Unlocking Learners’ Difficulties in Acquiring English Consonant Sounds ([ð] and [θ]) and the Implication for Teaching

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Abstract—Nowadays English is used to communicate not only to the native speakers but also to the non-Native English users. Instead of acquiring native-like pronunciation, ability to pronounce English with received pronunciation and at least being understood by other users, called as intelligibility, become a new goal of pronunciation instruction in the recent language teaching development. However, the best way to approach such intelligibility remains a debate among researchers. While some believed that teachers should focus on stress and intonation in pronunciation instruction, other view that focusing on individual sounds or segments is also crucial as these segments include as a system in speech production that can influence one to another. Furthermore, diagnosing learners’ difficulties in acquiring English sounds seems to be one of essential actions to achieve the intelligible pronunciation. Thus, this study aimed to investigate learners’ difficulties in pronouncing consonant sounds. This was a case study toward a Chinese English learner studying in an international class in the University of Aberdeen. By interviewing the subject that emphasized on exploring the way the consonant sounds, /θ/ and /ð/, were pronounced, transcribing and analyzing the recording of interview, it has been found that these dental fricative sounds were problematic for the learner. Moreover, through a followed-up interview, it could be explained that these difficulties occurred was due to the different phonological system between learner’s L1 and L2, the use of inappropriate teaching approach experienced by the learner, negative attitude toward English and the low motivation possessed. In addition, a number of teaching implications toward the findings was also been suggested such as using authentic pronunciation material and presenting the phonological sounds in a factual context, integrating pronunciation teaching with speaking and listening skill, providing corrective feedback, giving learners opportunity to do self-correction toward their pronunciation production.

Keywords—acquisition; pronunciation; consonant sounds; difficulties; dental fricative; teaching implication

I. INTRODUCTION

Pronunciation becomes a paramount skill needed in an effective communication [1] and plays an important role in second language (L2) learning [2,3]. When learners’ ability to pronounce English improve, their ability to communicate is likely to improve [1] because their speech production is likely to be easier understood by other English users [4]. However, in language classroom, pronunciation is as one of areas which is considered as the most difficult one by learners [5] and the instruction has almost been overlooked [1,6,7]. Moreover, a number of researchers found that learners had various issues dealing with pronunciation. The issues may occur from segmental to supra-segmental level [8] such as problems in acquiring vocal and consonant sounds [9], and then stress and intonation [10,11].

Furthermore, since English is more widely used, the purpose of pronunciation teaching is no longer to enable learners only to communicate to native speakers but also to the non-native English users. Thus, instead of acquiring native-like pronunciation, ability to pronounce English with received pronunciation and at least being understood by other English users, called as intelligibility [12,13], become a more viable goal of pronunciation teaching [14] in the recent development of language teaching.

Although for promoting the intelligibility the supra segmental features is much more focused in teaching [15], Zielinski asserts that both of segmental and supra segmental features are important to be taught for the intelligibility [16]. According to him, both of these features are as part of integrated system in speech production. It could be mean that both of these features correlates and influence one to another. Therefore, none of these features should be overlooked in teaching pronunciation. In other words, looking at learners’ difficulties in acquiring individual sounds is also crucial in order to help learners acquire the pronunciation better. It may also provide an insight for the teachers in diagnosing parts of pronunciation that need to be further emphasizing. Therefore, this research aims to unlock learners’ problems in acquiring segmental features in English pronunciation by focusing on their issue in acquiring English consonant sounds. However, to narrow down the scope of this research, a pair of dental fricative sounds, [θ] and [ð], would be focused on. Moreover, this research was framed with two main research questions. First, do the learners have an issue in acquiring dental fricative sound? Secondly, how to approach difficulties in acquiring [θ] and [ð] sounds in the classroom context?
II. LITERATURE REVIEW

A. The Process of Phonological Acquisition

There are several phenomena that would take place in phonological acquisition process. Firstly, universal linguistic process by which the phonological rule has been learned but it cannot be produced by the learners in their production [17]. It is signed with the simplification of the phonological features in target language such as reducing, inserting syllables or devoicing specific sounds [18]. Secondly, there would be phonological transfer [19] in which learners apply the phonological structures of their native language in the target language [20]. The third process is called developmental process [21]. Rogerson-Revell refers this process as the development of L2 pronunciation system without involving learners’ native language (L1) [18], it could be meant that the difficulties occurred is more to do with the L2 itself and it does not relate to the influence of L1.

Moreover, it also seems important to acknowledge that there are different views in second language acquisition theories explaining the opportunity for learners to acquire pronunciation. Firstly, nativists believed that the acquisition of pronunciation is related to the phonological rule and every individual has their innate language acquisition device (LAD) helping them to acquire this rule. The phonological acquisition would take place as long as they are exposed with comprehensible input [22] without any teaching intervention needed. Meanwhile, there is also view considering pronunciation instruction in order to facilitate acquisition because it is not enough to merely exposing learners with input without making them aware of the differences between the rule of their native language and the target language. Indeed, this view considers the importance of instruction allowing acquisition. The last view, rejecting the first view, then, believes that pronunciation acquisition would happen when meaning making process taken place that is through language production or output [23,24].

B. Factors Affecting in Phonological Acquisition

Firstly, when the phonological system in learners’ native language is different with that in L2, the acquisition would not be easier [25,26]. The learners may find difficulties in adjusting their perception to the new phonological systems of the target language [19]. Moreover, if the learners find out any feature or segment in target language which does not exist in their native language [27], they would substitute it with the element of their native language which is phonologically closest to the sound of target language [28] or with the easier sound for them to produce [29]. Thus, L1 is believed to contribute problem in L2 acquisition. However, if there is any feature of L2 phonological system which is similar to learners L1, the acquisition of this feature is likely to be easier [17]. Besides, the pronunciation could also be problematic if the sounds of target language are exist in learners’ native language but the manner and the place of articulation are different [2]. To deal with this, learners tend to pronounce the sound of the target language based on the sound of their native language [20].

Secondly is age. It is believed that when learners are exposed themselves with the target language at early age, they are likely to sound like native [21,29]. However, if the learners learn the language after critical period, up to puberty [30], they tend to get difficulty in mastering pronunciation [24]. This happen because the lateralization, the brain maturation process, has been completed. In this period learners’ capability to differentiate sounds might be problematic [26]. Ioup elaborated that this happen because the muscle of speech articulators and the neural cells of adult learners have been rather less flexible to articulate and acquire the new sounds of target language [21].

Besides there is another reason for learning language after puberty claimed to be difficult for learners. It is because the pattern of learners’ (L1) phonological system has been well developed when they become adult [28]. Thus, when they receive the new sounds, they are likely to be influenced by the developed sounds that have been acquired before the process of lateralization. However, Fledge found that acquiring language at early age does not guarantee learners to acquire L2 perfectly [31]. Through his study, he found that immigrant living in English speaking countries since childhood still adopt their L1 accent. It could be assumed that there would be other factors that influence learners’ difficulty in pronunciation.

Thirdly, Individual differences are suggested to be one of the factors in pronunciation difficulties [18]. Negative attitude and low motivation toward the target language [32] might be the two main causes of individual variable which make pronunciation problematic. Zhang and Yin said that some learners may resist to pronunciation teaching and have a low motivation to learn, use, and expose themselves to the target language [26]. They may also keep maintain their own accent because they do not want to lose their identity when they use the accent of target language [33]. Indeed, Light own and Spada assert that this sense of identity makes learners pronounce the target language based on their native phonological rules [34]. As a result, they are likely to have foreign accent. However, Ellis claims that some learners having positive attitude toward L2 also may still have problem in pronunciation [35]. He, then, suggested that there would be other factors influencing.

Indeed, pronunciation instruction itself is claimed to cause pronunciation difficulty [1]. Firstly, it is argued that teachers may give wrong information to students [6] about the role of L2 phonology [36]. This could be because the teachers do not have enough knowledge about it as they might not get sufficient training in phonetics, for instance [4]. Alternatively, the teachers might also not be skilled at using techniques to teach pronunciation [37]. For example, the way the teacher deals with pronunciation error. Teachers may ignore this error as they are too much focus on fluency [2]. In fact, Yoshida emphasized that teacher need to point out learners’ errors and give corrective feedback towards such error for enabling the learners to learn through their mistakes [37].

C. Dental Fricative Sound

Regarding the difficulty in pronunciation, one problematic areas encountered by learners is producing a pair of dental
fricative sound /θ/ and /ð/ [38]. It is a pair of English consonant sound [39] produced with slight obstruction which allows the air to escape through mouth along with friction [40]. These sounds “are generally articulated with the tip of the tongue near or lightly touching the upper front teeth – generally at the cutting edge” [41]. The place and the manner of articulation of these sounds are the same [42]. However, the different between the two is that the former is voiceless while the latter is voiced [18]. In fact, these sounds become problematic for many learners from different L1 backgrounds such as Vietnamese, Japanese, Arabic, Spanish [38] and Chinese [43].

A number of studies have discussed that /θ/ and /ð/ are problematic area in pronunciation which is encountered by many learners from different L1 background [44,3,45,46]. However, most of the researches above do not seem to provide the more practical concept to teach pronunciation focusing on addressing learners’ problems in producing /θ/ and /ð/ [47]. Therefore, through this small research project, the writer tries to address this gap by describing the issue in producing such dental fricative sounds as well as suggesting activities and exercises to teach these sounds.

III. METHOD

This study is a case study which descriptively explains the difficulties in pronunciation acquisition experienced by an individual learner. Sample, data collecting technique together with the procedure are explain as follows.

A. Sample

The subject of this study was a post graduate student studying at University of Aberdeen. The subject has non-native English background, Chinese. This sample was selecting through a purposive sampling technique. The criteria of selecting the sample was a non-native English learner which had less intelligible pronunciation.

B. Data Collecting Techniques

The data collecting technique for this project is an interview. The writer adopted interview questions from IELTS (English Language Testing System) simulation test of speaking [48]. Moreover, the duration of interview was about five minutes, and the audio recorder was used in order to record the voice of participant. In addition, the writer also addressed a followed-up interview to the participant in order to gain more data about the other factors, which contribute to the pronunciation’s difficulties.

IV. RESULT AND DISCUSSION

A. Learners Difficulties in Pronouncing Consonant Sounds (/θ/ and /ð/)

Based on the data in the transcription, /θ/ and /ð/ seem to be problematic for the learner. Firstly, the sound /θ/ was pronounced as /s/ for word birthday. Thus, [bɔ: θ.dei] becomes [bɔ:s.dei]. Similarly, the learner also substituted /θ/ with /s/ for word ‘think’, ‘thing’, ‘mouth’ and ‘something’. As a result these words sound like sink (sɪŋk), sing (sɪŋ), mouse (maʊs), and some sing (sæm.sɪŋ). Moreover, the sound /ð/ in word ‘with’ and ‘this’ was also substituted with /z/. Therefore, ‘with’ became wiz (wɪz) while ‘this’ was as zɪs or a non-word [19]. In addition, both /θ/ and /ð/ were also produced voiceless by the learners even though /θ/ is, in fact, a voiced sound [42].

There are a number of possible reasons to explain this phenomenon. The substitution /θ/ into /s/ and /ð/ into /z/ by the learner firstly because these sounds are absent in Chinese phonetic inventory [26,44,49]. Therefore, when the learner produced /θ/ and /ð/, she substituted the sounds with the closest sound from her L1, [28] or with the sound which is easier for her to produce [37]. Indeed, the difficulty in producing these sounds is claimed as developmental process by Rogerson-Revell [18]. According to him it is because /θ/ and /ð/ are not exist in learner L1 phonetic inventory and the problems is merely related to the development of L2 itself without any interference of her L1.

Moreover, this substitution may also occur because learner has failed to perceive or categorize /θ/ and /s/ as well as /ð/ and /z/ as different sounds. It could be said that learners have wrong perception toward the L2 sounds. In fact, perception plays important role in phonological acquisition. According to Brown [24], the acquisition of L2 phonological system would be successful if the learners perceive the L2 correctly. Therefore, when they learners fail to perceive the new sounds, they are likely to have problem in their pronunciation [20]. Alternatively, the learners might able to perceive the sounds correctly, however when it comes to practice, she failed to differentiate these sounds. Jenkins argues that this issue may cause speech production less intelligible [19].

In fact, learners’ difficulties in pronouncing sounds /θ/ and /ð/ have been reported in a number of previous studies. Deterding [6] and Han [5] found that Chinese learners tended to substitute such dental fricative sounds with /s/ and /z/ respectively. Indeed, this kind of substitution has been claimed as identical for speakers from China [44]. Then regarding the voiceless sounds produced by the learner, all phonemes, in fact, are pronounced voiceless in Chinese as they do not have any voiced sound in their phonetic inventory [5]. Similarly, Turkish learners also encounter the same problems, they, however, substituted /t/ for /θ/ and /d/ for /ð/ [3]. Therefore, it could be said that the problem with dental fricative sound is not only encountered by Chinese learners but also by many learners from different L1 background such as Nigerian [45], Japanese [50], and Arabic learners [46,38]. This may indicate that /θ/ and /ð/ may be acquired last by the L2 learners as these sounds are also acquired last even by English native speakers [19].

However, learner’s onset age of learning does not seem to contribute in her pronunciation difficulty, but the other factors do. Based on the followed-up interview result, the learners have started learning English since she was eight years old. This indicated that she is likely to acquire native-like pronunciation because according to a number of experts [21,18,30] learners would acquire native-like pronunciation when they learn the language before puberty, that is before 10 years old [35]. In fact, she is still get problem in pronunciation. Thus, the other factors seem to contribute to this problem.

Based on the result of followed-up interview, it was found that the learner has a negative attitude toward English because
she does not want to expose herself to English pronunciation. This could be because she has a low motivation also to do so. In fact, her motivation to study English is merely for passing the exam. It could be assumed that she just focused on learning English in written form, not for spoken one. According to Zhang and Yin [26] and Rogerson-Revell [18] learners would get difficulty in pronunciation when they have negative attitude and low motivation to expose themselves with English pronunciation. Meanwhile viewed from teaching point of view, it was also found that the learner did not get enough exposure to pronunciation teaching. It is because the teaching only focused on grammar and written form. Besides teaching which overlook pronunciation indeed can also contribute to learners’ pronunciation problem [51].

Brown [24] and Weinberger [27] claim that the issue encountered by such learner might be permanent. However, Hawkind and Lozano [28] believe that as the learners become more experienced and expertise in English, they would not have difficulties in pronunciation. According to them it would happen as long as the learners are exposed with practice in the area of their difficulties and make them aware of differences phonological system between their target language and their native language. By doing so they are likely to be able to pronounce appropriately. In other words, pronunciation instruction is likely considered to help learners catering these difficulties.

B. The Implication for Pronunciation Instruction

Firstly, the goal of pronunciation teaching is suggested to be realistic [4]. It does not perfectly require learners to have a native-like pronunciation, but at least their speech is understandable or intelligible for English interlocutors [2]. In fact, Levis [15] claims that to make learners’ pronunciation intelligible, teachers need to focus more on supra-segmental features such as stress and intonation rather than on segmental features or individual sounds such as vowels and consonants. Zielinski [16], however, argues that teaching individual sounds is also important for intelligibility. According to him it is because such individual sounds or segmental features is also as a part of integrated system in speech production. Thus, it could be said that it is important to teach individual sounds, in this case is teaching /θ/ and /ð/.

Teachers should expose learners with English sounds as input. Nativists asserted that acquisition of pronunciation is related to the phonological rule and every individual has their innate Language Acquisition Device (LAD) helping them to acquire this rule [52]. The phonological acquisition would take place as long as they are exposed with comprehensible input [22] without any teaching intervention needed. Pronunciation teaching can partly adopt this view because it seems important for the teachers to provide learners with such input [21]. In this case teachers can provide speech sounds produced by native speakers as the authentic input through listening material retrieved from internet [2]. However, teachers need to select the material which is appropriate with learners’ level to make the input comprehensible [14]. By doing so, students might become motivated and their attitude toward L2 is likely to be positive. As a result, they would encourage themselves to get more exposure with English.

However, it does not seem to be enough for merely exposing learners with the input. It is because they need attention and awareness in order to acquire the phonological system [52]. Therefore, it can be said that in teaching pronunciation, it is important to make learners able to notice [18] the sound contrasts [24]. It can be done by isolating the problematic area of their pronunciation [43]. Responding to the case of learner in this project, teacher needs to make comparison of how /θ/ is different from /s/ as well as /ð/ which is different from /z/. To work with this Harmer [33] suggested that teachers may firstly introduce the manner and the place of articulation between these different sounds by using diagram. Alternatively, Harmer also suggests to the teacher to use minimal pair to show the contrast between the two pair of sounds which seems similar. After that, teacher can do drilling [18], asking learners to listen the model of target sounds and repeat in order to produce the sounds [23]. This enables learners to notice the gap between the pattern of sounds that they have learned and their ability to articulate and modify the sounds [53].

Furthermore, teachers should present a context [51] in pronunciation teaching. Having such context, teacher can avoid presenting the phonological rule in isolation [32] and learners are likely to understand how the phonological rules work in such context. Scrivener [51] explained that the context could be in short phrases or sentences. In addition, Kelly [40] suggested that pronunciation teaching can be integrated with listening or speaking. In the case of integrating pronunciation in speaking, teachers can adopt usage-based approach, a recommended approach in second language theories enabling learners to produce the language in learning pronunciation [52]. According to Couper [52] this approach gives more opportunity for learners to acquire L2 sounds as they produce it [23]. The teacher can ask learners to produce the target sounds in communicative way [32], through dialogue or role play [54]. This dialogue or role play enable students to produce the sounds which has been anticipated to be problematic for the learners.

After that teachers can provide learners with corrective feedback when it is found that the learners still mispronounce the target sounds [37]. However, Wong [2] prefer to let the students monitor own speech. Wong [2] explained that teachers can ask learners to record themselves voice and compared it with the correct pronunciation from electronic dictionary for example. Then, the students can notice the gap between their speech productions and the one in the model.

V. Conclusion

Moreover, through a followed-up interview, it could be explained that these difficulties occurred was due to the different phonological system between learner’s L1 and L2, the use of inappropriate teaching approach experienced by the learner, negative attitude toward English and the low motivation possessed. In addition, a number of teaching implications toward the findings was also been suggested such as using authentic pronunciation material and presenting the phonological sounds in a factual context, integrating pronunciation teaching with speaking and listening skill [40], providing corrective feedback, giving learners opportunity to do self-correction toward their pronunciation production.
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