

The Effect of Explicit Pronunciation Instruction on Enlarging Listening Vocabulary Size

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Abstract—This study explores the effect of explicit pronunciation instruction on enlarging listening vocabulary size. 115 learners of English as a foreign language were recruited and received ten-week explicit pronunciation instruction on segments and four pronunciation skills (reduction, elision, intrusion and assimilation). How the instruction was carried out was described in details and pre-test and post-test were carried out in the form of Listening Vocabulary Levels Test. It was found that after the explicit pronunciation instruction, learners' listening vocabulary size displayed a remarkable increase, smaller individual differences were displayed and significant difference was found between the scores of two tests. Possible reasons were provided for these changes. The result indicated that explicit pronunciation instruction could be an effective way to help students enlarge listening vocabulary size and it might be more effective for students with lower proficiency level. Pedagogical implications in terms of course design, teaching practices, and teacher development were also provided to improve future listening vocabulary acquisition and instruction.

Index Terms—listening vocabulary, explicit pronunciation instruction, pedagogy, segment, connected speech

I. INTRODUCTION

For any EFL learner, listening is always a cornerstone in the learning process (Rivers & Temperley, 1978). It offers them a way to get the message from others and its development also promotes the betterment of other linguistic skills (Vandergrift & Goh 2012). At the same time however, it is never easy for many learners (Graham, 2006; Brown, 2013) and sometimes, it is regarded as the most difficult facet among four skills (reading, writing, listening, speaking) (Arvaniti, 2009; Echelberger, 2013). One explanation for the difficulty lies in the listening vocabulary, the sound and meaning of which are perceived and understood by listeners while listening (Nation, 1990). The importance of listening vocabulary toward listening has been emphasized by some scholars. It shares closer links with listening proficiency compared with reading vocabulary (Milton et al., 2010) and a good command of it contributes to sound listening comprehension (Liu, 1994; Bonk, 2000; Zhang, 2011; Wei, 2021). Rost (2016) further pointed out that the ability to recognize and understand vocabulary during listening is the core of improving listening comprehension. Without adequate amount of listening vocabulary, learners usually find it hard to various extents to comprehend listening materials. Therefore, listening vocabulary should never be underestimated both in listening acquisition and instruction and efforts should be made to enlarge listening vocabulary size to enhance listening proficiency.

These said, listening vocabulary receives little attention it deserves both in research and in teaching, let alone those on ways to enlarge listening vocabulary size. Meanwhile, in most English listening classes in China nowadays, little attention has been paid to listening vocabulary. Teachers more often than not care about whether students have got the answer of listening practices right rather than unknown words or expressions in listening. While some teachers indeed would deal with vocabulary in listening classes, a more common approach would be telling students meanings of possible unknown expressions so that they would not consist a problem for the subsequent listening practice. While students have been complaining that there were too many unknown words when asked troubles and difficulties they find in improving listening proficiency, they have seldom tried to enlarge their listening vocabulary size since most of them have never heard of this concept before or because they have no idea of how to enlarge it.

Considering the scarcity of relevant research and problems in learning and teaching, this study is aimed at examining the effect of one of the ways to enlarge students' listening vocabulary size, that is, explicit pronunciation instruction and ultimately provide some pedagogical implications to facilitate both teachers and students in terms of enlarging listening vocabulary size in the EFL setting.

II. LITERATURE REVIEW

A. *Measures to Enlarge Listening Vocabulary Size*

Considering the importance of enlarging listening vocabulary size, different measures have been put forward to facilitate its instruction.

The first measure focuses on input modality. When learning a foreign language, learners can have access to various inputs and they can be generally divided into two modes, aural and visual (Kim & Godfroid, 2019). These two modes are different since they concern distinct physical medium and their requirements for real-time processing (Kim & Godfroid, 2019) differ. Aural input concerns primarily hearing and is highly timed. In terms of enlarging listening vocabulary size, aural input has been gathering momentum as a better modality. It was found that aural input would yield more satisfying results in terms of listening vocabulary acquisition than visual input (Wang, 2002; Gao, 2018). Fu (2006) and Miao (2008) pointed out after comparing the effects of three input modes (aural, visual, and audio-visual) that to enhance the learning outcome, a combination of aural and visual inputs should be adopted. This conclusion was further supported by Yuan (2013) and Zhang (2016). It should be noted that be it aural input or audio-visual input, aural input always has a vital role to play. This is understandable when taking the nature of listening vocabulary into consideration. Different from reading vocabulary, comprehending vocabulary during listening more often relies on the sound instead of the spelling (Nation, 1990; Wang, 2017) so that aural input which is more related to the sound facet might exert greater influences. A vote for aural input also indicates that for acquiring listening vocabulary, the sound aspect should never be overlooked.

The second recommended measure concerns phonological awareness. It is a processing ability that helps one to deal with the sound in a language and concerns listeners' sensitivity to the sound structure (Antony, 2005). Although various relevant skills are included in this construct according to which type of task is performed and which sound unit is focused (Antony, 2005), nearly all studies on enlarging listening vocabulary size via raising phonological awareness did not make such distinction. The reason might lie in the attempt to provide a comprehensive view of the sound structure of a language to participants in those studies so as to enhance the learning outcomes. Wu (2006) for example provided the experimental group with a two-month phonological awareness training which included phoneme awareness training, sound-letter correspondences, segmenting words into syllables and individual sounds, blending individual sounds into syllables and words, onsets, rimes, etc. Following a pre-test and post-test design, it was found that after training, there was a remarkable improvement in terms of listening vocabulary size among the experimental group and a significant difference was found between the experimental group and the control group. Wu (2006) explained that this result came from an increased sensitivity of sound and a focus on how words were pronounced. These findings were in line with Gui and Li (1992), Xue (2012) and Wang (2012). To the essence, phonological awareness training to enlarge listening vocabulary size also stresses the importance of the sound aspect of vocabulary.

Another measure that usually goes hand in hand with raising phonological awareness is explicit pronunciation instruction. Explicit pronunciation instruction is aimed at explicitly introducing students the sound system of a target language and training students to achieve certain goal in pronunciation, be it intelligibility, comprehensibility, accuracy or authenticity. Researchers championing this measure often claim that with an improvement in pronunciation, students might find it easier to recognise, differentiate and deal with words in aural input and eventually witness an increase of their listening vocabulary. Researchers such as Dong (2003), Wu (2006), Ren (2010) and Song and Li (2018) all advised that it was necessary to provide explicit pronunciation training to help students with their listening vocabulary acquisition. These suggestions are formed based on the close relationship observed between speech production and perception (Leather, 1999; Reed & Michaud, 2011; Cheung et al., 2016; Silva Neto, 2016) and the fact that listening is a complex process that involves both linguistic and non-linguistic knowledge (Rost, 2016). However, former studies simply recommended explicit pronunciation instruction as a possible effective measure instead of providing concrete evidence to support the claim. As a result, whether explicit pronunciation instruction truly exerts a positive effect on enlarging listening vocabulary size still remains to be explored.

It should be noted that all three measures mentioned above, though addressing different concerns, highlight the importance of the sound of vocabulary in enlarging listening vocabulary size. As an instruction exactly centering on the sound facet, it would be interesting to investigate the effect of explicit pronunciation instruction on enlarging listening vocabulary size.

B. *Explicit Pronunciation Instruction and Listening Vocabulary Size*

Though mainly focusing on improving pronunciation proficiency, it has been demonstrated that explicit pronunciation instruction boosts the development of other language skills, including listening (Lord, 2005; Reed & Michaud, 2011; Kissling, 2015). The reason lies in a close relationship between perception and production (Flege, 1995; Leather, 1999; Broselow & Park, 1995; Pulvermüller et al., 2006; Wilson et al., 2011; Schomers & Pulvermüller, 2016; Cheung et al., 2016). With learners gaining more information about the sound system of the target language, it would be easier for them to segment speech and recognise words (Kissling, 2018). With an advancement in pronunciation (production), learners could achieve higher accuracy in listening (perception) (Ur, 1984; Ghorbani, 2011; Thomson, 2012; Kissling, 2018).

Progress in listening proficiency has been reported in studies in which either segmental or suprasegmental instruction were conducted although differences occurred in terms of which performed better. Some voted for the instruction on

segmental features. For example, Yenkimaleki and Heuven (2016) compared the effect of explicit pronunciation instruction on segmentals and suprasegmentals by recruiting 12 students learning Farsi-English interpreting as participants. They were divided into three groups (control, experimental-segment, and experimental-suprasegment). Both experimental groups received pronunciation instruction in theory and in practice for 12 hours in total. Participants' scores in pre-test and post-test were compared and the results showed those receiving explicit instruction on segmental features made the biggest and most significant progress compared with other two groups. The results echoed findings in Ghorbani (2011) and Vandergrift and Baker (2015). It was suggested that segmental pronunciation instruction could facilitate word recognition (Kissling, 2018), increase the comprehensibility of the target language (Khaghaninejad & Maleki, 2015; Kissling, 2018), and receive better feedback from students since it was easier for them to truly feel the progress, thus boosting their confidence (Kissling, 2018). Meanwhile, for those who supported suprasegmental pronunciation instruction, it was contended that suprasegmental features were extremely essential for listening comprehension (Han, 1996) since they decided the information structure and spoken English was full of unclear articulation (Stæhr, 2009) so that learners sometimes found it hard to figure out already known words during listening (Goh, 2000), thus impeding listening comprehension. However, no matter what is taught and practiced in the process of pronunciation instruction, an improvement in students' listening proficiency through explicit pronunciation instruction has been repeatedly confirmed.

It should be noted that previous studies have offered some evidence on the positive effect of explicit pronunciation instruction on listening proficiency rather than on enlarging listening vocabulary size. It is therefore still not clear whether explicit pronunciation instruction will exert any positive impact on enlarging listening vocabulary size. Meanwhile, explicit pronunciation instruction has been recommended in many studies as an effective way to enlarge listening vocabulary size (e.g., Dong, 2003; Wu, 2006; Ren, 2010; Song & Li, 2018) but regrettably, has been mentioned in for the most time the pedagogical implication part with no evidence to support its effectiveness. The current study thus is aimed at filling this research gap and providing corresponding pedagogical implications.

To be more specific, the research question is:

- (1) Does explicit pronunciation instruction help to enlarge listening vocabulary size?
- (2) What pedagogical implications can be derived?

III. RESEARCH METHODS

A. Participants

This study was conducted in a vocational college in Xi'an, China. During the Spring term in 2022, 111 students were invited to participate and all agreed to. They were male, 18-20 years old and spoke Chinese as their first language. Before they enrolled in this study, they had taken English courses for at least 6 years since middle school. These students were previously placed into three different classes based on which department they came from so students' proficiency varied within each class. However, this was true for any intact class study so that no further rearrangement was made. All except the time they received the pronunciation instruction each week were the same. They received the same explicit pronunciation instruction throughout the term and were taught by the same teacher, who was an L2 speaker of English with expertise in English phonetics and phonology and experience in explicit pronunciation instruction.

B. Instruction

Each class met with the instructor two times per week for two sessions. One session was designed mainly for enhancing their reading and writing abilities (R&W) and another was mainly for improving their listening and speaking proficiency (L&S). Each session lasted 100 minutes. They were required to attend each session for 12 consecutive weeks. During the first L&S session, the concept of listening vocabulary, its importance and the overall arrangement for the whole term were introduced. Pronunciation instruction was mainly conducted at each L&S session from the second week to the eleventh week (ten weeks in total) for 30 minutes each time.

Pronunciation instruction on segments (vowels and consonants) was carried out from Session 2 to Session 8. British received pronunciation was chosen as the target. All segments were included for several reasons. First, pronunciation instruction on segments would be beneficial in terms of word recognition (Kissling, 2018). Since this study focused on vocabulary acquisition, such a teaching content was assumed to be helpful to the maximum. Second, an informal investigation before the study showed most participants (105 out of 111) in this study had little knowledge in English segments and none received any systematic pronunciation instruction on segments beforehand. Including all segments would provide students with a more comprehensive view of English sound system, thus better equipping them with the knowledge and skills to cope with the sound facet of each word. Third, such a choice would leave no sound-letter correspondences untouched. This would not only accommodate the problem of failing to match the pronunciation with the alphabetical symbols (Goh, 2000), but also cultivated phonological awareness both in theory and in practice. Meanwhile, segments that were deemed difficult for Chinese EFL learners based on researchers' experiences and students' performances were given special attention. The three last sessions concentrated on reduction, elision, intrusion, and assimilation (called pronunciation tips in actual teaching practices), which were among the main ways for variation of the standard pronunciation of individual word in connected speech (Rost, 2016). They were chosen because

introducing them to students and helping students to practice these features might better enable them to recognise words in connected speech, thus enlarging the listening vocabulary size.

Since the focus of this study was on vocabulary acquisition, suprasegmental features (stress, rhythm, intonation) which were known as features across segments and were more often related with structures larger than words were not included. It should also be noted that more emphases were placed on segments because although there might be variation in connected speech for certain segment within a word, the variation takes place based on the prototype (Wang, 2012).

At each session, the instructor first presented students with target segments or pronunciation tips on the slide. For each segment, ample examples were provided for illustration as well as practices. Letters that could be produced with certain segment were also listed with examples, which were all individual words. In particular, for segments hard to distinguish, minimal pairs practices were provided as instances so that students could perceive the difference. The instructor then read aloud the segment and examples slowly for students to imitate, emphasizing key points to produce it correctly. Students read after the instructor in chorus for several times. This would take around 15 minutes. The remaining 15 minutes were allotted to students for production-based practice. During this period, students were provided with a website (<https://res1.zcmu.edu.cn/vpn/2/http/en-yinbiao.xiao84.com/biao/>) where they could listen to certain segment and corresponding examples and watch organ movements. Students could listen, watch and imitate by themselves. Then, they were encouraged to present in front of the class by reading aloud certain segment and its examples. The instructor asked other students to listen carefully to judge if the student produced correctly before giving feedback herself. This was designed to help students become more sensitive toward the difference between target-like pronunciation and non-target-like one. When giving teacher's feedback, target-like pronunciation was acknowledged with remarks such as "Excellent!" or "Good!" while non-target-like pronunciation was followed by the instructor repeating certain segment and its examples. If a student still could not produce it right, the instructor would encourage him to do better next time. After class, students were asked to finish reading aloud assignments which contained segments and corresponding examples via a WeChat mini programme called Mei Ri Jiao Zuo Ye. Researchers then checked these recordings and provided comments. In this way, individual problems were accommodated. Another assignment concerned memorising sound-letter correspondences so as to enhance the link between sound and spelling. This assignment would be checked through a writing-from-memory task.

Since perception and production are highly related (Leather, 1999; Reed & Michaud, 2011; Cheung et al., 2016; Neto, 2016) and perception-based practices provide more aural inputs for students, which have been proved to be effective to listening vocabulary acquisition (Wang, 2002; Fu, 2006; Miao, 2008; Yuan, 2013; Zhang, 2016; Gao, 2018), perception-based practices were also included in current study. They were carried out after class in the form of passage dictation, word dictation and various listening comprehension tasks in textbooks. Dictation has been recommended as one of the most effective ways to improve listening proficiency (Field, 2003) and enlarge listening vocabulary size (Chen, 1999) since it requires students to parse the sound stream and write down words they perceive (Siegel & Siegel, 2015). After each session, the instructor would assign one piece of recording lasting around one minute. Students were required to listen to the recording and write down every word they heard and check the answer themselves. Manuscripts were provided but were only available via the mini programme after students turned in their versions. This followed the suggestion in studies that went to better enlarge the listening vocabulary size, students should listen first before reading the manuscript (Nation, 1990; Liu, 1995; Wang, 2012). They were also told that every word in materials given in assignments was a possible candidate for word dictations. Word dictation was carried out in English so that students might be led to paying extra attention to the pronunciation.

For pronunciation tips, the basic procedure remained pretty much the same: illustration with ample examples, demonstration by the teacher at a slow speed, imitation in chorus, and production-based practice. Each was introduced to students with as less jargon as possible and with sufficient examples. The only difference lied in examples given in class and materials used in after-class production-based practice. When teaching segments, examples and materials were segments and individual words. When teaching pronunciation tips, songs and movie clips were used because sound variation took place in connected speech and because these might arouse more interests among students. Students were required to listen, spot the targeted sound change in songs or movie clips before they tried to sing the songs or dub for the movie clips by themselves or in front of the class.

Although pronunciation instruction was mainly administered in L&S session, it was not left aside at R&W sessions. Corrective feedback for pronunciation errors was also provided to students whenever possible and new expressions from reading texts were also dictated at each R&W session.

Altogether, this study allotted at least 5 hours to explicit pronunciation instruction on segments and four pronunciation tips.

C. Instruments

Examples (words and corresponding letters) of each segment used in class for illustration and for practices were all selected from the book *Get Rid of Your Accent: The English Pronunciation and Speech Training Manual* (James & Smith, 2007), a practical pronunciation training book which provided various types of examples (words, corresponding letters, sentences, verses, tongue twisters, etc.) for all English segments. Recordings were provided along with so that students could listen and imitate.

Materials for minimal pairs training were selected from the website (<https://www.englishclub.com/pronunciation/minimal-pairs.htm>) where users could read the instruction for standard pronunciation and listen to the recording for imitation.

Words selected for dictation mainly came from listening and reading materials in textbooks and passages for dictation. To keep students motivated, materials for passage dictation tasks were all from the news report section in CET-4 tests and the model tests. CET-4 was a nationwide English proficiency test for college students in China. As in many colleges in China, this certificate was a requirement for obtaining a bachelor degree in this school.

As for songs and movies, researchers chose those that were popular among students, contained no strong accent and were appropriate for students' general English proficiency. Based on these three principles and due to the time limit, one song (*I'm Yours* by Justin Bieber) and one clip from *Harry Potter and the Deathly Hallows* were selected. A mobile app named Fun Dubbing was adopted so as to make the dubbing easier.

The WeChat Mini Program *Mei Ri Jiao Zuo Ye* was used to collect and comment students' recordings as well as for students to turn in the passage dictation assignment and check by themselves. This Mini Program could allow students to upload files in various forms and teachers to comment students' homework.

Studies focusing on learners' listening vocabulary size often compare learners' listening vocabulary size and reading vocabulary size by measuring both sizes via various methods. However, it was not until 2015 that a test specified in measuring listening vocabulary size was developed by McLean et al. (2015). This test is in a multiple-choice format, with 120 test items chosen from the 1000 to 5000 word frequency levels and 30 items from the Academic Word List (Coxhead, 2000). In this study, this test was translated into Chinese by researchers based on an English version downloaded from https://www.lex tutor.ca/tests/levels/recognition/LVLT/test_eng_v5.pdf. All translators were fluent English speakers and native Chinese speakers. Directions were given in Chinese so that they would not consist a hindrance for comprehension. It was employed both as a pre-test and a post-test to measure whether students made progress in enlarging listening vocabulary size. An example of item was shown below for illustration.

1. (What students heard: time: They have a lot of <time>.)
 - a. 钱
 - b. 食物
 - c. 时间
 - d. 朋友

D. Data Collection & Analysis

The pre-test was administered at the first session and the post-test, the last session. The same test was used to ensure comparability and since the post-test was carried out 11 weeks after the pre-test, it was assumed that it would not be influenced by the pre-test. Students first read the instruction on the test paper. Once they confirmed they were ready, they listened to the recording prepared beforehand and finished the tests. They then hand in the test paper and results were typed into researchers' computers for further analysis. Each test lasted around 30 minutes. Scores of listening vocabulary level tests were analysed via paired sample T-test in SPSS 26 to find out whether there was any progress and if there was, whether it was significant or not.

IV. FINDINGS AND DISCUSSION

A. Students' Progress in Enlarging Listening Vocabulary Size

Figure 1 below showed the changes of mean and standard deviation of two tests. From the bar chart it could be seen that there was a remarkable increase from 62.37 to 82.88 in terms of the mean score, suggesting that after ten weeks of explicit pronunciation instruction, students on average indeed made progress in terms of enlarging listening vocabulary size. It indicated that explicit pronunciation instruction did take effect to some extent. It was interesting to point out that there was a decrease in the standard deviation, indicating smaller individual differences among participants. One interpretation for this could be that explicit pronunciation instruction might exert greater influence on students with smaller listening vocabulary size. In this way, it somehow echoed studies such as Siegel and Siegel (2015) and Yeldham (2016) that contended that training in bottom-up processing seemed to be more effective for low proficiency level students. Since explicit instruction on pronunciation belongs to bottom-up processing for its focuses on individual segments or larger phonological structures such as syllables, it was reasonable to witness its bigger influence on lower-level students, thus possibly leading to smaller individual differences among 115 participants. However, whether it is truly the case deserves more investigations.

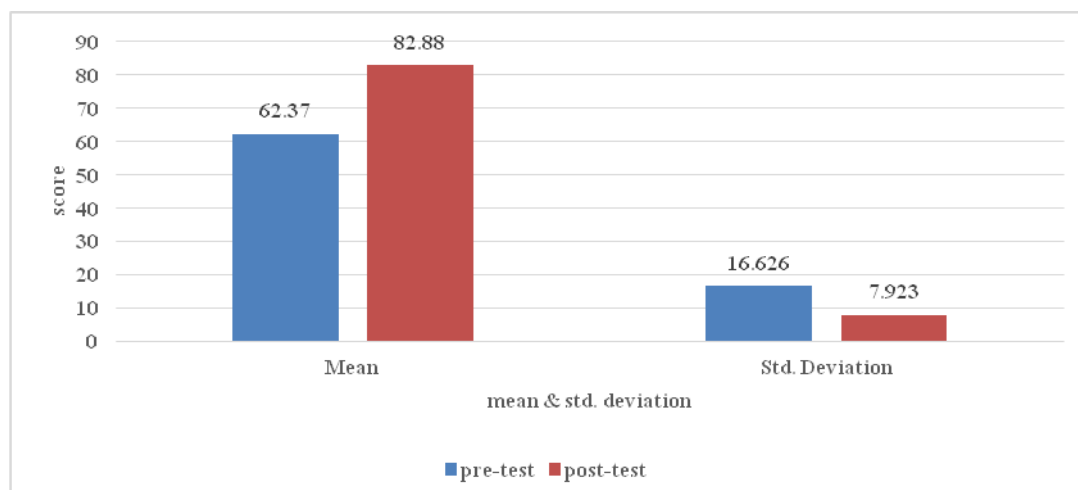


Figure 1 Descriptive Statistics of the Pre-test and Post-test

To further compare whether the difference found was significant or not, a paired sample t-test was carried out. Although standard normalization was not realized, the number of subjects was large enough (115) to rely on the result from paired sample t-test. Results presented in Table 2 below illustrated that there was a .338 correlation between the pre-test and post-test and the corresponding p value was below 0.05. This indicated that scores of the pre-test and the post-test in current study were significantly correlated and therefore, it was justifiable to use a paired sample t-test.

TABLE 1
PAIRED SAMPLES CORRELATIONS

Pair 1	pretest & posttest	115	.338	.000

The According to Table 4-3 below, there was a significant difference before and after the instruction ($t = -8.204$, $df = 114$, $p = - .000 < .05$). This indicated that with intervening measures taken in the form of pronunciation instruction for ten weeks, there was a significant improvement in participants' listening vocabulary size. It could then be concluded that explicit pronunciation instruction on segments and some pronunciation tips in connected speech (reduction, elision, intrusion, and assimilation) could significantly enlarge students' listening vocabulary size.

TABLE 2
RESULT OF THE PAIRED SAMPLES TEST
Paired Differences

Pair 1	pre- post	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
		-20.504	15.818	1.475	-23.426	-17.582	-13.901	114	.000

This finding can be accounted for in several ways.

First, explicit pronunciation instruction provides students with knowledge in English sound system, and this might help them to parse speech stream and recognize words (Kissling, 2018) during listening. What was cultivated along with the knowledge was the phonological awareness, which in turn contributed to the increase of listening vocabulary size as discussed in previous studies like Dong (2003), Wu (2006), Ren (2010) and Song and Li (2018). In addition, this instruction emphasized the pronunciation of individual segments, individual words and changes of segments in connected speech so that it might direct students to pay extra attention to the sound facet of words. As a result, some words which they could only figure out the meaning in reading became familiar to them in listening. In other words, reading vocabulary was transferred into listening vocabulary. This possible scenario has been described in previous studies, suggesting that in general, learners' listening vocabulary size is smaller than their reading vocabulary size (Liu, 1995; Qian, 2003; Yang, 2019) but can be transferred into listening vocabulary if both teachers and students try to at least spare more efforts on acquiring the accurate pronunciation of individual words (Fu, 2012; Li, 2017).

Second, apart from the knowledge, explicit pronunciation instruction also offered training to students to reach the target-like pronunciation. More and more evidences are indicating that there is a close relationship between speech perception and speech production (Leather, 1999; Reed & Michaud, 2011; Cheung et al., 2016; Silva Neto, 2016) so that an improvement in pronunciation might be beneficial to the improvement of listening proficiency (Reed & Michaud, 2011; Neto, 2016; Kissling, 2018). By providing students with explicit pronunciation instruction, students became more familiar with how individual segments should be pronounced and how some changes of segments in connected speech should be pronounced. During the process of correcting themselves in pronouncing individual segments, words as well as changes of segments in connected speech, their ability of perception to recognize segments and words might also improve. Therefore, it became more likely for them to recognize words in the aural input.

Third, explicit pronunciation instruction provides students with chances to improve their bottom-up processing skills. Listening combines both top-down and bottom-up processing (Buck, 1995; Rost, 2016). While the former needs prior knowledge about the topic and context before the listening takes place to take effect, the latter requires the knowledge of linguistic aspects of the target language (Field, 2004). During the bottom-up processing, listeners first transfer the sound signal into phonemes, then combine them into syllables, syllables into words and words into sentences before processing them at the syntactic level and semantic level (Field, 2003). Explicit pronunciation instruction helps since it improves students' ability to identify individual phonemes and how to segment them into syllables and words, thus increasing the possibility for them to recognize words based on the aural input.

Fourth, explicit pronunciation instruction undertaken in current study emphasizes on both production and perception practices. Therefore, students were not only provided with opportunities to practice their pronunciation, but also chances to get access to more aural inputs, which have been claimed to contribute to enlarging listening vocabulary size (Wang, 2002; Fu, 2006; Miao, 2008; Yuan, 2013; Zhang, 2016; Gao, 2018). The instructor also asked students to try their best and listen as many times as they want before referring to any transcript either in finishing listening tasks in the textbook or undertaking passage dictation tasks, thus ensuring they had as many aural inputs as possible and reduce their reliance on visual inputs. Meanwhile, word dictation was also conducted via English, i.e., the teacher reads aloud words in English instead of their Chinese meaning so that students would put more stresses on the sound aspect of words and depend less on their mother tongue.

Lastly, introducing sound-letter correspondences and requiring students to memorise them might help them to build a stronger connection among sound, spelling and meaning of individual words, thus providing students with more possibilities to recall the meaning of words. This might also contribute to the increase of listening vocabulary.

B. Pedagogical Implications

Based on findings and discussion and teaching practices, authors tentatively provide the following three pedagogical implications for reference.

First, more emphases should be placed on the sound facet of vocabulary, be it is a listening course or reading course. A good way is to integrate explicit pronunciation instruction into the course design. Although some teachers might lament that time is rather limited so that they have to sacrifice explicit pronunciation instruction in class, in current study altogether only five hours were allotted to explicit pronunciation instruction in class and the result was quite remarkable for enlarging listening vocabulary size. Therefore, it is recommended to allot certain amount of time to explicit pronunciation instruction in class for the sake of listening vocabulary acquisition and of enhancing listening proficiency to a larger extent.

Second, in a listening class, it might be more beneficial to refrain from providing any transcript to students or the meaning of a word before they listen, thus reducing their reliance on the manuscript. Even when the meaning of certain word needs to be given, it would be better to inform the students in the target language orally. Besides, teachers should also give students more time for both production-based and perception-based practices and offer feedback in time both in class and after class. It is through practices and feedback that students could make progress with more ease and more speed.

Third, while some teachers do not have an adequate amount of knowledge and skills to carry out pronunciation instruction, others have some pronunciation problems themselves. It is therefore suggested that teachers should train themselves to have a better command of the English sound system and improve their own pronunciation, or at least, it is advisable to require students to attend online courses in English pronunciation to complement the shortage of faculty.

V. CONCLUSION

Although listening is not just about recognizing or memorising words, the ability to recognize words from the sound stream is the prerequisite for listening comprehension works well (Samuels, 1987). Listening vocabulary should never be underestimated in both research and instruction. This study investigated the effect of explicit pronunciation instruction on English segments, reduction, elision, intrusion and assimilation on enlarging listening vocabulary size. It was found that after ten weeks' instruction, students made significant advances in their listening vocabulary size and the effect might be greater for students who reached relatively lower scores in listening vocabulary size pre-test. This suggested that in future teaching practices, to help students with their listening vocabulary size, explicit pronunciation instruction was an effective way and it might be more effective for low proficiency learners. However, whether it truly could yield better results for low proficiency learners requires more studies. Finally, based on findings, discussion and researchers' teaching practices, three pedagogical implications were provided from the perspective of course design, teaching practices, and teacher development. It should also be noted that this study merits not only in proving the effectiveness of explicit pronunciation instruction on enlarging listening vocabulary size, but also in providing how the instruction was conducted in details to provide reference for future teaching and research.

It should be pointed out that to the acquisition of listening vocabulary is influenced by many factors so that this study has just presented one way to enlarge listening vocabulary size. It would be interesting therefore, to examine which method is more effective or if there is any other innovative way to enlarge listening vocabulary size. Another possible research direction might be to investigate students' perception on the effect of explicit pronunciation instruction in

terms of enlarging listening vocabulary size. Some informal communications with participants showed that opinions on for example songs and movie dubbing vary, with some deemed them effective and useful and others felt the opposite although all students agreed that they were interesting and stimulating. Further investigation in this respect might generate more fascinating findings. Finally, although it is recommended to integrate explicit pronunciation instruction into the course design, what would be the best way for the integration still requires more research.

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