Students' Pronunciation Development:

A Case Study of Sunrise Boarding School, Nepal

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Abstract

The study aimed to investigate English pronunciation problems among Nepalese students and to develop the students' pronunciation in Sunrise Boarding School, Nepal. Sixty Nepalese students were the participants of this study. Before treatment, a pretest was designed to evaluate the students' mispronunciation. The pretest result showed 10 mispronounced English sounds. The dominant stage of this study was treatment in which posters and online lessons were used to support the students' process of pronunciation learning. The lessons were designed based on Interaction Hypothesis (IH), the belief that learners will have development in L2 if they face difficulties and make an effort to interact with other speakers. The results reveal that the students can pronounce English sounds more accurately as problematic sounds were corrected during the treatment.

Introduction

At present, it is undebatable that people learn English in order to communicate (Beare, 2015). In light of communication, there are four main skills including listening, speaking, reading and writing. Speaking skills, in particular, are extremely important in English communication (Gillis, 2013). One of the major aspects of speaking skills that the learners should be aware of is pronunciation because mispronunciation can cause miscommunication. In society, moreover, people with poor pronunciation are considered uneducated (Gilakjani, 2012).

This research was conducted at Sunrise Boarding School in Nepal, a private school where English is the main language of instruction. The researchers worked there as English teachers for five months and discovered that Nepalese students' pronunciation was problematic, causing misunderstanding between the students and the researchers. When compared with other language skills, pronunciation

seemed to be ignored by the school members, both teachers and students. One possible reason is that they can communicate in English well enough, so they ignore even major mispronunciation. In addition, there were no subjects that aimed to promote English pronunciation. Thus, to bridge the gap in the curriculums, this study was conducted in order to identify pronunciation problems and develop Nepalese students' pronunciation based on the following research questions:

1) What are English pronunciation problems among Nepalese students?; and
2) How can Nepalese students' pronunciation be developed?

Literature Review

This section provides a brief review of related theories and studies on pronunciation.

Phonetic Differences

Sounds in every language are acoustically and articulately different even though they may seem identical. Second language (L2) learners, thus, can adjust their L2 pronunciation to sound more native-like. However, such modification does not guarantee fully-acquired L2 norms. Nevertheless, approximant sounds are the only type of sounds which results in full L2 phonology attainment. The way that L2 learners develop their pronunciation from their first language (L1) closer to L2 norms signifies that L2 learners have unconscious judgments, the ability to detect difference between the norm of L1 and L2 without consciousness (Odlin, 1989).

Phonological Transfer

In the view of Contrastive Analysis Hypothesis (CAH) proposed by Lado (1950), the acquisition of L2 phonology can be interfered with by L1 since the more difference between L1 and L2 sounds, the harder it will be for L2 learners to acquire their target language pronunciation. Thus, L2 learners need to avoid L1 norms in order to learn L2 norms (Jenkins, 2000).

Phonological Alternations

Phonological alternation is the study of the occurrences of borrowed words. Fasold and Connor-Linton (2006) claim that phonological alternations can occur when contexts make the speakers pronounce the same morpheme, a small unit of

grammar such as prefix, suffix, in different ways. Phonological alternations can be classified into six types.

The first type of phonological alternation is *Assimilation*, the way that different sounds are pronounced more similarly. In other words, when two different sounds affect each other, the speakers will pronounce one sound in the same pattern as in the causative sound. Second, *Dissimilation*, in contrast to assimilation, happens when two sounds are pronounced in different patterns. Dissimilation is commonly found in tongue twisters due to the fact that it is difficult to pronounce the accurate sound next to each other.

The third type is *Epenthesis or insertion*, which occurs when a string of consonants is divided by vowel insertion. It, thus, usually affects syllable structure. Abrahamsson (1999) as cited in Intrasai (2004) classified epenthesis into two type including *anaptyxis*, which happens when the cluster is divided by vowel insertion (CC → CVC), and *prosthesis*, which occurs when the speaker inserts a vowel sound before the cluster (CC → VCC). The clusters which can have epenthesis are /sl/, /sm/, /sn/, /sv/, /st/, /sk/, /spr/, /str/ and /skr/.

Elision or deletion is opposite to epenthesis. A consonant tends to be deleted instead of adding a vowel while pronouncing. For English language, elision is common among native speakers (NSs). For example, the speaker elides the sounds in the word *'going to'* to be the word *'gonna'*. Another sort of phonological alternation is *Lenition and fortition*, another type of phonological alternation. Lenition is a process of weakening sounds while fortition is a process of strengthening sounds. *Metathesis and reduplication* can also be found in phonological alternation. Metathesis means switching the sound order in words, and reduplication means a process of conveying words in a pejorative sense by copying parts of words. The high and front vowels always precede the low and back vowels in reduplication since it is a human instinct (Pinker, 1994).

Interaction hypothesis

According to the interaction hypothesis (Long & Gass, 1978 as cited in Fasold & Connor-Linton, 2006), learners will have development in L2 if they face difficulties and make an effort to interact with other speakers for resolving such problems. Help, or conversational modification provision, from their interlocutors, thus, is needed for L2 learners' development (Fasold & Connor-Linton, 2006). The following are some examples of interactional methods found by Lightbown and Spada (1996):

a) *Comprehension check* is the method NSs use to check non-native speaker's (NNS's) understanding.

b) *Clarification Request* is the method that L2 learners use when they cannot comprehend the NS's utterance. They ask for their request by using words, phrases or sentences such as "Could you say that again?".

c) *Self-repetition or paraphrasing* is the way that NSs repeat their utterance by breaking up sentences or combining sentences.

Apart from these examples, Fasold and Connor-Linton (2006) proposed two more examples based on the work done by Michael Long and Susan Gass (1978) as follows:

a) *Modified Output Production* is the method which L2 learners use when acquiring L2. While interacting with NSs, L2 learners may produce incomprehensible outputs. Their interlocutors, thus, do probably not understand NNS's outputs. L2 learners, therefore, need to improve their utterance by using their linguistic knowledge, such as English phonology.

b) *Recasting* is the way that NSs provide corrective feedback to NNSs. NSs sometimes provide their learners with intended meaning as direct feedback. Such feedback is generally called corrective feedback. Corrective feedback provided by NSs are called a recast. A recast changes the form of utterance without changing the content.

Language learning and identities

Language learning does not only include language acquisition, but it also contains the way the learners adjust themselves into the target-language society. Thus, sociolinguistic competence acquisition is involved in language learning (Rothenberg & Fisher, 2007 as cited in Lu, 2009). Language, moreover, is used to negotiate one's identities as it is a crucial tool to define oneself to others (Ogulnick, 2000, as cited in Lu, 2009). Norton (2000) as cited in Ellis (2015) proposed the Social Identity Theory stating that L2 learners can have various identities. To be an effective communicator of L2, hence, L2 learners must view themselves as decent speakers.

Differences between cognitive and social second language acquisition

Ellis (2015) compared Cognitive Second Language Acquisition (SLA) and Social SLA in different dimensions. In terms of learner identities, Cognitive SLA treats L2 learners as having a single identity, a group of NNSs whereas Social SLA considered L2 learners as various identities which can be changed according to their language learning environments. In the dimension of L2 learners' linguistic background, L2 learners, in the view of Cognitive SLA, have one fluent language which is their L1. Social SLA, in contrast, considers L2 learners as being

proficient in more than one language. Interaction, moreover, is another dimension of this comparison. The Cognitive SLA paradigm is based on the notion that interaction is a means for obtaining L2 inputs as well as a chance for the learners to produce L2 outputs. The Social SLA paradigm, on the other hand, indicates that L2 learners can be socialized into L2 culture by interacting with L2 speakers.

Related studies

Li (2016) conducted research aiming to study the acquisition of phonology as L2 based on CAH. The research was conducted by observing real classrooms where Chinese students were taught English as L2. The findings revealed some mispronunciations in consonant sounds. For example, Chinese students cannot pronounce some consonant sounds (/ð/, /θ/ and /v/) which do not exist in Standard Chinese language. Moreover, the Chinese students cannot pronounce words with consonant-ending sounds, especially cluster-ending sounds, because the Chinese language has only vowel-ending sounds. Therefore, L2 learners tend to add epenthesis while pronouncing consonant-ending words. The retroflex sound or /r/ is another problem of L2 phonology attainment in Chinese students. The students cannot pronounce the /r/ sound in the final position.

Bradlow, Pisoni, Akahane-Yamada, and Tohkura (1997) as cited in Celce-Murcia (2010) conducted an experimental study comparing two groups of Japanese learners, one with L2 exposure and one without L2 exposure. It was found that Japanese students with L2 exposure could discriminate /r/ and /l/. There were two groups of students: a control group and a treatment group. The treatment group, the group exposed to L2 input, could identify differences between /r/ and /l/ and had more development in learning L2. The group with treatment could not only discriminate two sounds but also pronounce both sounds better without being trained than the group without exposure.

Research Methodology

In this section, the details of how the present study was conducted are presented.

Population and sampling

The population of this study was the secondary-level students at Sunrise Boarding School, Gulariya, Bardiya, Nepal. Their L1 is Nepali, and their L2 is English. The sampling group was 60 students from Grade 8, 9 and 10. Purposive random sampling was used as the sampling method since the researchers taught those students.

Research instruments

Three kinds of research instruments were used: (1) pretest, (2) pronunciation lessons and (3) posttest.

a) Pre-test

The pre-test was designed by the researchers to identify problematic speech sounds in English among Nepalese students. The instrument consisted of two forms including the oral pronunciation test and the evaluation form adapted from Nepalese grading criteria. This instrument was used to evaluate the subjects' pronunciation before providing treatment.

b) Pronunciation lessons

The pronunciation lessons included the International Phonetic Alphabet (IPA) and the problematic sounds discovered in the pre-test. These lessons were used during the treatment in direct teaching.

c) Posttest

The posttest was designed by the researchers to reevaluate the samples' mispronunciation. The instrument included two forms as mentioned in the pre-test. This instrument was used after the treatment.

Data collection

To collect the data, there are three main steps, including pre-test, treatment, and posttest, as shown in Figure 1.
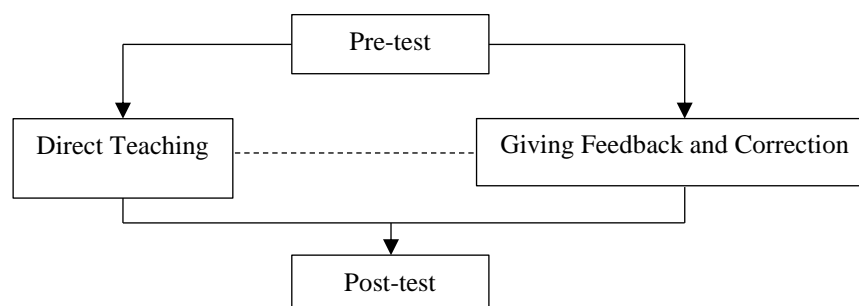

Figure 1. Data collection process

a) Pre-test

Before the pretest began, the pretest, the oral pronunciation test, was prepared. In the oral pronunciation test sheet, every English speech sound was included. In each sound, there were three allophones including aspirated sounds, unaspirated sounds and unreleased sounds. While the students were taking the oral pronunciation test, their pronunciation was evaluated by the researchers using the evaluation form.

b) Treatment

The treatment process can be divided into two steps including direct teaching, and giving feedback and correction.

In light of direct teaching, the samples were taught to read IPA. Some common mistakes, such as mispronunciation in voicing, places of articulation and manner of articulation were also highlighted in that process. The problematic sounds, moreover, were published in posters pasted on their classroom wall to encourage the samples raise their awareness of their pronunciation. An online classroom was also created for the samples and other students to learn the English pronunciation.

The website, www.schoology.com, which can be used to teach and provide some activities for the students, was used to create the online classroom. The students were given the code for accessing the online classroom. In the online classroom, the students were able to learn English pronunciation from NSs by watching the provided videos. The students, furthermore, could do quizzes after watching the videos to check comprehension.

For giving feedback and correction, all feedback of mispronunciation found in the normal English classes was given and all mispronunciation was corrected. Interaction hypothesis (Fasold & Connor-Linton, 2006) was used as the framework in this study. In the classes taught by the researchers, thus, students were encouraged to produce modified output so that they could raise their awareness of their pronunciation and correct it in a precise way.

The duration of the treatment is described in Table 1:

Table 1. Treatment duration

Types of Treatment	Duration
1. Direct teaching	3 hours
2. Giving feedback and correction	90 hours

According to Table 1, direct teaching took three hours (1 hour per week) to complete IPA reading lessons and pronunciation tips. After that, feedback and correction were given during the normal classes for 30 days or 90 hours due to the fact that the normal English classes in Sunrise Boarding School were available for three hours per week.

c) Post-test

After the training program, the students' pronunciation ability was reevaluated through the post-test evaluation form.

Data Analysis

After the test, data were collected and calculated using Statistical Package for the Social Science (SPSS) for Windows Program and interpreted according to the criteria. This criteria is used since it is the common grading criteria for the examination system in Nepal. The marking scheme of the oral pronunciation test is described in Table 2:

Table 2. Marking scheme of oral pronunciation test

Percentage Range	Meaning
51% - 100%	Correct pronunciation
0% - 50%	Error

The results of the pre-test were a guideline to develop the students' pronunciation. The mistakes found in the test, moreover, were published on a poster for the students. The results of the post-test, furthermore, showed the students' development after the treatment.

Results

This section presents the results from the pretest and the posttest of problematic sounds. The results are shown in Table 3.

Table 3. Comparison of pretest and posttest results

Sounds	Pre-test	Post-test
1. /k/ (Voiceless Velar Stop)	41.7%	89.1%
2. /t/ (Voiceless Alveolar Stop)	30%	87%

3. /s/ (Voiceless Alveolar Fricative)	33.3%	82.6%
4. /w/ (Voiced Labial-velar Approximant)	40%	82.6%
5. /p/ (Voiceless Bilabial Stop)	6.7%	58.7%
6. /z/ (Voiced Alveolar Fricative)	16.7%	52.2%
7. /ʃ/ (Voiceless Post-alveolar Fricative)	16.7%	43.5%
8. /v/ (Voiced Labio-dental Fricative)	15%	39.1%
9. /ð/ (Voiced Interdental Fricative)	18.3%	37%
10. /θ/ (Voiceless Interdental Fricative)	8.3%	34.8%

According to Table 3, the subjects could pronounce the following sounds more accurately after the treatment: the voiceless velar stop sound (89.1%), the voiceless alveolar stop sound (87%), the voiceless alveolar fricative sound and the voiced labial-velar approximant sound (82.6%), the voiceless bilabial stop sound (58.7%), the voiced alveolar fricative sound (52.2%), the voiceless post-alveolar fricative sound (43.5%), the voiced labio-dental fricative sound (39.1%), the voiced interdental fricative sound (37%) and the voiceless interdental fricative sound (34.8%).

Discussion and Conclusion

According to the results of the pretest, there are 10 sounds which the students could pronounce correctly. Such sounds are [k], [w], [s], [t], [ð], [ʃ], [z], [v], [θ] and [p]. Some possible explanations are as follows:

The students added voicing in some English voiceless sounds because such sounds are voiced in their L1. They, for example, pronounced [ga:r] for the word 'car' [ka:r]. It can be seen that the voiceless sound [k] became voiced [g] when the students pronounced it. Moreover, the students omitted the semi-vowel sounds in the cluster occurring in the initial position. One example from this case is that they pronounced 'swoon' [swu:n] as [su:n]. This example illustrates that the students have difficulties in pronouncing the voiced labial-velar approximant sound [w] in the cluster.

Prosthesis, the way that L2 learners insert a vowel before the cluster (CC to VCC) (Abrahamsson, 1999 as cited in Intrasai, 2004), is another evidence found in the

pretest. One case of prothesis found in the pretest was the vowel insertion before the voiceless alveolar fricative sound [s] functioning as the cluster. In the Nepali language, the short central mid vowel or /I/ is always added in front of the cluster – the voiceless alveolar fricative sound [s], so the students transferred such phonotactic constraint to their L2, English. For instance, they pronounced 'school' [sku:l] as [Isku:l].

Some English speech sounds tended to have lenition. That is, the subjects pronounced aspirated sounds as unaspirated sounds as in the following example: 'pea' [pʰi:] is pronounced as [pi:]. The students changed places of articulation to the closest position which they could pronounce. They, for example, tended to pronounce 'think' [θIŋk] as [tIŋk]. In this example, the students changed the position from interdental to alveolar. Some different sounds, sometimes, were pronounced instead of the actual sounds. For instance, they pronounced 'video' [vIdiəʊ] as [wIdiəʊ]. In this example, [v] was replaced by [w]. This is possibly the result of L1 phonological transfer because there is no /v/ I L1 directory. This result is in line with that of Li (2016) who found that his Chinese subjects had difficulties pronouncing /v/, /θ/ and /ð/ because these sounds do not exist in the Chinese sound system.

According to the pretest results, it is possible that English, the target language, was interfered with by Nepali, the students' native language. Much evidence demonstrates the differences between L1 and L2 sounds. The students, for example, tended to transfer phonotactic constraint from their L1 to L2. From this, thus, it can be inferred that L1 is one of the main factors causing students to pronounce some speech sounds in L2 wrongly. After the treatment, some students could pronounce those sound correctly. Some students could not pronounce the sounds correctly but showed their will to improve their pronunciation in the correction process.

Comparing the results of pre and post-test, it was found that the students had development in pronunciation after the treatment. They tended to pronounce their previously mispronounced sounds more accurately. This demonstrates that direct teaching and giving feedback as well as correction are possible effective approaches for teaching students English pronunciation. The online lessons, however, are not effective due to lack of effective Internet connection in some areas of the town, so most students could not access the prepared online classroom. Some students who attended the online classroom, moreover, did not have better English pronunciation when compared to those who did not. The findings suggest that the online classroom is an ineffective approach to teach pronunciation in this study and cannot be used without direct teaching. In addition, it cannot provide appropriate feedback, such as negative feedback,

according to the interaction hypothesis. Instructors using the direct teaching method, therefore, are still important for pronunciation development.

For developing students' pronunciation, teachers should raise the awareness of pronunciation. They, moreover, should spend some time giving feedback and correction for mispronunciation. After students receive feedback for a certain period of time, their pronunciation will gradually develop. They, then, will have better pronunciation allowing them to communicate more effectively.

In light of identities, it was found that the students' English pronunciation was mixed with the Nepali accent to some extent. It, thus, can be inferred that their English pronunciation is influenced by Nepalese, their home-country culture, as the English courses provided by the school do not promote sociolinguistic competence, but solely aim to teach English linguistic aspects such as vocabulary and grammar. The findings, hence, are not in line with Social Identity Theory as these students may not see themselves as legitimate members of their L2. English teachers, thus, need to make their target language more acceptable in their minds and spend some of their courses on basic pronunciation sessions as well as on sociolinguistic competence so that students can use English more effectively in international contexts.

The results of the students' pronunciation posttest, moreover, tends to agree with Cognitive SLA. These students were NNSs whose identities were maintained as can be seen when they added some sound features in their L1, Nepali, in their English pronunciation. Although the students obtained treatment, they still mispronounced some sounds reflecting their L1 cultural identity. This shows the influence of L1 interference on L2 pronunciation. The interaction with the researchers can be viewed as the students' L2 input as well as their chance to communicate in L2 due to the controlled treatment plans which focused on correct pronunciation of English speech sounds.

The present study has some limitations in terms of the instrument validity because the spelling of some words in the pretest and posttest might be confusing to the subjects (e.g., Eiffel, regime). To ensure validity, clearly-spelled words should be used to conduct the tests. Further studies ought to be concerned about such limitations.

In conclusion, this study was conducted to improve the pronunciation of the students at Sunrise Boarding School with the aim of investigating problematic sounds among the students and to develop their speaking skill. Before the treatment, the subjects transferred phonotactic constraint from L1 to L2. From this, thus, it can be inferred that language interference from L1 is one factor which negatively influences the students' pronunciation of L2. However, after the treatment they can pronounce English sounds more accurately. The online

classroom, on the other hand, is not an effective approach to teach the students pronunciation.

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