosyllabic words containing vowels /I/ and /i/ and words containing final stop consonants /t/ and /d/?
- 3. How do learners perceive the instruction on their speaking and listening skills? This study limits the listening to one-syllable words instead of multi-syllable words, in line with methods used by Aliaga-Garcia and Mora (2009) and Linebaugh and Roche (2013).

To listen to and complete dictation tasks on multi-syllable words, students may need adequate English vocabulary (which could act as a potential confounding variable). For example, for the word "honest", students could listen and recognize all word phonemes but find it hard to write down the correct word if they do not know this word (as the "h" in this word is silent).

Chapter 3: Methodology

Participants

This study elicited data from sixteen Vietnamese adult learners of English (N = 16) who resided in Vietnam. One requirement was that participants did not have any previous classroom explicit phonetic instruction on English pronunciation. This criterion helps ensure that the pretest perceptual scores are not affected by previous instruction.

Initial recruitment involved basic background information about participants in both groups, such as name, age, and prior pronunciation classroom instruction. This information was elicited in an initial Google form sent via email to prospective participants who responded to the initial invitation for participation. Only participants who met the requirements of age (i.e., at least 18 years old) and lack of prior pronunciation instruction were chosen to participate in the study. The Google consent form was sent to participants before the study started so that participants could provide their online signature voluntarily. Table 1 below summarizes the steps in recruiting participants for the study.

Table 1

Procedure for Participant Recruitment

Channel of	A public Facebook group for EFL learners in Vietnam.
recruitment	
Initial	A Google form was sent to those who are interested, asking about the
selection	names, ages and any prior pronunciation training. Only those who were
	at least 18 years old, with no prior classroom instruction on
	pronunciation proceeded with the pre-test.
Consent form	An online consent form (Google form) was sent to participants via
	email.

Personal information about participants was kept confidential. The researcher used number codes (e.g., 1, 2, 3) to represent each participant instead of using their names or any related personal information. To avoid revealing the explicit purpose of the study, participants were told that the study aimed at helping teachers adjust their teaching methods to improve teaching effectiveness.

Participants were divided into two groups: the control group (n = 6) and the experimental group (n = 10). They were recruited through a public Facebook group, which consisted of more than 7,000 members and served as a discussion board for adult Vietnamese EFL learners who wished to improve their pronunciation and communication skills. At first, in the recruitment advertisement for this study, the researcher aimed at recruiting at least 20 participants each for both the experimental group and the control group. Those who registered to be in the experimental group joined a free five-hour online pronunciation instruction, while those in the control group completed two online listening tests and were offered one-hour free online pronunciation instruction afterwards. Although

there were twenty participants who voluntarily joined each group (and signed the consent form), there were only thirteen people in the experimental group who showed up during the instruction, ten of whom completed both listening tests (n = 10). Three participants in the experimental group were reported to quit the study in the middle of instruction due to personal time conflicts. For the control group, in fact, there were only six students who completed both pre-and post-listening tests (n = 6).

Development of the Instruments

The Listening Test

To test participants' perceptual gains after the treatment, a pre-test and post-test were applied for both groups (following the design of previous studies, such as Aliaga-Garcia & Mora, 2009). Pre-test and post-test were identical. Each test consisted of two parts. In both parts, 66.6% of the items contained the target phonemes and 33.3% were used as distractors. Each question was worth a point with a maximum score of 27. The first part (Part A) tested students' abilities to listen and distinguish target sounds with 15 monosyllabic minimal pairs (Appendix B). The audio used in the listening test was recorded by a male native English speaker from North America using the recording software of a Samsung Galaxy S7 Edge. Each sentence was repeated twice and in a clear manner.

For example:

Listen to the speaker saying one of the two words. Write down the word that you hear.

Luke – Look

You write down: Look

The second part (Part B) tested students' abilities to listen and dictate monosyllabic words in a stream of speech (Goh, 2000; Linebaugh & Roche, 2013), using "fill-in-the-gap"

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exercises with a total of 12 sentences. Part B tested students' abilities to decode phonemes in each monosyllabic word, and convert phonemes into letters. To avoid difficulties in converting sounds into orthographic form (as a potential confounding variable), words were chosen among the 2000 most frequently occurring words to assume that the words were familiar with participants (according to the British National Corpus). This decision was also based on the study by Linebaugh & Roche (2013), in which the identification task consisted of 10 minimal pairs (20 items), with words chosen from the 2000 most frequent words according to the British National Corpus.

For example:

Listen and choose the right word to fill in the blank

The man said____again.

Answer: Sad

Table 2 presents a Table of Specification (Bachman & Palmer, 1996) with detailed structure of part A and part B of the test instrument, focusing on the number of test items containing target phonemes in the test and the number of distractors.

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Table 2:

Table of Test Specification

Test	Total items	Percentage (%)	Question number
Part A: Discrimination	15 pairs		
/t/-/d/	5	33.3%	1, 4, 9, 12, 14
/i/-/ _I /	5	33.3%	2, 5, 6, 7, 13
Total target phones	10	63.3%	
Distractors	5	33.3%	3, 8, 10, 11, 15
Part B: Dictation	12 sentences	Percentage (%)	Sentences
Final /t/	2	16.67%	3, 10
Final /d/	2	16.67%	9, 11
Short vowel /I/	2	16.67%	6, 8
Long vowel /i/	2	16.67%	2, 7
Total target phones	8	63.33%	
Distractors	4	33.33%	1, 4, 5, 12

Post-Instructional Survey

A short survey (Appendix C) was administered after the instruction to investigate students' perceptions towards the instruction that they received, particularly how they perceived the training on their receptive and productive skills (research question 3). The survey consisted of two 4-Likert scale questions and three open-ended questions. The two Likert scale ratings asked participants to rate their levels of improvement in both speaking and listening skills after the pronunciation instruction. The other open-ended questions

elicited participants' ideas on their areas of perceived improvement and any suggestions to improve the instructional quality.

Example of the Likert scale questions:

Do you think that your listening skills have improved after the instruction?

Example of open-ended questions:

Please describe how your listening skills have been improved.

Initial Piloting of the Instrument

A pilot test was conducted on an intact online pronunciation class of the same target population. The class from which the pilot data were collected, which started on October 15th, was conducted online (through the Zoom platform) by the same instructor. The class consisted of ten online segmental pronunciation training sessions which lasted one hour each. The course aimed at providing students with phonetic instruction on the American English sound systems. There were eight students in the class; however, only seven students took the pre-test at the beginning of the course. Table 3 demonstrates the pilot pre-test results, collected in mid-October 2018, with percentages of correct answers displayed for each participant, and percentages of wrong answers related to the target phonemes /t/-/d/ and /i/-/ı/. There were 27 items in the test (with one point for each item), so there was a total of 27 points (Appendix A).

Table 3

Result of the pilot pre-test

Dartiainant	Correct	Incorrect answers	% (Incorrect target
Participant (P)		related to target phones	answers/Incorrect
		(Wrong target answer)	answers)
1	13	8	61.5%
2	15	10	90.9%
3	16	7	70.0%
4	20	5	83.3%
5	20	4	66.67%
6	21	3	60%
7	23	2	66.67%
Mean	(M)	18.2	
Standard Deviation (SD)		3.6	

Data has shown that all participants in the pilot test had high percentages of errors which are related to the target phonemes (from 60-90%). This indicates that the chosen phonemes were problematic to most Vietnamese learners.

Overall scores of participants in the pilot pre-test were higher than anticipated (M = 18.2). The reason could be that in section A, the sample speaker was asked to read each minimal pair and repeat one of the words.

For example: Listen to the speaker reading two words. One of the words will be repeated.

Write down the repeated word.

(The speaker says) Luke – Look - Look (You write down) Look

Participants were then required to write down the repeated word. This might not be ideal in examining whether learners could perceive sounds, as it could be that sample speech of each minimal pair made it easier for students to recognize one of the words in juxtaposition. Therefore, the format of task A was adjusted in the actual thesis study. Instead of having participants listen to minimal pairs and circle the repeated word, the official test required students to listen to one of the two words, and circle or write down the words that they heard. This way, listeners did not have the opportunity to listen to and compare both the correct answer and distractor in juxtaposition.

For example: Listen to the speaker saying one of the two words. Write down the words that you hear.

Luke – Look

(The speaker says: Look).

You write down: Look

Pilot test results

As participants 5 and 6 finished the pre-test; however, they dropped out in the middle of the course for some personal reasons. As a result, their data was not analyzed. Also, data from participant 7 was not included because in the pre-test, that person could not answer three questions in test A (question numbers 13,14,15) due to Internet connection errors. Tables 4 and 5 below demonstrate the pre and post listening tests results among the pilot group, related to the target vowels and the target consonants correspondently.

Only questions related to the two target vowels /i/-/ɪ/ and the two target consonants were scored. In part A of the test, there were five questions related to the target vowels /i/-/ɪ/ and five questions related to the target consonants /t/-/d/. Each

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question worth one point, so the total score related to the target vowels in part A is 5, and the total score related to the target consonants in part A is 5. In part B of the test, there were four questions related to the target vowels /i/-/ɪ/ and four questions related to the target consonants /t/-/d/. The total score related to the target vowels in part B is 4, and the total score related to the target consonants in part B is 4.

Table 4

Pre-test and post-test results related to the target vowels (short and long i)

Participant	Part A (minimal pair)		Part B (dictation)	
-	Pre-test	Post-test	Pre-test	Post-test
1	4	4	3	2
2	4	4	3	3
3	5	5	3	4
4	5	5	3	3
8	3	5	1	1
М	4.2	4.6	2.6	2.6
SD	0.8	0.5	0.8	1.1

As demonstrated in table 4, for the discrimination task (part A), the mean score of post-test (M = 4.6) (related to the target vowels) was slightly higher than in the pre-test (M = 4.2). However, for the dictation task, the mean score of the pilot group remained unchanged.

Table 5

Pre-test and post-test results related to the target consonants /t/ and /d/.

Part A (minimal pair)		Part B (dictation)	
Pre-test	Post-test	Pre-test	Post-test
3	5	3	2
3	5	3	3
5	5	3	3
4	4	2	4
4	4	0	3
3.8	4.6	2.2	3.0
0.8	0.5	1.3	0.7
	Pre-test 3 3 5 4 4 3.8	Pre-test Post-test 3 5 3 5 5 5 4 4 4 4 3.8 4.6	Pre-test Post-test Pre-test 3 5 3 3 5 3 5 5 3 4 4 2 4 4 0 3.8 4.6 2.2

Regarding the target consonants, for both discrimination and dictation tasks, the mean scores of the pilot group was higher after the post test. Overall, students' listening performance seemed to slightly improve, mainly regarding the word-final consonants /t/-/d/.

Pronunciation Instruction as Treatment

Segmental pronunciation training courses often consist of both phonetic and perceptual aspects, such as listening discrimination (e.g., Aliaga-Garcia & Mora, 2009). However, this study excluded perceptual training in order to clearly examine the direct effects of explicit pronunciation instruction on listening skills.

The experimental group received phonetic instruction in nearly two weeks, with three classes per week. The course consisted of five online segmental pronunciation instructional sessions, with each session lasting for one hour. The training focused on the six English vowel phonemes: [i]-[i], [v]-[u], [æ]-[ɛ], and the six stop consonants: [p]-[b], [t] - [d], [k]- [g]. Although the study targeted the four English phonemes [i]-[i] and [t]-[d], the

instruction involved other phonemes serving as distractors, to avoid revealing the target phonemes being studied.

Students received five classes in phonetics via a video-conferencing platform called Zoom, due to the geographic distances between the trainer who was staying in the United States and the students who were living in Vietnam. Zoom functioned as a virtual classroom where teachers and students could see and talk with each other to simulate face-to-face communication. For each session, participants were instructed on how to produce each English sound (articulatory training), focusing on the six target phonemes described above. For example, for the sound /i/, through video interaction, the instructor illustrated the mouth movement and tongue position, and articulated the sound. Following instruction on each phoneme, the teacher provided students with three to four sample words for each phoneme (Appendix D). He analyzed each phoneme in the sample words, and read aloud those words for students to listen. After that, the students were asked to read the sample words, and received explicit corrective feedback from the instructor on accurate production of these phonemes. There was no homework assigned for participants. Moreover, to ensure that participants fully attended all of the instructional sessions, there was a rule that participants who skipped any class would have to drop the whole five-hour course.

The instructor was a male Vietnamese teacher of English who had been teaching English to EFL learners in Vietnam at an English center in Hanoi for nearly six years. He gained a bachelor degree in Foreign Language Teaching from a university in Hanoi, a Master of Business Administration degree in the U.S and has been living in the U.S for four years.

Participants in the control group did not receive any training; however, they were compensated with one-hour free online pronunciation instruction after the study was over.

In other words, the control group took the pretest, received no instruction for the same time period as the treatment group participated in classes, and then took the post-test two weeks later.

Data Collection Procedures

The pre-test was given to participants in both the experimental and the control groups before the instruction started. After nearly 2-weeks of training (three classes per week), participants in both experimental and control groups took the post-test, conducted immediately after the final training session. Table 6 illustrates the detailed schedule for the experimental and the control group in the study.

Table 6

Schedule for both groups

	Experimental group (n=20)	Control group (n=20)
Pre-test	Before the instruction	Before the instruction
Session 1	Vowel /i/ - /ɪ/	
Session 2	Vowel /ε/ -/æ/	
Session 3	Vowel /u/-/v/	No training
Session 4	Stop consonant /t/-/d/	
Session 5	Stop consonant /k/-/g/, /p/-/b/	
D	Immediately after the	Same time as the
Post-test	training	experimental group
	Session 1 Session 2 Session 3 Session 4	Pre-test Before the instruction Session 1 Vowel /i/ - /i/ Session 2 Vowel /ε/ -/æ/ Session 3 Vowel /u/-/v/ Session 4 Stop consonant /t/-/d/ Session 5 Stop consonant /k/-/g/, /p/-/b/ Immediately after the Post-test

The pre-test and the post-test were used with the same recordings. It took about 10-15 minutes for students to finish the test, which was confirmed in initial pilot data collection. The short testing time was to avoid fatigue among students (Linebaugh & Rouche, 2013). Both pre-test and post-test were conducted over the Zoom platform, and test papers were

sent to participants via email. Participants were asked to stay in a quiet room to avoid disturbing the testing environment. During the Zoom meeting conference, participants were asked to listen to the stimuli and circle words that they heard (part A) or write down the missing words (part B). Immediately after the tests were over, participants were asked to send a Word document or a photo of their papers via email to the teacher.

Data Analysis

The current study investigated the effects of explicit pronunciation instruction on listening skills, by comparing the listening test performance between two groups: the experimental group (who received the treatment) and the control group (who did not receive any treatment). Pre and post-test results were also analyzed to examine the differences within each group, before and after the instruction. Descriptive statistics (means and standard deviations) of the pre-and post-tests in both groups were analyzed. Due to the small sample size (where normal distribution is not present in the target variables), additional non-parametric statistical tests were used to compare the differences between and within groups. Specifically, a Wilcoxon rank sum test (Mann-Whitney U Test) was used to examine the differences between the two groups, while a Wilcoxon signed rank test was adopted to analyze the differences within each group.

Qualitative data from the post-instructional survey (Appendix C) were collected in the form of 4-point Likert scale ratings and open-ended questions. Regarding the Likert scale, a mean and standard deviation of responses were calculated. Short answers from participants were identified as specific themes and tallied according to each theme (with number of raw answers and percentages).

Chapter 4: Results

Research question 1

The first research question aims at examining whether pronunciation instruction helped improve students' ability to listen to and distinguish English phonemes. In the listening test, part A (the discrimination task) was designed to test students' perceptual abilities in listening and discriminating certain English sounds. Based on post-listening test results of part A, responses related to the four target phonemes were analyzed in two main categories: stop consonants /t/-/d/ and vowels /i/-/ɪ/ (as the descriptive statistics show in table 7).

The test consists of two parts: part A (15 questions) and part B (12 questions) (Appendix B). Each item worth 1 point. In part A, there were 5 questions on the target stop consonants /t/-/d/ and 5 questions on the target vowels /i/- /ɪ/, so the maximum possible score for each category (target consonants and target vowels) was 5 points each. In part B, there were 4 items on the target stop consonants /t/-/d/ and 4 items on the target vowels /i/-/ɪ/, with the maximum possible score for each category was 4 points each.

Table 7

Pre-test and post-test results among the experimental group (Discrimination task)

Participant	Stop consonants /t/-/d/		Vowels /i/-/ɪ/	
	Pre-test	Post-test	Pre-test	Post-test
1	4	5	5	2
2	5	5	4	4
3	5	4	1	3
4	4	5	3	3
5	3	4	5	4
6	3	2	1	2
7	5	5	3	2
8	2	4	5	5
9	2	4	3	2
10	5	4	3	2
M	3.8	4.2	3.3	3
SD	1.2	0.9	1.4	1.1

As demonstrated in table 7, with regard to the two target consonants, the mean score of the experimental group is slightly higher in the post-test (M = 4.2) than in the pre-test (M = 3.8); however, it was slightly lower in regard to the two target vowels. Table 8 illustrates the pre and post test results (part A) of the control group.

Table 8

Pre-test and post-test results among the control group (Discrimination task)

Participant	Stop consonants /t/-/d/		Vowe	ls /i/-/ɪ/
	Pre-test	Post-test	Pre-test	Post-test
11	5	5	4	4
12	3	3	5	3
13	4	4	1	2
14	4	4	4	4
15	4	4	3	3
16	4	2	2	1
M	4	3.6	3.1	2.8
SD	0.6	1.0	1.4	1.1

As demonstrated in table 8, the mean scores of the post-test among the control group (n=6) decreased by 10% as compared to the pre-test, regarding both consonants and vowels.

Research question 2

The second research question examines whether students' abilities to listen to and dictate monosyllabic words containing the target phonemes would improve after the pronunciation instruction. Part B of the listening test (the dictation task) was designed to answer the second research question. Table 9 and table 10 below compare the pre- and post-test results (dictation task) of the experimental and the control group in correspondence.

Only responses related to the four target phonemes were analyzed.

Table 9

Pre-test and post-test results among the experimental group (Dictation task)

Participant	Stop consc	onants /t/-/d/	Vowe	ls /i/-/ɪ/
	Pre-test	Post-test	Pre-test	Post-test
1	2	2	3	3
2	4	3	2	3
3	3	2	1	1
4	2	1	3	2
5	3	3	2	1
6	3	0	1	2
7	2	4	2	2
8	3	3	2	2
9	2	2	0	1
10	3	4	1	1
M	2.7	2.4	1.7	1.8
SD	0.6	1.2	0.9	0.7

As shown in table 9, mean test scores of the experimental group declined by 10% from pretest (M=2.7) to post-test (M=2.4) regarding the two target consonants and were almost unchanged regarding the two target vowels.

Table 10

Pre-test and post-test results among the control group (Dictation task)

Participant (4)	Stop consonants /t/-/d/		Vowels /i/-/I/	
	Pre-test	Post-test	Pre-test	Post-test
11	1	2	2	4
12	1	1	3	4
13	0	0	2	2
14	1	1	2	1
15	1	1	2	2
16	3	2	2	2
M	1.1	1.1	2.1	2.5
SD	0.9	0.7	0.4	1.2

Likewise, in the control group, the mean test score did not change with regard to the target stop consonants, while it increased slightly by 19% in the target vowel section.

As the sample size in the study is rather small (N=16), in addition to the above-mentioned descriptive data (means and standard deviations), non-parametric tests were used to analyze differences between the control and the experimental groups, and to examine differences within each group (in the pre- and post-listening tests). The Wilcoxon rank sum test (also called the Mann-Whitney U test) was used to examine differences between the two groups while the Wilcoxon signed-rank test was used to measure differences within group. Table 11 illustrates p-values of the Wilcoxon rank sum test (between groups) and table 12 demonstrates p-values for the Wilcoxon signed rank test (within group).

Table 11

P-values for the Wilcoxon Rank Sum Test

	Part A	Part A	Part B	Part B
	Consonant	Vowel	Consonant	Vowel
	difference	difference	difference	difference
Group difference	0.1	0.4	0.4	0.2

Note: Confidence level set to 0.95 (2-tailed)

Table 12:

P-values for the Wilcoxon Signed Rank Test for the two groups

	Part A	Part A	Part B	Part B
	Consonant	Vowel	Consonant	Vowel
	difference	difference	difference	difference
Differences within	0.3	0.4	1.0	0.4
control group				
Differences within	0.2	0.3	0.6	0.5
experimental group				

Note: Confidence level set to 0.95 (2-tailed)

As p values in both table 10 and table 11 are all greater than 0.05, results show there was no statistical difference between groups or within group. This means that there is no significant difference between the test scores of participants in the control group and the experimental group, or between the pre- and posttests in each group regarding the target phonemes examined in this study.

All in all, it could be indicated that the experimental group did not experience any significant perceptual gains after the five-hour pronunciation instruction, and did not

perform significantly different than the control group in the listening test. It is worth noting, however, that such limited sample sizes would require a strong effect to show significant differences, if they were to exist.

Research Question 3

Post-instructional survey

In this study, in addition to using the listening test as a tool for analysis, a short survey was used to provide further information on students' self-perception towards improvement (or lack thereof) with regard to both listening and speaking skills (Appendix C). The survey was administered among participants in the experimental group right after the instruction ended as the survey questions focused on the participants' self-perceptions of the instruction received. There were ten students who completed both the pre- and post-tests; however, the number of participants from the beginning of the instruction was higher (n=13). During the instruction time, three students decided to terminate their participation due to personal time conflicts. At the end of the instruction, thirteen responses to the post-training survey were collected. Table 13 demonstrated mean scores of self-ratings on both speaking and listening skills among participants of the experimental group. The ratings were based on a 4-point Likert scale.

Table 13:

Self-perception of improvement in speaking and listening skills

	Listening	Speaking
M	3.0	2.6
SD	0.4	0.8

According to the participants' self- rating of improvement after the instruction (on a 4-point Likert scale), the mean score was 3.0 for listening (which meant students agreed

that there was improvement in listening skills) and 2.6 for speaking skills. It shows that participants perceived more progress in perceptual skills.

In the survey, as mentioned in the research design section, besides the Likert-rating scale, open-ended questions were used to elicit qualitative data from the participants. Table 14 summarizes what areas of listening skills students perceived to get improved.

Table 14

Detailed aspects of perceived areas of improvement in listening skills

Detailed aspects of improvement	Percentage
Ability to listen and distinguish English phonemes	8 (88%)
Ability to listen and guess the words	1 (11%)

Based on participants' comments, the majority of them agreed that after the instruction, they were able to listen to and distinguish difficult English sounds. Specifically, they reported to have better understandings of tense and lax vowels, voiced and voiceless consonants, and the length of vowels. One of them commented that he could listen and guess words correctly based on their pronunciation.

In addition to listening skills, self-perception on speaking skills were also examined.

Table 15 presents perceived areas of improvement in speaking skills among participants.

Detailed aspects of perceived areas of improvement in speaking skills

Table 15

Detailed aspects of improvement	Percentage
Understanding how to make correct sounds	9 (81%)
Have not seen improvement yet and need more practice	2 (18%)

Specifically, 81% of participants reported that they had a better command over how to articulate sounds, and pronounced words more clearly, with regard to all the phonemes

taught during the instruction. Only two of the participants stated that they did not make much progress in their speaking skill as extra practice was needed.

In the questionnaire, participants were asked to provide some suggestions to improve the effectiveness of the training course. Table 16 presents suggestions from participants on how to enhance the overall instructional effectiveness.

Table 16
Suggestions on course improvement based on participants' comments

Detail	Comments
More practice speaking & Listening	4 (44%)
Extend the duration of the course	3 (33%)
Extend the scope of training to other sounds or supra-segmental aspects	2 (22%)

The most common suggestions were to provide students with more chances to practice speaking and listening in class (44%) and to extend the course duration (33%). Particularly, there were two participants who claimed that listening activities should be integrated into class activities. Overall, based on qualitative data provided in the survey, participants had positive attitudes towards the instruction, and perceived that their listening and speaking skills were enhanced to a certain point. Still, students recognized the absence of listening practice and the lack of speaking practice as potential moderators to their pronunciation development.

Chapter 5: Discussion and Conclusion

Discussion

As analyzed in the result section, there seems to have been no significant changes in student's listening performance before and after the pronunciation instruction, at least in this limited sample of learners. Particularly, after receiving the five-hour online phonetic instruction on the English target phonemes, the Vietnamese learners in this study did not show improvement in their abilities to distinguish the target phonemes as well as their abilities to listen and dictate monosyllabic words. However, according to the survey conducted after training, students perceived to experience improvement in perceptual skills. In particular, they claimed to find it easier to listen to and distinguish English sounds which were confusing to them before. One student noted that his ability to listen to and guess words was improved after the course. The mismatch between the quantitative and qualitative results could be attributed to several factors. First, participants in the treatment group might not judge the course effectiveness too harshly as it was free of charge. As the post-instructional survey was conducted by the researcher, participants were likely to have positive perceptions towards the course as a way to show their gratitude. Second, students might feel that their listening skills were improved (as they mentioned in Table 15) due to the new knowledge that they learned during the pronunciation instruction. However, in order to perform better in the listening test, they might need more listening practice.

Even though, it should be noted that due to the limited sample size, the results of this study need to be interpreted as an exploratory study, which hopes to inform the design of a study with a larger sample in the future.

The current study results could be attributed to several factors. First, participants in this study might not have had a serious study attitude. This study was not based on intact

classes. Instead, this was based on a convenience sample that was solicited. It could be likely that free instruction within a short amount of time (five hours) made participants less determined to study for a specific purpose. From the beginning of this study, twenty participants agreed to participate in the experimental group; however, ultimately, only thirteen students showed up in the first class. Two of the target phonemes of the study (vowels /1/ and /i/) were introduced right in the first class (as shown in Table 6). Therefore, students who skipped the first class were not allowed to continue joining the study. Then, some participants dropped in the middle of the treatment due to personal conflicting schedules.

Besides, due to a short amount of instructional time, there was no homework assigned to participants, which limited their chances to review and practice what they had learned in class. The instruction would likely have been more effective in the case of an intact class where curriculum with homework assignments were already available for students. Homework assignments offer extra opportunities for students to practice at home due to the limited instructional time in classrooms. As mentioned in Table 16, the participants suggested that they would like to have more listening and speaking exercises in class. Furthermore, the pilot of this study, for instance, was conducted on an intact online pronunciation class of five students. This class was conducted through Zoom interaction for ten sessions (ten hours). Unlike this study in which instruction was free, students in the pilot project had to pay tuition fees to attend. The course focused on providing students with knowledge of all English sounds, with extra homework assignments. Based on students' test results, students' listening performance improved (but not significantly with such limited sample size). This could have been due, in part, to their more committed attitude towards the instruction and a sense of belonging to a specific class with a clearer purpose.

Second, based on the instructor's comments, the online testing environment via Zoom was more difficult to control than expected. During the pre-test students carefully chose distraction-free environments while quietness was no longer prioritized during the post-test. The instructor reported that many participants got distracted by their surrounding family members or other noises in the post listening test. It is undeniable that testing environment plays a role in test performance, especially in listening tasks where students should stay focused.

Another potential explanation for the unchanged performance in students' speech perception could be attributed to the exclusion of perceptual training in this study. A growing body of research has shown that perceptual training leads to improvement in perception skills (e.g., Bradlow, Pisoni, Akahane-Yamada, & Tohkura, 1997; Wang, Jongman, & Sereno, 2003). Thus, to exclude perceptual training effects on listening skills, the pronunciation instruction in this study focused only on phonetic training. In the past, there was one study that also excluded perception training from pronunciation instruction that led to similar results. Agostinelli (2013) investigated the effects of mere explicit phonetic instruction on perceptual skills of novel L2 contrasts among English native speakers learning Spanish as an L2. Her study did not employ any perceptual training, and the results showed no clear effects of phonetic training on listening skills among participants. Cooper (2011) also pointed out that even though critical listening activities led to better listening skills and better awareness of sound production led to better production skills, it was unclear whether better sound production led to better sound perception or vice versa.

Last but not least, the short-term instruction of five hours might not be enough for the desired effects to occur. According to the post-instruction survey, some students claimed that the course was too short, which limited their chances to practice and thus, affected their improvement. Before this study was conducted, the researcher piloted a study (on five students from the same population). The pilot study, however, showed a slight but not significant improvement in students' listening skills after ten-hour online pronunciation instruction. It is noted that the instructional time in the pilot study was twice as long as in the current study, which could be associated with perceptual gains. Longer time of instruction likely lead to greater effects on student's performance. Thompson & Derwing (2014), in a meta-analysis of recent studies in pronunciation instructional effects, suggested that global improvement in comprehensibility/ intelligibility required weeks or even months of instruction, not hours or days. They also mentioned that pronunciation effects might continue even after explicit training, so delayed post-tests are necessary to measure whether instruction results in ongoing improvement relative to control groups. It was likely that in the current study, students got confused after the instruction, especially with certain phonemes that did not exist in the Vietnamese language such as the lax high front vowel /1/. In the listening tasks, many participants got the correct answers in the pre-test but shifted to the wrong answers in the post-test, which might indicate certain confusion. According to the training schedule, only two hours were spent on the four target phonemes (while three hours were spent on the other distractor phonemes), which could not be enough for students to establish some confidence over what they learned. Thus, spending more time practicing the target phonemes with more examples provided should be of more help in boosting students' perception skills.

Implications for Future Research

Of all related studies in this area (Agostinelli, 2013; Cenoz & Lecumberri, 1999; Garcia & Mora, 2009; Kissling, 2015; Linebaugh & Roche, 2013), pronunciation

instruction often integrated perceptual training (discrimination or identification tasks). For this reason, it was unclear whether progress made in listening skills resulted from phonetic instruction or from perceptual training. This study, similar to the results from Agostinelli (2013), indicated that there was no clear improvement in listening skills as a result of mere phonetic instruction (without the intervention of perception teaching).

Hence, in order to clarify the effects of mere phonetic instruction on listening skills, future studies could investigate different conditions of training to see the clearer effects of each training condition on perceptual skills. For example, they could compare one group in which both perceptual and productive training are used, two other groups in which either perception or production training is applied, and one control group in which no training is used. In order to investigate the delayed effects of each training condition on L2 learners' perception after the instruction, both listening posttests and delayed posttests should be administered.

Furthermore, this is the first study to examine the effects of pronunciation on listening skills among Vietnamese EFL learner population. However, it has some limitations due to very small sample size and short duration of pronunciation instruction. It is suggested that future studies be conducted on the same population on a larger scale, in an extended amount of time for treatment, and possibly employ both a post-test and a delayed posttest to examine the delayed effects of the pronunciation instruction. Last, as most current studies in this field focus on the segmental features (Agostinelli, 2013; Cenoz & Lecumberri, 1999; Garcia & Mora, 2009; Kissling, 2015; Linebaugh & Roche, 2013), more empirical studies would be necessary to investigate the effects of supra-segmental features or the combined effects of both segmental and supra-segmental aspects on listening skills.

Pedagogical Implications

Due to the small sample size of this study, pedagogical implications are limited; however, a few potential implications could be discussed. As the effects of mere explicit instruction on perceptual skills remains unclear, it would be advisable that pronunciation teaching should focus on both perceptual and productive experience, with an explicit comparison between the phonology of the target language with their native language (Pennington, 1998). Setter & Jenkins (2005) defined pronunciation training as perception and production. Likewise, as mentioned by Celce-Murcia et al (2010), integrating pronunciation teaching as a part of Communicative Language Teaching (CLT) consists of a wide variety of activities, including listening and imitating, phonetic training, minimal-pair drills, and contextualized minimal pairs. Moreover, it has been suggested that pronunciation should be taught in meaningful discourse (Issacs, 2009; Levis & Grant, 2003; Saito, 2011). With regard to corrective feedback, Derwing & Munro (2014) suggested that teachers should provide feedback to students, directly and immediately in controlled practice while feedback can be delayed after the activity in guided or communicative practice to avoid interruption of the flow of communication. Peer feedback in pair or group work is also encouraged.

Limitations

As with previous studies, the current study has entailed several short-comings. First, the instruction in this study, which lasted for five hours, was rather short to see any potential effects of pronunciation training on listening skills. It is hypothesized that students would need additional amount of time to practice and absorb what they have learned. As effects of pronunciation instruction might continue even after the instruction (Thompson & Derwing, 2014), a delayed post-test could have been used to examine the delayed effects of

explicit training on perceptual skills. Besides, as the instruction was conducted online via Zoom teleconferencing, it was unavoidable to control the surrounding environment of learning and testing among participants. Additionally, it was unexpected that the drop rate of participants in this study was rather high, partly due to the random sampling method. As participants were recruited through a public Facebook group, many of them who agreed to join the study did not show up in the training. It seemed that participants felt less obliged to fully attend the instruction as they could quit the study at any point without penalties. In fact, it would be much easier to conduct the study on an intact class as the drop rate of participants might reduce due to financial ties (e.g., tuition fees paid to join a certain course) or other study obligations (e.g., perceived responsibilities to attend classes as a student of a certain institute). Finally, due to the small sample size, the study did not emphasize differences between various levels of English proficiency. It could be possible that students at different stages of L2 development benefit in a different way from pronunciation instruction. Therefore, it would be useful for future studies to further investigate effects of pronunciation instruction on various levels of proficiency.

Conclusion

In summary, the study's quantitative results revealed no perceptual gains among Vietnamese EFL learners after the pronunciation instruction, although qualitative data from the questionnaire demonstrated students' self-perceived improvement in both listening and speaking skills. Unlike other research in the field, the current study examined the mere effects of phonetic instruction on learners' aural perceptions. This was the reason why perceptual training was excluded from the treatment, which might have led to limits on L2 perceptual gains. From that point, the direct relationship between mere explicit phonetic instruction and perception needs to be re-examined in future research. Nevertheless,

pronunciation teaching, which generally consists of both perception and production, has been empirically studied previously and has shown promising impacts on both listening and speaking skills. As a result, despite the findings of this study, pronunciation training deserves to be introduced into L2 curriculum. To do so, not only should teachers be well-aware of pronunciation's role in L2 learning but they also should be well-equipped with phonetic and phonological knowledge.

Appendix A: Pilot Listening Test

A. Listen to the speaker reading two words. One of the words will be repeated. Write down the repeated word.

For Example:
Luke – Look
(You write down) Look
Now it's your turn.

Item number	Audio-recorded prompt	Answers participants should write down
1	Mat – Mad	Mad
2	Rich – Reach	Reach
3	Pull – Pool	Pull
4	Sat - Sad	Sat
5	Lid – Lead	Lid
6	Bin – Bean	Bean
7	It – Eat	It
8	Cap – Gap	Cap
9	Hit – Hid	Hid
10	$\operatorname{Beck}-\operatorname{Beg}$	Beg
11	Pat – Bat	Bat
12	Bet - Bed	Bed
13	Fit – Feet	Fit
14	Hat – Had	Had
15	Would – Could	Would

B. Listen and choose the right word to fill in the blank (Each sentence will be read two times).

Item number	Audio-recorded prompt	Answers participants should write down
1	Look in the	Bag
2	I have a	Bean
3	Thelooks good	Mat
4	Imake it	Could
5	It looks like it could be	Full
6	Did you say ""?	Pig
7	Did you say ""?	Sheep
8	Did you say ""?	Lip
9	Did you say ""?	Had
10	Did you say ""?	Bat
11	Did you say ""?	Sad
12	Did you say ""?	Cab

Appendix B: Revised Listening Test in response to piloting

A. Listen to the speaker saying one of the two words. Write down the word that you hear.

For Example:

Luke-Look

You write down: Look

Now it's your turn.

Item number	Audio-recorded prompt	Answers participants should write down
1	Mat – Mad	Mad
2	Rich – Reach	Reach
3	Pull – Pool	Pull
4	Sat - Sad	Sat
5	Lid – Lead	Lid
6	Bin – Bean	Bean
7	It – Eat	It
8	Cap – Gap	Cap
9	Hit – Hid	Hid
10	$\operatorname{Beck}-\operatorname{Beg}$	Beg
11	Pat – Bat	Bat
12	Bet - Bed	Bed
13	Fit – Feet	Fit
14	Hat – Had	Had
15	Would – Could	Would

B. Listen and choose the right word to fill in the blank (Each sentence will be read two times)

Item number	Audio-recorded prompt	Answers participants should write down
1	The man said again	Bag
2	The man said again	Beat
3	The man said again	Spent
4	The man said again	Could
5	The man said again	Full
6	The man said again	Sick
7	The man said again	Sheep
8	The man said again	Rich
9	The man said again	Got
10	The man said again	Side
11	The man said again	Ride
12	The man said again	Cab

Appendix C: Post-instructional Survey

1.	. Do you think that your listening skills have improved after the instruction			
	Strongly disagree	Disagree	Agree	Strongly agree
	1	2	3	4

- 2. Please describe how your listening skills have been improved
- 3. Do you think that your speaking skills have improved after the instruction?

Strongly disagree	Disagree	Agree	Strongly agree
1	2	3	4

- 4. Please describe how your listening skills have been improved.
- 5. In your opinion, what could be done to make the instruction more effective for you?

Appendix D: Words instructed during the five instructional sessions

Session	Phonemes	Words instructed
Session 1	/i/ - /I/	Hit – Hid
		Bit – Beat
		Sit – Seat
		Seat – Seed
		Beat - Bead
		Teach - Team - Tea
Session 2	$/\epsilon/$ - $/æ/$	Bed-Bad
		Said – Sad
		Bet - Bat
		Met - Mat
Session 3	$/_{\rm U}/_{\rm -}/_{\rm u}/$	Pull-Pool
		Cook – Could
		Foot – Full
		New - News
		Whom-Who
		Food/Moon/Soon
Session 4	/t/-/d/	Ten – Den
		To - Do
		Bet - Bed
		Mat - Mad
		Sat - Sad
		Bit - Bid
Session 5	/b/-/p/	Pack – Back
	/k/-/g/	Pit – Bit
		Cap – Cab
		Lap - Lab
		Cap – Gap
		Lack – Lag
		Back - Bag

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