



Shadowing: For Better Understanding Accented Englishes

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English has been used as a Lingua Franca (ELF) in communication among English speakers, both NSs and NNSs. However, people occasionally face difficulty when communicating among NNSs and NSs because of the speakers' accents that originate from their first language. For smoother communication, speakers should speak English with comprehensible pronunciation, while listeners should understand accented English. Perceptual adaptation has been studied mainly in L1 contexts, in terms of NSs' adaptation to unfamiliar English accents and English with foreign accents. Still, little research exists on the topic of NNSs and perceptual adaptation. The question is whether NNSs should only be exposed to accented English as NSs are, or whether another useful type of instruction should be developed. Given these, this study took a first step to explore a way to help English learners adapt to unfamiliar accented English in classroom. This study examined which is more effective for Japanese students' perceptual adaptation—listening to an unfamiliar foreign accent (Chinese), or shadowing. The shadowing group engaged in a shadowing conversation between two Chinese speakers speaking English, while the listening group only listened. Four lessons of 15 minutes each were given. The results showed that the shadowing group outperformed the listening group.

Keywords: shadowing, perceptual adaptation, listening, accented English, ELF

Introduction

In the present day, English is used as a lingua franca, and we commonly see interactions in English among non-native speakers (NNSs) who have different English accents with different L1 backgrounds. In international interactions, the number of non-native speakers (NNSs) has surpassed that of NSs (Kankaanranta & Louhiala-Salminen, 2010). Research has found an increasing demand for professional English in various business circumstances in the engineering field in Asia such as Hong Kong (Evans, 2010), Taiwan (Spence & Liu, 2013), and Thailand (Kaewpet, 2009). In consideration of the situation surrounding the workers who use English in international business, research has shown concerns. In the case of engineers in Taiwan, the semi-structured interview survey reveals that communication difficulties in speaking and listening occur because of foreign accented English; especially for teleconference and telephone communication, any non-standard accents basically pose a problems, such as India, Germany, France, Japan, Malaysia, and southern US (Spence & Liu, 2013). In Europe, Rogerson-Revell (2007) investigated the nature and role of the English used in international business meetings. A questionnaire was administered to 34 NNSs and 9 NSs. The survey showed that the majority of the NNSs use English very often or quite regularly and the majority of NSs and 67% of NNSs attend meetings in English very often or quite regularly. When they were asked about the difficulty in communicating with NSs or NNSs, 43% found NNSs and NSs to be equally easy, 33% preferring NSs and 24% finding NNSs easier. This means that for NNSs communicating with other NNSs and NSs are not always smooth or easy. In fact,

more specifically, when asked to clarify if any accents are easy or difficult, quite a range of responses were found regarding just the difficult accents. The difficult accents included both NSs' and NNSs' such as London, Australian, Scottish, Irish, Tennessee and New Orleans American for NSs; Catalan, French, Japanese, German, Southern European, and Far Eastern for NSs. Put simply, for NNSs, accented English is a concern that may cause a problem in communication.

Despite these concerns, there are a number of events that require listening and speaking skills in international communication. For example, they need to deal with telephoning, receiving spoken instruction or advice, and listening on international seminars and conferences (Kaewpet, 2009; Evans, 2010). When discussing the needs of specific skills for international communication, writing skills often garner attention (e.g., Evans, 2010; Spence, & Liu, 2013), but the workers do need to face various situations that require them to listen to accented English.

While English usage and issues in the business workplace have been discussed, international students, who are candidates for international workers, also face a problematic issue of English variations. First of all, when they study overseas, they need to understand non-native International Teaching Assistants (ITAs), who speak different English from the type they are familiar with. Especially in North America, ITAs often teach basic courses (Fitch & Morgan, 2003). In addition, in daily lives, they need to communicate with other international students who have a different L1 background. For example, in the U.S., the number of international students has passed 900,000 and approximately one-third are students from China, followed by India at 17.3% (Open Doors, 2017). The UK has more students, and the number of enrollment in higher education passed 400,000 from 2016 to 2017; the majority is Chinese, and students from EU countries (HESA, 2018).

In terms of teaching learners in an EFL/ ESL course, or in an oversea preparation course, specific training to deal with these situations is necessary, but would exposing learners only to unfamiliar English variations solve the problem? This study attempts to answer this question and propose a way for teachers to help learners understand accented English effectively in classroom.

Literature Review

Accented English in Communication

For listeners, it is not easy to understand English when it is influenced by an unfamiliar foreign language; this is known as accented speech. Accented speech generally requires more listening effort (i.e., additional cognitive resources required to listen) than less accented speech (Van Engen & Peelle, 2014). Native speakers (NSs) of English may understand accented English, but accented utterances require a longer time for processing, even for native speakers (Munro & Derwing, 1995). Indeed, research shows that both native and non-native listeners' comprehension is lower when listening to NNSs' English (Major, Fitzmaurice, Bunta, & Balasubramanian, 2002). Therefore, researchers study pronunciation, while teachers try to improve learners' pronunciation.

However, in terms of communication, is it enough to only help speakers acquire intelligible English? Intelligibility is "a two-way process involving both listener and speaker" (Zielinski, 2008, p. 70). If listeners could become better at listening to accented English and speakers could try to speak more intelligible English, it would surely lead to better mutual understanding.

A question arises as to how non-native listeners listen to accented English. In past research on pronunciation, NNSs were considered to improve their L2 pronunciation only through being exposed to the target language, but now it is commonly understood that they will struggle to acquire intelligible speech without formal instruction (Grant, 2014). Similarly, to help NNSs listen to accented English, research emphasizes the importance of effective training. Adapting to accented English involves phonological perception, and learners need instruction to acquire phonological perception (Qian, Chukharev-Hudilainen, & Levis, 2018). However, classroom instruction of listening is highly associated

with testing rather than teaching of listening, so listening needs to be taught (Graham, 2017). Hence, effective perceptual training for non-native listeners will help them in their accented English listening.

NSs of English have been shown to be able to adapt their listening to unfamiliar accents after brief exposure, but L2 and L1 listeners listen differently (Cutler, 2012). The listening process of L1 listeners is much smoother than that of L2 listeners; L1 listeners' phoneme perception is automatized, while that of L2 listeners is not; L1 listeners can spend more cognitive resources for understanding speech than L2 listeners. In consideration of the needs of communication among NNSs and the needs for understanding each other's accented English, it is worth examining this topic for the sake of more effective English communication.

Perceptual Adaptation

Perceptual adaptation has been studied over decades in research on cognition and acoustics. If a person with British English and a person with American English begin conversing, they would have few problems understanding each other. When a person with an Australian accent speaks with another person with a Japanese accent, the Australian person will still understand the Japanese persons' English. NSs of English naturally adapt their perception to unfamiliar accents; this is called perceptual adaptation. Perceptual adaptation is defined as listeners' adjustment of their preexisting phonemic categories to accommodate speakers' pronunciation (Kraljic & Samuel, 2007).

NSs' perceptual adaptation to unfamiliar accents has been studied, and research has found that their perceptual system relies on acoustic cues and lexical knowledge used to adjust phonemic representations (e.g., Bradlow & Bent, 2008; Kraljic & Samuel, 2007). Clarke (2002) investigated NSs' perceptual learning of Spanish-accented English by tracking perceptual processing speeds and measuring reaction times. Clarke found the participants' reaction time to Spanish-accented English became faster after listening to it multiple times, indicating that rapid perceptual adaptation occurred. Clarke and Garrett (2004) further examined NSs' adaptation to Spanish- and Chinese-accented English, measuring reaction time. The results again showed that listeners adapted to accented speech for both types of English. Sidaras, Alexander, and Nygaard (2009) examined NSs' perceptual learning of accented speech using transcription tasks. Through two experiments, one on sentences and another on words, they examined perceptual adaptation to Spanish-accented English and found that after only brief exposure, perceptual adaptation occurred for the listeners; they became better able to listen to another speaker's English in the same accent group, one that had not been practiced in the training, at both sentence and word levels (i.e., generalization of perceptual adaptation). These studies found that NSs of English quickly adjust their perception to NNSs' accented speech after limited exposure and generalize the accents to multiple speakers of the same variety (i.e., speaker-independent).

There has also been research conducted on NNSs' perceptual adaptation in languages other than English (e.g., Hanulikova & Ekstrom, 2017; Reinisch, Weber, & Mitterer, 2013), though when narrowing the focus to perceptual adaptation among NNSs of English, the research is limited. Mitterer and McQueen (2009) examined whether NNSs (Dutch) can adapt to unfamiliar Scottish and Australian English accents, especially by using subtitles. By watching a 25-minute video in either of the accented English types with subtitles, participants' perceptual adaptation to both new and previously heard words was enhanced. Drozdova, van Hout, and Scharenborg (2016) examined whether NNSs (Dutch) can retune an ambiguous sound in a non-native language (British English sound contrast) to their phonetic categories. The participants were exposed to a story that included ambiguous /ɪ/ or /I/ sounds and engaged in the phonetic categorization task for approximately 20 minutes. The results showed that NNSs can retune their non-native phonetic boundaries but in a narrow sense.

From these studies on perceptual adaptation and the discussion of English use in business communication, two directions for further research are proposed. First, given that the perceptual adaptation of NNSs of English to an unfamiliar NS's English accent was observed in past studies, it will be interesting to examine the case of perceptual adaptation among NNSs of English and other NNSs of

English. In this regard, though past studies were conducted in the research field of cognition and acoustics, the obtained findings have not been fully made use of in classroom; so conducting research on perceptual adaptation to contribute to teaching will be welcomed. Second, perceptual adaptation is shown among proficient NNSs of English (Drozdova et al., 2016; Kang, Thomson, & Moran, 2018; Mitterer & McQueen, 2009), but the English users (i.e., NNSs) are not necessarily highly proficient, and negative concerns about their English proficiency were reported (Rogerson-Revell, 2007), so it will be more realistic and useful to examine the topic of non-proficient NNSs.

Listening, Perception, and Shadowing

It is generally known that NSs and NNSs listen differently; although whether NNSs use more top-down or bottom-up listening processes has been debated (e.g., Yeldham, 2018), some research shows that NSs are more prone to top-down processing than NNSs (e.g., Ito, Pickering, & Corley, 2018). In other words, NNSs are likely to rely on bottom-up processing. The initial process of bottom-up processing is phonological perception, and if listeners fail to recognize words in speech, it prevents the information being successfully processed in the higher-level process of comprehension. However, “many types of L2 phonological perception are often difficult to acquire without instruction” (Qian, Cukharev-Hudilainen, & Levis, 2018, p. 69), so it is valuable to study NNSs’ perceptual adaptation; however, to simply examine whether it occurs is insufficient, so research needs to be directed at enhancing NNSs’ perceptual adaptation.

With such considerations in mind, *shadowing*, an exercise to improve learners’ perception skills in bottom-up listening, has potential as a new teaching method. Shadowing is the act of simultaneously repeating what one hears as accurately as possible without looking at a written script, and much attention has been paid to its positive effects on listening in an EFL context, mainly in Asia. An example is given below, comparing it with repetition.

Shadowing (no written script provided)

Model: Learning English is so much fun and I especially like listening and speaking.

Learner: Learning English is so much fun and I especially like listening and speaking.

Repetition (no written script provided)

Model: Learning English is so much fun and I...

Learner: Learning English is so much fun and I...

Shadowing is fundamentally different from simple repetition; in shadowing, learners are required to repeat each word simultaneously as they hear it, while in repetition, learners repeat words in chunks. In other words, there is no pause while shadowing; thus, it seems that L2 learners direct their attention exclusively to the phonological features of what they listen to when shadowing, while in repetition, their attention is split between the phonological features and the meanings because of the pause (Kadota, 2007; Hamada, 2017).

Shadowing has been shown to help L2 learners’ speech perception skills, especially low-listening proficiency learners. The learners’ focus is controlled to attend to phonological information rather than meaning while shadowing. Even when compared with other bottom-up activities such as dictation, shadowing is considered to be the only activity that exclusively directs learners’ attention to speech perception (Hamada, 2017; Kadota, 2007).

Purpose of the Study

Taking all the discussions above together, this study focuses on communication among NNSs, precisely

listening to accented English, and shifts our attention from understanding perceptual adaptation to teaching and helping English learners. To this end, this study attempts to explore perceptual adaptation by focusing on that of NNSs and other NNSs' accented English, and on non-proficient English learners. Instead of examining the effect in a psychological laboratory setting, this study attempts to examine the effect observed in a more naturalistic setting, to focus on more applicability and practicality of the findings. Given these elements, the study will answer the question of whether NNSs can also adapt their perception by simply listening in a similar way to NSs of English, or whether exclusively focusing on training perception skills is more effective. Therefore, the research question in this study is the following. Which is more effective for Japanese students' perceptual adaptation: listening to an unfamiliar foreign accent (Chinese), or shadowing?

Methods

Participants

Sixty-six Japanese university freshmen aged 18 to 20 participated. The experimental group consisted of 39 health science students (6 males and 33 females), while the control group consisted of 27 engineering students (23 males and 4 females). All of them were placed in basic classes of three proficiency levels (basic, intermediate, and advanced), due to a placement test given at the beginning of the semester (equivalent to TOEICⁱ under 400); their English proficiency levels were upper basic to intermediate, at most. None reported that they were familiar with the target accent, which was Chinese-accented English. One female participant in the experimental group was absent for the third class, and one male participant in the control group showed extremely low scores at the pre- and post-tests (i.e., outlier); therefore, data of 64 participants were used.

Materials

In the recording used in the experiments, two Chinese male speakers worked on a picture-spot-the-difference task in English, in which each speaker refers to a picture that has several differences from the other, and they try to find the differences only by talking. This type of authentic conversation was chosen over a collection of simple random sentences because this kind of exposure is beneficial for daily life. The audio data was taken from OSCAAR (Van Engen, Baese-Berk, Baker, Choi, Kim, & Bradlow, 2010), a database containing conversations between people with different accents. Two different conversations were chosen, and the first 550 words, approximately, of each of the two files were used to ensure exposure to 1,100 words over the course of the four-day training (see details in the Procedure section). Among multiple possible choices, the materials were selected for the following two reasons. First, because the ultimate goal for the students was to understand accented English in a real-life situation, natural conversations were chosen, instead of controlled tasks such as sentence read-aloud tasks. The participants were exposed to a total of three different Chinese speakers (one appeared in both files), because exposing them to multiple speakers would help generalize the accent (Baese-Berk, Bradlow, & Wright, 2013). Second, the vocabularies and speech rate of the conversations were considered to be at an easy level, judging from the high readability and vocabulary size— a majority belonged to the General Service List (GSL, a vocabulary frequency list; West, 1953) 1,000 level and GSL 2,000 (Table 1). Vocabulary words not included in the GSL mainly comprised insertions such as “yeah,” “uh,” and “um.” Both files were split in two; thus, the participants were exposed to approximately 270 words on each of the four days. Given that the Word Per Minute (WPM) rates were 95, 99, 115, and 151, the speed of speech was considered not too fast and manageable for them to shadow.

TABLE 1
Details of the Training Materials Used in the Experiment

File	Lesson #	words	Time (WPM)	Flesh Reading Ease*	Flesh Kincaid*	K1/K2* (%)	Off list (%)
1	1	269	2:50 (95)	100%	0	81.02/6.93	12.04
		280	2:49 (99)	100%	0.6	75.51/9.18	15.31
2	2	276	2:24 (115)	92%	1.6	76.24/9.93	13.83
		275	1:49 (151)	100%	0	76.51/8.90	14.59

Note. *Flesh Reading Ease: calculated automatically in Microsoft Word; the larger the number, the easier the material is.

*Flesh Kincaid: also calculated in Word; the smaller the number the easier the material is.

*K1/K2: The first 1000/2000 most frequent word list in the GSL.

For pre-and post-tests, the transcription task was adopted as in other studies (e.g., Bradlow & Bent, 2008). The audio file was also taken from OSCAAR, and the participants were asked to listen once and transcribe six sentences, each consisting of five words, along with ten individual words. The speaker who read the sentences and words was not among those who appeared in the experimental training, so as to measure whether participants generalized accents from the same group as opposed to simply becoming familiar with the speaker they encountered (i.e., speaker-independent rather than speaker-dependent). The author and a male American teacher who had grown up in the Midwest and specialized in TESL agreed that the Chinese speakers in the tests spoke accented English.

The audio files and items were selected through a pilot study (Table 2). Prior to the pilot study, the author listened to the first 25 of a total of 62 words read by a Chinese speaker and chose 18 that were manageable for Japanese EFL students. The author then listened to 60 sentences and chose 33, all of which are listed in OSCAAR (Van Engen, Baese-Berk, Choi, & Bradlow, 2010). In the pilot study, three Japanese students whose English proficiency was intermediate (TOEIC 600 level), high-intermediate (TOEIC 800 level), and advanced (TOEIC 900 level) listened to 33 sentences and 25 words spoken by the same Chinese male speaker used in the pre-and post-tests and transcribed them. Based on the results, along with GSL, the author chose six sentences and ten words that were clearly accented with Chinese but considered manageable for the participants in this experiment. All the words appearing in the six sentences were within the 2,000 GSL level. Seven of the ten words were also within the 2,000 GSL level. The three exceptions were “boots,” “chop,” and “bees,” but these were included because they were deemed to be relatively familiar words to the participants based on the results of the pilot study. The target sentences were kept to the minimal amount of six sentences and ten words to avoid a situation wherein the participants became accustomed to the accent during the test; this also limited the influence of fatigue on the participants, which had been observed in the pilot study. Given that NNSs’ perceptual adaptation to NNSs occurs at the vocabulary and sentence levels (Sidaras et al., 2009), both individual vocabulary words and sentences were included to create a brief yet balanced test.

TABLE 2
Sentences and Words Used in the Pre- and Post-tests

Sentences
Mom pointed at his father.
We talked about the water.
This is her favourite week.
Mom looked at the juice.
February has twenty-eight days.
He talked about the dinner.
Vocabulary
boots, pot, chop, sheep, but, box, shoes, bees, spring, cheese

Procedure

One group engaged in shadowing, while the other simply listened to the same conversation as the shadowing group. Both groups were given four lessons for 15 to 20 minutes each. In the first lesson, half of the first file was used; the other half was used in the second lesson. In the third lesson, half of the second file was used; the other half was used in the fourth lesson. Both groups followed the same five steps (Table 3). The length of each file ranged from approximately 1.5 to 3 minutes, while total exposure to the audio in the four lessons for both groups of participants was approximately 48 minutes (Table 1). Past research has shown that the number of shadowing trials for the same passage should be fewer than six, because a plateau presents at that level (Shiki et al., 2010). The procedure in Table 3 has been shown to be effective for improving perception skills (Hamada, 2017); therefore, this study followed the same procedure.

TABLE 3
Lesson Procedures

Step	Shadowing Group	Listening Group
1	Shadow	Listen
2	Shadow	Listen
3	Shadow with script	Listen with script
4	Study time	Study time
5	Shadow	Listen
6	Shadow	Listen

As for the classroom environment, all the audio files were played through speakers at the front of the classroom at quite high volume. A laboratory-type room, in which all participants can practice while wearing headphones, may produce more precise data, but one of the priorities of this study was to find a way to help learners adapt to accented speech in a natural, ordinary classroom environment. Each student could hear the shadowing voices of other students, but the volume of the audio was considered high enough to prevent being disturbed by others. These procedures have been used in other studies (e.g., Hamada, 2016) and still fulfilled the purpose of the research, showing positive results.

Because there have been few studies that explored perceptual adaptation among NNSs in classroom, the amount of learners' exposure to the accents was determined, based on the balance of findings in previous research on NSs and on shadowing. As Clarke and Garrett (2004) mentioned, past studies on NSs' perceptual adaptation showed that brief exposure to accented speech benefits listeners, and even less than a minute of exposure triggers NSs' perceptual adaptation to NNSs' accents. In Hamada (2016), learners were exposed to a total of 1,104 words in an eight-day shadowing training, with positive results on their phoneme perception skill development. Given that NSs' perceptual adaptation occurs within a minute, eight lessons may be too long even for NNSs, but to ensure their improvement, providing a similar amount of exposure to 1,104 words is reasonable. Therefore, the participants in our study were exposed to approximately 48 minutes of training and 1,100 words over the four lessons.

The pre-test was conducted four days prior to the experiment, and the post-test was conducted four days after the fourth lesson (Table 4). The same items were used for the pre- and post-tests in order to measure progress. To minimize the memory effect of the pre-test on the post-test, the pre-test was collected immediately, and no feedback was given. The same pre- and post-tests were used because the risk of practice effect was considered to be less than the risk of reliability by using different pre- and post-tests and by setting a contrast group.

TABLE 4
Timetable of the Experiments

Date	Procedure
April 13 th	Pre-test
April 17 th	First lesson
April 20 th	Second lesson
April 24 th	Third lesson
April 27 th	Fourth lesson
May 1 st	Post-test

Analysis

Learners were tested on a total of 40 words (30 words in the six sentences and ten single words), and two points were given for each word. Because the tests aimed to discover whether participants were able to recognize the heard words and were not designed to test spellings (Buck, 2001), two points were given if they recognized the words but failed to spell them correctly. However, if they wrote a completely different word, zero points were given. For example, *Febulaly* for *February* received two points because in Japanese there is no /r/ and it is a common mistake to confuse /r/ and /l/, yet it still showed that the participants recognized the words; *bee* for *bees* received one point because it showed that the participant recognized the word but could not catch /s/; /man/ for /mom/ received zero points because it did not show if the participant recognized the word, as “man” and “mom” are completely different words.

After marking the tests, descriptive statistics were calculated. As shown in the descriptive statistics of the test results, there were some differences between the two groups in the pre-test. For the purpose of measuring which group performed better at the post-test by precisely dealing with the differences of the pre-test, an analysis of covariance (ANCOVA) was employed with the pre-score being a covariate. All the assumptions to employ an ANCOVA, including independence of the covariate and dependent variable, parallel test, and significance of regression, were met.

Results

Descriptive statistics for scores of the control group showed that the mean score increased from 24.69 to 27.38, while those of the experimental group showed an increase from 28.29 to 34.16 out of 80 (Table 5). The number of those who increased their score in the listening group was less than half (13 out of 27), while 33 out of 38 in the shadowing group increased their score (Figure 1). The ANCOVA shows that there was a significant difference between the two groups in the post-test, [$F(1, 61) = 7.17, p = .01$]. In sum, the shadowing group outperformed the listening group, as the effect size of the shadowing group is much larger ($d = 0.73$) than the listening group ($d = 0.33$).

TABLE 5
Test Score Results for the Shadowing and Listening Groups

Group	Pre				Post				<i>d</i>
	Mean	SD	Max	Min	Mean	SD	Max	Min	
Listening	24.69	8.28	44	14	27.38	8.05	43	14	0.33
Shadowing	28.29	7.70	44	16	34.16	8.36	49	17	0.73

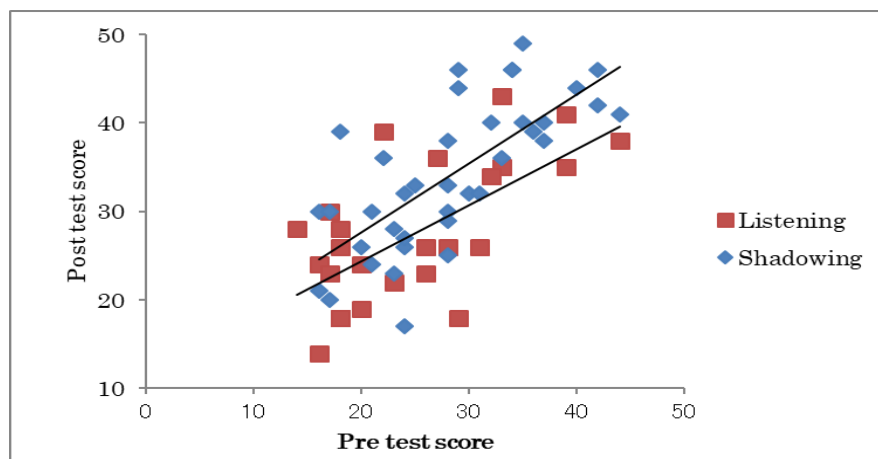


Figure 1. Results of shadowing and listening groups

Discussion

This study explored NNSs' perceptual adaptation to other NNSs' English by comparing the effects of listening and shadowing. The results of the experiment showed that shadowing was more effective in the four-day, 15-minute lessons than just listening, especially for non-proficient Japanese English learners. Simply put, shadowing has higher potential to enhance adaptation than exposure alone, and perceptual adaptation is less likely to occur for NNSs in a similar way to NSs. Two topics will be discussed in this section: the participants' proficiency level and the function of shadowing.

First, language proficiency may account for the results. As Mitterer and McQueen (2009) and Drozdova et al. (2016) show, perceptual adaptation can occur among highly proficient NNSs of English through a process similar to that of NSs of English. However, because the participants in this study were not highly proficient, they probably could not follow the same process as highly proficient NNSs. For example, their limited cognitive resources were divided among multiple processes (e.g., top-down processing and bottom-up processing), leaving insufficient cognitive resources for acoustic cues or lexical knowledge. Also, successful phonological prediction did not occur. While NSs use phonological prediction when listening, NNSs' processing delays predictive processing (Ito et al., 2018). When listening to accented speech, the process may be even slower. In contrast, shadowing helped learners attend to perceptual information while blocking their lexical access, enabling their limited cognitive resources to be used only for the phoneme perception process when shadowing. Because of this function of shadowing, phoneme perception skills of Chinese-accented English were considered to improve, while none of the listening processes improved in the listening group.

Second, narrowing the discussion to shadowing alone, the result matched previously conducted research on shadowing. Shadowing was shown to improve EFL learners' phoneme perception skills, especially those of low-listening proficiency learners (Hamada, 2016). In the experiment, Japanese learners improved their phoneme perception skills of North American English, which is different from the Japanese-accented English they are accustomed to. Similarly, in this study, participants enhanced their perception skills of Chinese-accented English, which is also different from their Japanese-accented English; because their proficiency level was not high, their progress was noticeable.

Another interesting finding was that most students in the shadowing group improved their scores, so shadowing is suitable to be used as a classroom exercise, even for a relatively large class, to help students adapt to a new accent. On the other hand, the rate of improvement/non-improvement of the listening group varied greatly for each person, which implies that listening alone is unsuitable as a classroom technique, in this regard.

Limitations

Essentially, the results of this study showed that non-proficient English learners' perceptual adaptation to unfamiliar Chinese-accented English was enhanced through shadowing more effectively than listening alone. Because this study attempted to examine the perceptual adaptation of NNSs in the classroom, it adopted a quasi-experimental design to focus on the actual impact in the classroom rather than on unrealistic data obtained from a laboratory experiment. Therefore, there were some limitations, including four factors which may limit the interpretation of this study. The first limitation lies with the tests. Regrettably, a delayed post-test was not given because giving the same test three times would result in memory interference, and a practice effect could occur. Development of more robust and convenient tests is expected to measure how long the effect lasts in the future. Also, the use of counterbalanced tests (i.e., one test for one half and another test for the other half) would ideally increase the reliability of the results; however, due to the smaller number of participants and time restrictions, this possibility was compromised. Second, although the results were positive for the shadowing group, the question of the appropriate amount of exposure remains; based on this study, more examination of the training period and amount of exposure is required. Third, while the shadowing group was exposed to three Chinese speakers in the training and listened to another during the tests, it could be too early to generalize and say the speakers represented Chinese-accented English. With this in mind, experiments on more variations of Chinese speakers and other variations with different L1s are hoped for. The last limitation lies with the participants. Ideally, a counterbalanced design (i.e., changing the shadowing and control group and repeating the experiment) would be adopted, but because this study was conducted in educational settings and affected by time restrictions, it was compromised.

Conclusion

This study has shown that shadowing is more effective for NNSs of English, specifically Japanese learners of English, to adapt their perception to an unfamiliar accent after only a short period of time. This opens the door to more smooth and effective communication among NNSs. In EFL contexts, daily exposure to English is much less frequent than in ESL contexts, so NNSs must seek effective methods that provide quick results within a limited time frame. It is worth noting that shadowing, in this sense, meets this need, in that it helps NNSs adapt to other NNSs' English to promote smooth interaction in the context of using English as a lingua franca. Lastly, shadowing is usable not only in EFL classrooms but in ESL and study abroad prep classes. Given that most of the participants in the shadowing group improved their scores in the post-test, so it shows great potential that shadowing as a classroom teaching technique is just as effective with both large and small numbers of participants to help them understand various styles of Englishes.

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ⁱ *TOEIC = Test of English for International Communication. It is widely used in Asia. The full mark is 990; those who have over 730 are considered fairly proficient.