Interdental Consonant Sound Errors
Made by First Semester Students of English Education of Sanata Dharma University

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ABSTRACT
This paper investigated factors influencing students’ pronunciation. Pronunciation is one of the important aspects of the learning of English. When mastering English pronunciation, many non-native English speakers have difficulty pronouncing certain words that contain the phonemes not used in their native languages. This paper also reported several aspects that might influence pronunciation. The pronunciation aspect investigated in this research paper was the English interdental consonants [θ] and [ð], which are not available in the Indonesian language sound system. This qualitative research used interviews as a method for collecting primary data. The researchers interviewed twenty participants from the English Language Education Study Program (ELESP) of Sanata Dharma University, Yogyakarta, Indonesia, related to the pronunciation of the two interdental consonant sounds. The findings showed that the mother tongue, age, and teacher instruction on target language exposures affected the ELESP students’ (mis)pronunciation. Pedagogical implications of the findings are English teachers can assist their students in overcoming pronunciation challenges involving the two interdental consonants and pronunciation textbook writers should provide more pronunciation practices focusing on [θ] and [ð] sounds.

Introduction
In spoken communication, pronunciation plays a significant role because mispronunciation can cause misunderstanding. This research aimed to investigate one of the spoken communication aspects, namely pronunciation. According to
Nunan (2003), pronunciation refers to the sounds that someone produces when he or she speaks. In addition, according to Kreidler (2004, pp. 22-23), pronunciation is the process of producing meaningful speech sounds that are articulated by the controlled friction of airstream through human speech organs. In general, pronouncing English words needs more effort, especially for non-native English speakers, because the way they utter the words is influenced by their mother tongue. Kenworthy (1987) believes that students’ native language is an important factor in the correct pronunciation of English words. It is believed that the mother tongue influences and hinders the learners in learning a foreign language, especially in the pronunciation aspect. Pronunciation is the production of significant sounds used by a particular language as part of the code of the language and used to convey meanings in the context (Seidlhofer, 1994).

When we as language learners speak English, our interlocutors will gain an impression of our spoken language, or to be more precise – of our pronunciation. The poor and inarticulate pronunciation will cause misunderstanding between speakers and listeners. Limited pronunciation skills will make learners lose their self-confidence and result in a negative influence on learners to estimate their credibility and abilities (Morley, 1998). As stated earlier, this research investigated interdental consonant pronunciation, focusing on common errors in producing the interdental consonants [θ] and [ð] in English. The urgency in conducting the current research is that the researchers often find that the English learners mispronounce the two interdental consonants when they speak English, particularly the first semester students of the English Language Education Study Program of Sanata Dharma University, Yogyakarta, Indonesia. The students are to be English teachers in the future, and as candidates for this position, they should be role models to their students. Teachers serve as role models through how they perform their duties, and by the manner they conduct themselves (Sava, 2002; Ozel, 2007; Lumpkin, 2008). Therefore, having accurate pronunciation is a must for them as future English teachers.

Based on the research background, the research question is formulated as follows: What are the factors influencing students’ pronunciation in producing the interdental consonants made by the first semester students of the English Language Education Study Program of Sanata Dharma University? Thus, the objective of this research was to analyze the common interdental consonant errors made by English learners. It focused on interdental consonant production, namely [θ] and [ð].
Literature Review

English Interdental Consonants

In English, interdental consonants are produced by placing the tip of the tongue between the upper and lower front teeth. Here are the two kinds of interdental consonants classified by Ladefoged (1982, pp. 151-157):

a. \[ð\] is a voiced dental fricative. In the production of \[ð\], the tip of the tongue is positioned very close to the upper teeth or the tongue is placed between the lower and upper teeth, and the vocal folds are vibrating.

b. \[θ\] is a voiceless dental fricative. In the production of \[θ\], the tip of the tongue is positioned very close to the upper teeth or the tongue is placed between the upper and lower teeth, and the vocal folds are not vibrating.

According to their place of articulation (MacCarthy, 1997: 96-97), \[θ\] and \[ð\] are dental, and the air is obstructed by the tip of the tongue and the upper teeth.

These sounds are problematic for English learners. “The inter-dental consonant phonemes … have always created pronunciation problems for Turkish learners of English …” (Hismanoglu, 2009, p. 1697). Hanulikova, & Weber, (2010, 173) also reported that “non-native (L2) speakers of English often experience difficulties in producing English interdental fricatives (e.g., the voiceless \[θ\]), and this leads to frequent substitutions of these fricatives (e.g., with \[t\], \[s\], and \[f\])”.

Factors Influencing Pronunciation

a. Mother Tongue

Avery and Ehrlich (1992), as cited in Thanasoulas (2003), state that the rules and patterns of students’ native language are unconsciously applied to their second or foreign language, and it might lead to the production of a foreign accent. This common attitude is actually performed by many foreign language learners around the world. Sounds, rules, patterns, and intonation of their native language will often affect the way they speak in a foreign language. Therefore, it could not be denied that mispronunciation will always occur among those foreign language learners. Avery and Ehrlich (1992), as cited in Thanasoulas (2003) also clearly define that there are three aspects of how native language or students’ mother tongue might affect the target language pronunciation, either language learners or foreign language learners.

The first aspect is the nonexistence of certain sounds of the target language in the students’ native language. It can be seen in several examples such as the sounds \[θ\], \[ð\], and \[æ\] that are not available in the Indonesian language, so it will lead to difficulties for the students to pronounce those sounds. Flege and Port (1981) as cited in Nation and Newton (2009, p. 80) argue that the most frequently influenced factor from L1 to L2 commonly occurs at the level of
phonetic implementation. It means that the different aspect of phonemes or sounds in L1 and L2 has become a major issue for foreign language learners. Hewings (2004, p. 3) supports this argument by saying that the different phonemes appeared in the first and second languages become one of the major problems faced by learners when learning a foreign language.

The second aspect is the different rules of combining sounds into words in the target language. In this case, when the rules of combining sounds into words in the target language are different in the learners’ mother tongue, it might cause some confusion. The main reason for this problem is due to the different rules in combining sounds in every language and those rules are very complex. The last factor of the mother tongue that can distract students’ pronunciation is the different rules of word and sentence stress and intonations between their native language and the target language. This aspect makes the students fail in achieving the correct pronunciation of the target language.

b. Age

The age might be one of the factors influencing students’ pronunciation. In this case, age refers to the period someone learns other languages. Most Indonesian learners begin to learn a foreign language when they attend elementary school. Taking into account the average age of elementary school students, most of them are seven up to 13 years old. This period is regarded as the optimal period to learn a foreign language. Nation and Newton (2009, p. 78) state if the students start to learn and even speak in L2 before six years old, there will be no accent produced by them. Otherwise, if they start to learn and speak when they are more than 12 years old, their native accent will be dominant. Considering this aspect, in learning any foreign languages, it can be concluded that the younger the better than the older. This is in line with the learning English pronunciation concepts that were proposed by Gilkajani (2001, p. 78), who argues that the influence of age on language acquisition and specifically pronunciation might lead adult learners to find more difficulties compared to children. Besides, the achievement of native-like pronunciation is considerably difficult.

The influence of age in learning a foreign language is actually based on the theory of the Critical Period Hypothesis (CPH). The theory on CPH proposed by Lenneberg (1967) as cited in Gilkajani (2001) states that there is a biological period, which ends around the age of twelve. In addition, he argues that after this period, the achievement of complete mastery of the second language, especially pronunciation, is considerably difficult. Therefore, it can be concluded that the best period to master any foreign languages, especially to gain native-like pronunciation, is before twelve years old. Nevertheless, Flege (1987) and Patkwoski (1990) as cited in Nation and Newton (2009) disagree with the CPH theory proposed by Lenneberg. They argue over the relationship between age
and mastering a foreign language especially the pronunciation aspect. In their opinion, learners have learned the sounds of their mother tongue and they will automatically interfere with the process of learning the target language. Scovel (1998) also predicts that learners who start to learn a second language later than around age 12 will never be able “to pass themselves off as native speakers” and will “end up easily identified as non-native speakers of that language. When learners are getting older, their perception of the sounds of their native language becomes more well-integrated and stable. This different perception leads us to conclude that some scholars basically have the same agreement that starting to learn any foreign languages at a younger age is better than starting to learn when learners are getting older or as adults.

c. Teacher Instruction on Target Language Exposure

Generally, foreign language teaching focuses on four main areas of development skills, namely listening, speaking, reading, and writing. Pennington (1994), as cited in Gilkajani (2001, pp. 77-78) explains that pronunciation is commonly regarded as a component of linguistic instead of conversational fluency. Besides, pronunciation is often considered as having little importance in a communicatively oriented classroom. According to Elliot (1995) cited in Gilkajani (2001, pp. 77-78) teachers tend to take into account pronunciation as the less useful aspect of basic language skills. As a result, they generally avoid teaching pronunciation in order to spend valuable class time on other aspects or skills of the target language.

Method

This is qualitative research, focusing on understanding social phenomena from the perspective of the human participants in the study” (Ary, Jacobs, & Razavieh, 2002; Merriam, 2002). In this research, the researchers and the participants were the instruments or the so-called human instruments. The research could not be conducted without human instruments because they were the key instruments of the research. According to Poggenpoel and Myburgh (2003), the key to obtaining the data in qualitative research is the researcher himself. Moreover, the researcher becomes the facilitator of the research. He or she facilitates communication in order to gather rich data. In this research, the researchers collected and analyzed the data. The current research was driven from the planning stage, collecting data, analyzing and interpreting data, until reporting as well as drawing conclusions. Moleong states that the researcher is directly and personally involved in the research which is conducted (2004, p. 56). Therefore, in this research, the researchers and the participants who were the main instrument as human instruments were crucial, and the researchers, as human instruments, were also the data collector to answer the research question. In
addition, a data-sheet was also employed as a secondary instrument. This data sheet was used to record the classified data.

The data gathering consisted of two sessions. The first session was the oral test in which the participants were requested to pronounce the words listed, which contained interdental sounds. The first section aimed to understand how the participants pronounced interdental sounds. The second session was the interview where the interviewers asked the open-ended questions to the participants. The questions were based on the factors which influenced the participants’ pronunciation. The English words used in this research were as follows: 1. although, 2. ethic, 3. feather, 4. further, 5. leather, 6. method, 7. nevertheless, 8. pathetic, 9. rhythm, 10. southern, 11. sunbathing, 12. that, 13. theater, 14. thigh, 15. thin, 16. thoroughly, 17. thought, 18. threatening, 19. through and 20. weather.

In the second session 2, three questions were given to the participants. Each question represented the factors that influenced the participants’ pronunciation. The interview questions were listed as follows: 1. Berapa lama kamu belajar Bahasa Inggris? (How long have you been learning English?), 2. Bahasa apa yang kamu gunakan dalam kehidupan sehari-hari? (What language do you use for daily communication?) and 3. Apakah guru mu sewaktu di sekolah mengajar dengan menggunakan Bahasa Inggris? (Did your teacher use English when teaching and giving the instruction in the classroom?)

In this research, the semi-structured interviews in the second session, consisting of open-ended questions, were conducted in September 2018 to obtain the data. There were 20 participants who were interviewed. All of the participants were the first semester students of the English Language Education Study Program. The students were randomly selected for the research and consisted of 11 females and 9 males. Furthermore, the Indonesian language was the most frequently used language by the participants in their daily communication. Before conducting the interviews, the researchers formulated the pronunciation test consisting of thirty items with twenty interdental consonants and ten random words so that the participants would not realize which phonemes were tested. In addition, the researchers also formulated several questions to be investigated related to the factors influencing students’ pronunciation, especially the two interdental consonants.

Findings and Discussion

Interdental Sound Errors

In this section, the researchers analyzed the sound errors made by the students while pronouncing the words listed. The participants were given the pronunciation task consisting of thirty words (20 interdental consonants, ten words that were randomly selected to hide the words consisting of an interdental consonant /ð/ and /θ/).
Table 1. Errors Made by ELESP Students

<table>
<thead>
<tr>
<th>Interdental Sounds</th>
<th>Wrong Answer</th>
<th>Correct Answer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>/θ/</td>
<td>154</td>
<td>66</td>
<td>220</td>
</tr>
<tr>
<td>/ð/</td>
<td>110</td>
<td>70</td>
<td>180</td>
</tr>
<tr>
<td>Grand Total</td>
<td>264</td>
<td>136</td>
<td>400</td>
</tr>
</tbody>
</table>

**English Interdental Sound [θ]**

Based on the analysis of the pronunciation test given, it can be concluded that most students performed less accurately pronouncing the [θ] sound. There were twenty participants involved in the pronunciation test. They were also eleven [θ] sounds listed in the test. If all the participants pronounced the words correctly for those eleven [θ] sounds, the correct answer should be 220. However, the results showed that there were only 66 correct answers pronounced by the participants. This means that the Indonesian students, namely the English Education students of Sanata Dharma, still face problems in pronouncing the [θ] sound.

**English Interdental Sound [ð]**

The analysis of the [ð] sound showed similar results to that of the [θ] sound. There were nine words listed in the pronunciation test containing the [ð] sound. If all the participants pronounced the nine words correctly, the total correct answers reached 180. Nevertheless, the results showed that there were only seventy correct words pronounced by all the participants. This means that the pronunciation of the [ð] sound still appeared among the Indonesian students.

**Factors Influencing English Pronunciation**

Table 2. Languages Used by ELESP Students in Their Daily Conversation

<table>
<thead>
<tr>
<th>Language</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Indonesian Language</td>
<td>12</td>
</tr>
<tr>
<td>The Javanese Language</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

English becomes the international language for communication, and it is important for speakers of English to be able to communicate effectively and understandably so that the listeners will not misunderstand the messages. Brazil (1994) defines the word intelligibly as being able to make one’s meanings and intentions clear to a listener. Nevertheless, in reality, being intelligible in
Communication is quite difficult to grip by EFL learners. Besides, the achievement of pronunciation can be seen not only from teaching processes but also from the processes of learning. Many researchers have investigated the factors that affect the process of learning. Moreover, these factors influence the EFL’s ability to pronounce the words correctly and intelligibility. The three factors are classified as follows:

a. Mother Tongue Influence

All aspects of pronunciation are connected to the learners’ native language, consisting of sounds, stress, and intonation. Sometimes, these factors are applied by the learners while learning a foreign language. In this research, the focus was on the pronunciation of [ð] and [θ] sounds. From the first until the twentieth recording, almost all the participants had difficulty pronouncing the interdental sounds [ð] and [θ]. The difficulty pronouncing the consonant sounds was caused by the unavailability of the consonant sounds in the participants’ mother tongue. The participants of this research were from different towns or areas in Indonesia who use the Indonesian language as a means of communication in their daily life. From the interviews, there were twelve participants, who communicated in the Indonesian language and the rest of the participants communicated in the Javanese language. As the researchers had understood, in Indonesian there are no [ð] and [θ] sounds.

The participants who speak Javanese or Indonesian replaced [ð] or [θ] with [d]. They produced a complete obstruction instead of partial obstruction. They should hold the tip of the tongue flexible near the upper teeth, not raise the tip of the tongue toward the teeth ridge. Participants who are Javanese replaced [ð] with [nd], [n] plus [d] voiced dental stop. Also, in producing [θ], the tip of the tongue was put very close to the upper teeth forming a narrow passage through which the air stream escaped. The soft palate was raised to close off the nasal passage. The vocal folds were not vibrating. In trying to pronounce [θ], most Javanese participants would usually produce the [t] sound. The mistake in pronouncing Indonesian [t] instead of [θ] was a mistake in the manner of articulation because the air was completely obstructed instead of partially obstructed.

The findings explained above were in line with the point of view shared by Nation and Newton (2009) and supported by Hewings (2004). In short, it might be concluded that the mother tongue influences and hinders learners in learning a foreign language, especially in the pronunciation aspect. As well, MacKay (1967) points out, a pronunciation “...error may be due to a transfer from the native language; an analogy with something correctly learned in the foreign language; a wild guess, vagueness in remembering the right form; or general lack of accuracy and language skill.
b. Age

![Figure 1](https://example.com/figure1.png)

**Figure 1.** The time when students begin learning English

The second factor influencing the participants to learn pronunciation is age. Here, age refers to the period when the participants intensively learn pronunciation. All the participants said that they started learning English pronunciation seriously and effectively when they went to university. Based on the Critical Period Hypothesis (CPH), the average age of the participants to start learning English at the age of seven, but they did not learn English pronunciation intensively and seriously. They started learning English pronunciation deeply when they entered the English Language Education Study Program. However, for the learning of English pronunciation, the golden age is twelve years old. Almost all the participants in this research admitted that they learned English pronunciation intensively only when they had started their college life.

c. Teacher Instruction on Target Language Exposure

<table>
<thead>
<tr>
<th>Teacher Instruction</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>The English Language</td>
<td>9</td>
</tr>
<tr>
<td>The Indonesian Language</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

**Table 3.** Teacher Instruction Used in the Learning Process

Teachers’ instruction on the target language also became one of the factors influencing students’ pronunciation. Many English teachers in Indonesia did not really pay attention to the importance of pronouncing the words correctly and even, some of the participants in this research stated that their teachers did not pronounce English words accurately while teaching in the class. Based on the interviews, nine out of twenty participants stated that their teachers used English while explaining the materials and giving
instructions in the classroom activities. Their teachers also emphasized the importance of English pronunciation by providing the correct pronunciation if their students mispronounced certain words. However, the discussion on the importance of English pronunciation was not clearly exposed.

Furthermore, eleven participants stated their teachers did not really pay attention to English pronunciation, and even some of them stated that their teachers used the Indonesian language while explaining the materials and giving instructions during the classroom activities. It can be concluded that their English teachers considered pronunciation as a less important aspect of English learning. They gave more attention to the main four areas of English development skills, namely listening, speaking, reading, and writing. This is in accordance with Pennington (1994) cited in Gilkajani (2001, pp. 77-78) that states pronunciation is typically viewed as a component of linguistic rather than conversational fluency, and pronunciation is often regarded with little importance in a communicatively oriented classroom. In addition, Elliot (1995) cited in Gilkajani (2001, pp. 77-78) also states teachers tend to view pronunciation as the least useful of the basic language skills and therefore they generally sacrifice teaching pronunciation in order to spend valuable class time on the areas of language.

Note that English pronunciation has become common issues among college students, especially those who are majoring in English education and English letters. Based on the findings, it can be seen that the main factors influencing their pronunciation are divided into three factors: the mother tongue, age, and teacher instruction on target-language exposure.

The mother tongue is one of the common factors influencing language learners, especially in English pronunciation. Based on the Longman Dictionary (2010), a “mother tongue is usually a language which a person acquires in early childhood because it is spoken in the family and/or it is the language of the country where he or she is living”. As presented in the findings, the participants of this research stated that they used the Indonesian language and the Javanese language in their daily conversation. In addition, the interdental consonants [θ] and [ð] are not available in those two languages. This becomes the main factor why the Indonesian people have difficulty pronouncing those two interdental consonants. This factor is in accordance with what is stated by Avery and Ehrlich (1992) cited in Thanasoulas (2003) that the first aspect that might obviously influence the process of pronunciation, especially related to the influence of mother tongue, is the absence of certain sounds of the target language in the students’ native language. Based on the term of cross-linguistic transfer, it refers to when “a person who knows two languages transfers some aspect from one language to another”, and “what can be transferred depends, among other things, on the
relationship between the two languages” (Cook, 2008: 76). This theory pointedly explains that the mother tongue really influences the English pronunciation.

The second factor that influences ELESP students’ pronunciation is the age. In this case, the age refers to the period when students began to learn English pronunciation. Based on the interview, most students stated that they began to learn English when they were in elementary school when they were around nine to twelve years old. However, in the second interview, they stated that they learned English pronunciation deeply and intensively when the first time they studied in ELESP when they were around 18 years old. The second interview revealed that this is considered too late to fix their pronunciation as the proper age to start learning English pronunciation without the interference of their native accent is before twelve or even before six years old. This is in line with Nation and Newton’s (2009, p. 78) argument that suggests if the students start to learn and even to speak in L2 before six years old, there will be no accent. This factor is closely related to the theory of the Critical Period Hypothesis by Lenneberg (1967). He states that children between 2 and 13 can attain native-like proficiency in acquiring a foreign language, especially pronunciation. However, if they start doing so when they are over twelve, there will always be an accent. Therefore, it can be concluded that younger students who start to learn other languages would face interference with their native accent.

The last factor that might influence students’ pronunciation is teacher instruction of the target language. The language used by the teacher will also affect pronunciation. Brown (2007) states that it relates to the length of time that the learners live in a target language environment. In this case, the teacher is the main creator of that environment. It does not matter the place or country the learners stay but depends on how much they use English in their daily life. Many Indonesian teachers do not use English during the learning process, both when explaining the materials and giving instructions. Some teachers also consider that English pronunciation is less important. As Celce-Murcia, Brinton, and Goodwin (1996) say, the teacher becomes a suitable model of the target language, and determines that students have opportunities outside of class (e.g., in language-laboratory or learning-center environments) to experience samples of the authentic oral discourse of native speakers. Based on the findings, eleven students revealed that their teachers did not emphasize the importance of English pronunciation. They did not really consider pronunciation as an important aspect of English learning. In the second interview, there were some students stated that even their teachers’ pronunciation was less accurate. This is in accordance with Elliot’s (1995) opinion as cited in Gilkajani (2001, pp. 77-78) that teachers tend to view
pronunciation as the less useful of the basic language skills and therefore they generally sacrifice teaching pronunciation in order to spend valuable class time on the areas of language. Based on the findings and interviews, teachers mostly focused on the four English basic skills, namely listening, reading, writing, and speaking. Therefore, the students did not gain the target language exposure from their English teachers in the previous stages.

**Conclusion**

Producing the interdental consonants [θ] and [ð] might be difficult for English learners. There are three aspects that can influence someone’s pronunciation, namely the mother tongue, age, and teacher instruction on target-language exposure. The mother tongue becomes one of the main factors in mispronouncing those two interdental consonants. In terms of the mother tongue, there are three important aspects that might influence someone’s pronunciation, that is, the absence of certain sounds of the target language in the students’ native language, the different rules of combining sounds into words in the target language with the mother tongue, the different rules of stress and intonation in terms of words and sentences in students’ native language. Another factor that influences a learner’s pronunciation is age. Age refers to the period when someone begins to learn English. If someone begins to learn English before six years old, the accent will not become an obstacle in producing English sounds; however, if someone starts to learn English after twelve years old, it will be challenging for them to abandon his or her accent.

The last factor is teacher instruction related to target-language exposure. English teachers play an important role in influencing students’ pronunciation. Teachers are the role models to learn, to behave, and to imitate for their students. If teachers do not give good examples to their students, the students will only imitate them in accordance with the examples modeled by their teachers. Therefore, the students might also consider that English pronunciation is less important and less useful. As a consequence, they will not practice a lot in improving their pronunciation skills.

The limitation of this study is that it investigated only interdental consonant [θ] and [ð] sounds. The researchers suggest that future researchers investigate other aspects of pronunciation to enrich the literature on English pronunciation produced by non-native English speakers. In addition, the researchers suggest that the English teachers around the world, especially in Indonesia, improve their pronunciation since they are the role models of their students and give exposure to their students that the urgency of English pronunciation cannot be ignored.
References


