The Effects of the Eastern Gyeongnam Dialect on Students' English Intonation: Focusing on the Learnability*

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The current study investigates the effects of the Eastern Gyeongnam dialect on students' English intonation. Research questions are as follows: (1) Does the Eastern Gyeongnam dialect have effects on English intonation of students? (2) Is there any difference between middle and high school students in English intonation? The experiment was conducted with the help of ten middle and ten high school students from Gyeongnam province and two American native speakers. Subjects read eight English sentences and seven Korean sentences out loud and their voice was recorded. Recordings were analyzed and compared using a speech analysis software program Praat and IBM SPSS. Five elements were mainly studied in English recordings: initial pitch contours, final pitch contours, pitch range, word stress, and the pitch gap around nuclear stress. Results of the experiment show that the Eastern Gyeongnam dialect can affect English intonation regardless of the educational stage, especially in initial pitch contours and word stress patterns. Overall, the results of the experiment corroborated the findings of several previous studies on the same topic. This study

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sheds light on the possibility of the transfer of the dialect and revealed that the Eastern Gyeongnam dialect can influence English intonation in various areas regardless of the educational stage.

I. Introduction

Since English has become a lingua franca (ELF), sounding exactly like native speakers is less of a focus than communicating with different peoples nowadays. Still, quite a number of English learners are concerned about their accent and many strive for native-like intonation. Jenkins (2007) showed that even non-native speaker (NNS) English teachers believed in teaching and following native speaker (NS) English and did not approve of NNS accents. Aside from learner's desires and concerns, it should be noted that English intonation does play a crucial role in communication. Anderson-Hsieh, Johnson, and Koehler (1992) found that prosody made more contributions to intelligibility than segmentals and syllable structure. Thus if one's intonation is starkly different from that of native speakers, it can have a harmful effect on communication.

Learners would have a difficult time learning a target language if their intonation differs greatly from that of the target language. Ellis (1994) mentions that phonological phenomena and habits of the first language can be realized in a target language, which can be an obstacle in learning the target language. The research questions emerged from this. If there is a positive or negative transfer of the first language to the target language, would there be a transfer of one's dialect? Gyeongnam (a southeastern province in South Korea) dialect, especially, is known for its distinct intonation and pitch patterns. The purpose of this study is to understand the effects of the dialect on students' English intonation with the hope that English teachers can make use of the results of this study in class. In addition, the study tries to find out if any prominent

difference exists between two student groups.

II. Literature Review

1. Language Transfer and Phonological Transfer

Odlin (1989) offers the working definition of transfer as "… the influence resulting from the similarities and differences between the target language and any other language that has been previously acquired" (p. 27). Ellis (1994) says transfer indicates various kinds of influence from languages other than the target language. The study of transfer mainly investigates on four linguistic phenomena: errors (negative transfer), facilitation (positive transfer), avoidance of target language forms, and over-use.

Many studies covered the effects of language transfer in learning the target language. Givón (1984) showed word order transfer of Filipino and Korean speakers of Hawaiian pidgin. Their word order patterns were different from each other in that they tended to produce word order patterns reflecting their first language. Similar examples can be found in Odlin (1990), where word order transfer was observed in Korean Bamboo English (a pidgin used between American soldiers and Koreans in the 1940s and 1950s).

Jarvis and Pavlenko (2008) defines phonological transfer as "the ways in which a person's knowledge of the sound system of one language can affect that person's perception and production of speech sounds in another language" (p. 62). Phonological transfer is largely due to phonetic difference between two languages. This difference is originated from the different sound systems and physical traits of two languages (Odlin, 2003).

A good example of phonological transfer can be found in Wiik (1965), where Russian L2 speakers of Finnish followed the phonetic system of Russian and pronounced Finnish /y/ as Russian [ju]. Similarly, Ellen (2010) found the

influence of L1 on L2 by analyzing a corpus of Dutch and English conversations between Dutch speakers. Results revealed that voicing and devoicing rules that were frequent in Dutch were transferred to English. Another example of phonological transfer is vowel epenthesis that is often found in Korean-accented English. Tak (2006) reanalyzed three types of vowel epenthesis and found that the ranking of markedness constraints of L1 were transferred to the interlanguage. In addition, Yoon (2016) investigated the effect of Japanese (L1) on intonation of Korean (L2) and found both positive and negative phonological transfer of L1. Evidence of phonological transfer can be found not only in recent data but also in ancient documents. Dahlgren (2018) investigated phonological transfer of Coptic to the second language Greek in Graeco-Roman Egypt and revealed that nonstandard vowel variants in the documents were based on Coptic phonological characteristics.

Phonological transfer can also be observed in the group of Bilingual First Language Acquisition (BFLA) children (Wanner, 2001). Transfer of Japanese to English was observed in utterances of one-year-old bilingual children, which showed a word ending of the syllabic system. Another note-worthy phenomenon is that phonological knowledge of one non-native language can be transferred to other non-native language. Wang (2016) found that students who had learned Japanese (L3) were significantly better at identifying the length of English (L2) vowels than students who had no knowledge of Japanese.

Brière (1966) noted that the difficulty of learning phonological categories of L2 was concerned with the similarity between the categories of L1 and L2. Recent fMRI studies (Price, 2010; Saidi & Ansaldo, 2011) corroborated this idea, proving the facilitative function of phonological similarities between L1 and L2 words (such as cognates and clangs) in engaging L1 neural circuits while learning the target language. Nam (2018) showed the possibility of modeling of the interaction of L1 and L2 and the phonetic accommodation in L2 through a concept of self-organization.

So far we have reviewed studies related to language transfer and further on

phonological transfer. Based on these previous studies, it would not be unreasonable to posit that phonological transfer of the first language dialect can occur in the target language. Next section reviews studies on the effects of Gyeongsang dialects since the current study is related to them.

2. Effects of a Korean Dialect on English Intonation

Several studies (An, 2014; Bae, 1998; Kim, 2001; Kim, 2011; Lee, 2001; Park, 2007) have been conducted on the effects of a Korean dialect on English intonation. Bae (1998) carried out a contrastive phonological analysis of Gyeongsang Korean and English and found interfering effects of the first language on English intonation. It was found that Seoul speakers were better at raising the last syllable of low-rise sentences than Gyeongsang speakers, which was assumed to be the effects of the dialect. Also Gyeongsang speakers' English rising intonation was different from native speakers'. Kim (2001) also compared the English intonation of Seoul and Gyeongsang speakers and found that Gyeongsang speakers were affected by the dialect but, at the same time, had learned English intonation to some degree. Similar results were found in An (2014), where English intonation of Busan (located in the southeastern part of the Korean peninsula) and Seoul speakers was studied. The interference of the Busan dialect was found in boundary tones and a pitch range.

Lee (2001) and Park (2007) confirmed the effects of the Daegu (located in North Gyeongsang province) dialect on English intonation. Lee (2001) observed the contrast between Seoul and Daegu speakers. Seoul speakers had English intonation more similar to that of native speakers than Daegu speakers. Both native and Seoul speakers showed a longer duration on stressed words while Daegu speakers stressed words with a high pitch without changing duration. Park (2007) examined pitch contours of Daegu and native speakers and claimed that the Daegu dialect can have both positive and negative effects on English intonation. Daegu speakers showed different initial and final pitch contours

from that of native speakers. In addition, both native and Daegu speakers had overall falling pitch contours, which is said to be the influence of the dialect.

III. Methodology

This study hypothesizes that the Eastern Gyeongnam dialect would have effects on student's English intonation based on previous studies on language transfer. Two research questions were set for the study: 1) does the Eastern Gyeongnam dialect have effects on English intonation of students? and 2) is there any difference between middle and high school students in English intonation? Accordingly, the experiment was designed to observe and analyze English intonation of Gyeongnam students.

1. Subjects

Subjects were twenty two in total: two native speakers, ten middle school students and ten high school students. All of them were female. The reason that middle and high school students were chosen was to understand the effects of the dialect on younger generations of the region. Two student groups were compared to see if any significant difference could be found between the groups, since high school students had been exposed to the dialect and public English education for a longer period of time than middle school students.

Middle school students were 15-year-old from a city called Changwon. High school students were 18-year-old from a city called Gimhae. Subjects were chosen randomly and their English level was mixed. Native speakers were American, born and raised in California; both were in their 20s (23 year-old, and 29 year-old). Recordings were saved anonymously and named as Native 1, 2 for native speakers, Mid1, 2, 3, … 10 for middle school students, and High1, 2, 3, … 10 for high school students.

2. Measurement

For Gyeongnam students, recording was done in a quiet and empty classroom. Samsung NT455R4J and its built-in microphone were used for recording. Program used for recording and analysis was a speech analysis software program called Praat. Gyeongnam students were asked to read the seven colloquial expressions of the dialect in addition to eight English sentences. It was to screen out the students who were not a dialect user. Native speakers were asked to record their voice on their phone and send the audio files to the researcher. Their files were also analyzed using Praat.

Recordings were analyzed using Praat and IBM SPSS. With Korean recordings, overall pitch contours and pitch range were measured. Student participants were confirmed to be the dialect users based on pitch contours. Pitch range was measured to see if there is any pitch range difference between students' Korean and English recordings. English audio files were annotated based on the English ToBI system and analyzed in five categories: initial pitch contours, final pitch contours, pitch range, word stress patterns, and pitch gap around nuclear stress.

3. Procedures

Students were asked to come into the classroom one by one and sit next to the researcher. Researcher explained the purpose and procedures of the experiment to students beforehand and students signed a consent form. They first read the reading materials in silence and were allowed to practice once or twice. When they said they were ready, the researcher pressed the record button and students read out the sentences one by one starting from Korean sentences to English ones. Each recording per person took about ten to fifteen minutes.

4. Reading Materials

Reading materials were eight English sentences and seven Korean sentences. English sentences are of various kinds: three declarative sentences, two wh-questions, two yes-no questions, and one tag question. They were chosen to observe typical pitch patterns of English sentences. Reading materials contain words with different numbers of syllables to analyze word stress patterns. The level of words is that of elementary and middle school based on the basic English word list suggested on the national curriculum. Figure 1 shows the English sentences.

Declarative sentence

1) He forgave his grandparents.

2) The communication class was difficult.

Listing

3) I like avocados, pineapples and oranges.

Interrogative sentence

Wh-question

4) What are we going to learn today?

5) Which university is the best for me?

Yes-no question

6) Do you have to watch the basketball game tomorrow?

7) Do you know that alligators got out of the zoo yesterday?

Tag question

8) She came to our Halloween party, didn't she?

Figure 1. English recording materials

Reading materials contain words with different numbers of syllables from one syllable to five syllables. They were selected to analyze word stress patterns. The level of English words is mostly that of elementary and middle school according to the basic English word list suggested on the national curriculum. Wh-questions and yes-no questions were chosen because they have different final pitch contours; wh-questions end with a falling tone and yes-no questions with a rising tone. The assumption was that students would finish a sentence with a falling tone even when asking yes-no questions, since Gyeongnam people usually lower the final pitch asking questions regardless of the question type. A tag question was selected for the same reason.

All Korean sentences are colloquial expressions of the Eastern Gyeongnam dialect, excerpted from 『함안 방언 연구(the Study of Dialect of Haman)』. They were chosen to see if the students show typical dialectal pitch patterns, i.e. if they are fluent in the Eastern Gyeongnam dialect, and possibly, can be affected by it. Figure 2 below contains the Korean sentences used as reading materials.

1) 가는 부산에 산다. (그 아이는 부산에 산다. He/she lives in Busan.)
2) 알약 말고 가리약으로 도라캐라. (알약 말고 가루약으로 달라고 해라. Tell them to give powdered medicine instead of pills.)
3) 뜨신 물 말고 찬물 좀 없나? (뜨거운 물 말고 찬물 좀 없어? Don't you have cold water instead of hot water?)
4) 저녁 묵고 집에 놀러온나. (저녁 먹고 집에 놀러와. Come visit my place after dinner.)
5) 니 학교에 갔다 왔나? (너 학교에 갔다 왔어? Did you go to school?)
6) 니 어데 가나? (너 어디 가? Are you going somewhere?)
7) 니 어데 가노? (너 어디 가? Where are you going?)

Figure 2. Korean recording materials

IV. Findings

1. Korean Recordings

All twenty Gyeongnam students showed typical pitch patterns of the dialect. No anomaly was found. It was confirmed that the students were fluent users of the Eastern Gyeongnam dialect. In terms of pitch range, the average pitch range of each group was calculated and compared to each other. The results are as below.

Table 1. Average pitch range of Korean recordings

Group	Middle	High
Average Pitch Range	123.4571	100.8429

A Mann-Whitney U test indicated that the pitch range of Korean sentences was statistically wider for middle school students (*Mdn* = 123.4571) than high school students (*Mdn* = 100.8429), U = 1595, *p*< .001.

2. English Recordings

1) Initial Pitch Contours

The F0 pitch of the first and second vowels in every recording was measured. The comparison was based on the average pitch of the first and the second vowel of each sentence. Pitch contour was considered to be level or flat when the pitch gap is less than 10.

Table 2. Average F0 of initial pitch (Hz)

Type	Declarative S1		Declarative S2		Declarative S3		Wh-question S4	
Native	215 →	219	219 →	222	238 ↗	270	228 ↗	263
Middle	276 ↘	247	243 ↗	267	256 ↘	239	250 →	246
High	239 ↘	217	215 ↗	229	226 →	218	224 →	222

Type	Wh-question S5		Yes-No Question S6		Yes-No Question S7		Tag Question S8	
Native	259 ↗	270	207 ↗	262	207 ↗	335	229 ↗	266
Middle	263 ↘	231	236 ↗	276	242 ↗	266	262 →	260
High	232 ↘	209	216 ↗	250	220 ↗	246	249 ↘	227

Native speakers mostly raised their pitch as they went from the first syllable to the second. On the contrary, Gyeongam students did not raise the pitch as much as native speakers, and even lowered it in three sentences. To understand the details, the pitch gap between the first and second vowels was also compared. Middle school and high school students had similar pitch gaps compared to native speakers. Even when two student groups did not have the same pitch contours, they were similar with each other in the pitch gap more than with native speakers.

Interestingly enough, Gyeongnam students selectively pronounced the first syllable with a high pitch based on the first word. Gyeongnam students did not started the sentence with a high pitch when the first word was an article or an auxiliary verb. On the other hand, the first word was read with a high pitch when it is a subject of the sentence or an interrogative pronoun. The initial pitch contours of students imply that the dialect could have influenced them, especially since this tendency coincides with the phonological

characteristics of the dialect users, not of general Korean speakers.

2) Final Pitch Contours

The F0 pitch of the penultimate and ultimate syllables in every recording was measured. The comparison was based on the average pitch of the penultimate and ultimate syllables of each sentence. Table 3 shows pitch data and final pitch contours.

The final pitch contours of Gyeongnam students are mostly similar to that of native speakers. However, high school students had a tendency to raise the final pitch in the first wh-question (sentence 4) and not to raise it in the second yes-no question (sentence 7) unlike two other groups. Also, both native speakers and middle school students raised the final pitch in sentence 8, even though it was a tag question.

The results were inconsistent with the assumptions that there would be some kind of a dialectal influence on the final pitch contours and that students would have the same falling tones regardless of the question type. Data show that students were mostly good at recognizing and producing the right final tone for each sentence type.

Table 3. Average F0 of final pitch (Hz)

Type	Declarative S1		Declarative S2		Declarative S3		Wh-question S4	
Native	169	130 ↘	189	156 ↘	182	171 ↘	183	137 ↘
Middle	234	204 ↘	231	201 ↘	229	204 ↘	204	211 →
High	211	175 ↘	197	176 ↘	181	154 ↘	166	186 ↗

Type	Wh-question S5		Yes-No Question S6		Yes-No Question S7		Tag Question S8	
Native	166 ↘	137	200 ↗	260	251 ↗	278	140 ↗	321
Middle	218 ↘	208	209 ↗	231	214 ↗	226	222 ↗	266
High	189 →	198	195 ↗	210	186 →	187	207 →	213

3) Pitch Range

The average of each group's pitch range was calculated and compared to each other. IBM SPSS was used to compare the means. Table 4 shows the average pitch range of each group.

The Kruskal-Wallis H test was performed to explore the pitch range of different groups, i.e. native speakers, middle school students and high school students. There is a statistically significant difference among three groups (Chi square = 11.259, p = 0.004, df = 2) with a mean rank pitch range of 128.16 for native speakers, 81.43 for middle school students and 87.64 for high school students. The results of the Bonferroni post hoc test show a significant difference between the native speakers and two groups of Gyeongnam students. Results are on Table 5 and 6.

Table 4. Average pitch range of English recordings

Group	Native	Middle	High
Pitch Range	180.1875	125.5	131.3875

Table 5. Kruskal-Wallis H test summary on pitch range

Total N	Test Statistic	Degree Of Freedom	Asymptotic Sig. (2-sided test)
176	11.259a	2	.004

a. The test statistic is adjusted for ties.

Table 6. Pair-wise comparisons between groups on pitch range

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.a
middle-high	-6.219	8.055	-.772	.440	1.000
middle-native	46.731	13.952	3.349	.001	.002
high-native	40.513	13.952	2.904	.004	.011

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Test results show that the pitch range of native speakers is significantly broader than that of both middle and high school students. There was no difference between student groups. These results are not compatible with the previous assumption that the Gyeongnam students would have a considerably wide pitch range.

4) Word Stress

In general, students pronounced words correctly when reading relatively more familiar or frequently exposed words. However, when it comes to words that are less used, students tended to apply the stress rules of the Eastern Gyeongnam dialect inadvertently. No difference between two student groups could be found in terms of the number of stress errors: twenty eight errors made by middle school students and thirty by high school students.

Students hardly made stress errors while pronouncing two-syllable words: 'forgave', 'today', and 'party'. Only two high school students made stress errors in reading 'forgave', and 'party.' (High 5 and High 7 respectively) High 5 stressed the penultimate syllable in 'forgave' and High 7 the ultimate syllable in 'party.' The same tendency could be observed with several three-syllable

words like 'difficult', 'basketball', 'tomorrow', and 'yesterday.' Except High 10, every student pronounced words with correct stress. High 10 stressed the ultimate syllable in 'basketball', and the antepenultimate syllable in 'tomorrow.'

However, not every three-syllable word was exempt from a stress error. Some words were unfamiliar to students or used as loanwords, inducing errors. Many errors were made, pronouncing some three-syllable words: 'grandparents', 'Halloween', pineapples', and 'oranges.' In pronouncing 'grandparents', twelve middle and five high school students made errors. All of them stressed the penultimate syllable. Seventeen students made the same stress error in the word 'Halloween' by stressing the antepenultimate syllable. Five middle and seven high school students stressed the penultimate syllable reading 'pineapple.' Lastly, six middle school students and two high school student stressed the penultimate syllable of 'orange.'

Most students pronounced four-syllable and five-syllable words correctly except for a few students. Two middle and two high school students made a stress error in 'alligator.' Three of them (Mid 7, Mid 8, High 10) put stress on the penultimate syllable while one student (High 8) on the ultimate. 'Avocados' is not that commonly used compared to other words like 'basketball' or 'yesterday,' but all the students pronounced it correctly. Only two students made an error in five-syllable words: High 5 in reading 'communication' and High 10 in 'university.'

5) Pitch Gap around Nuclear Stress

Pitch gap around nuclear stress (the gap between nuclear stress and surrounding syllables) was measured and compared. This was to see if the subjects make the distinction between stressed and unstressed syllables with pitch. The Kruskal-Wallis H test and the Bonferroni post hoc test were used to compare the means. Below are the result of the Kruskal-Wallis H Test.

The Kruskal-Wallis H test was performed to explore the pitch gap around

nuclear stress of three subject groups. There is a statistically significant difference among groups (Chi square = 12.874, p = 0.002, df = 2) with a mean rank pitch range of 119.16 for native speakers, 95.70 for middle school students and 75.17 for high school students. This means that the pitch gap was different among groups. The results of the Bonferroni post hoc test show a significant difference between the native speakers and high school students, and between middle and high school students. However, native speakers and middle school students were not significantly different.

Table 7. Kruskal Wallis H test summary on pitch around nuclear stress

Total N	Test Statistic	Degree Of Freedom	Asymptotic Sig. (2-sided test)
176	12.874a	2	.002

a. The test statistic is adjusted for ties.

Table 8. Pair-wise comparisons between groups on pitch gap around nuclear stress

Sample1-Sample2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Siga
high-middle	20.531	8.054	2.549	.011	.032
high-native	43.988	13.950	3.153	.002	.005
middle-native	23.456	13.950	1.681	.093	.278

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

V. Discussion

The goal of the research was to provide a better understanding of the effects of the Eastern Gyeongnam dialect on English intonation. Another research question was to determine whether two student groups differ in English intonation. The results of the study suggest that the Eastern Gyeongnam dialect has a significant impact on English intonation in initial pitch contours, word stress patterns and the pitch gap around nuclear stress. However, the effects were not conspicuous or observable in final pitch contours

and pitch range. In addition, there was no marked difference between middle school and high school students except in the pitch gap around nuclear stress.

In initial pitch contours, Gyeongnam students tended to start the sentence with a high pitch when the first word was a subject or an interrogative pronoun, forming falling or level contours. It is likely that students were influenced by the dialect since the falling initial pitch contour is one of the characteristics of the dialect according to previous studies (An, 2014; Kim, 2001; Koo, 2015, Lee, 2001). Seoul Korean, on the contrary, usually has a rising initial pitch contour (Kim, 2001; Koo, 1991). One interesting thing to note is that Gyeongnam students did not start the sentence with a high pitch when the first word was an article or an auxiliary verb. Students might not find articles or auxiliary verbs important enough to deserve a high pitch. This could be also because students had been exposed to pitch patterns of yes-no questions often for a long time. Falling initial pitch is a unique trait of the dialect but it can mislead a listener to pay attention to the first word of a sentence more than necessary.

The influence of the dialect was not observed in final pitch contours. In addition, students could mostly differentiate the final pitch of wh-questions from that of yes-no questions. These results do not coincide with the previous assumption that students would lower the pitch at the end regardless of the question type. Native speakers and middle school students raised the pitch at the end of the tag question. It is likely that they thought the question was for expressing uncertainty (genuinely asking about the fact). The results imply that students learned and were well aware of final pitch patterns of English questions.

Pitch range of the students was similar in both Korean and English recordings. It was significantly narrower than that of native speakers. These results were contrary to the previous studies. It can simply mean that native speakers have the broader pitch range than Gyeongnam students. Another possible explanation is that the recordings could not reflect students' authentic

pitch range since students were not in a natural conversational context.

Another crucial finding is that the Eastern Gyeongnam dialect can have effects on English word stress. No difference was found between two student groups in terms of the number of errors. Students made a significant amount of stress errors in three-syllable or unfamiliar words. More importantly, almost all of the stress errors resulted from following the stress rules of the dialect. Students made errors even with easy words when the words were used as loanwords. This means that the Eastern Gyeongnam dialect can have a negative impact on English word stress and further on overall intelligibility. Field (2005) says that stress shifting to the right is more of a threat to intelligibility than to the left. Some of the stress errors were made by shifting stress to the right like [oˈrændʒəs] and [pɑɪnˈæpəlz]. Students' stress errors can thus impair intelligibility when repeated throughout the communicative context.

Middle and high school students showed difference only in the pitch gap around nuclear stress. High school students made less of the pitch difference between stressed and unstressed syllables than middle school students. Middle school students and native speakers were similar. The dialect can be the reason for these results. Gyeongnam dialect has characteristics of a tone language (Koo, 1991). This means that Gyeongnam people distinguish stressed syllables from unstressed ones with pitch. Thus, middle school students might have stressed nuclear stress syllables with a higher pitch. High school students, on the other hand, could have neutralized the dialectal trait. Because of that, their intonation sounded more like general Koreans — mostly flat between syllables.

VI. Conclusion

The study suggested the possibility of the transfer of the Eastern Gyeongnam dialect. Two research questions were answered. First, the Eastern

Gyeongnam dialect can influence English intonation in various areas: mostly initial pitch contours and word stress patterns. Second, no difference could be found between two student groups. One hopeful note is that students showed appropriate intonation and word stress when reading familiar sentence types or words. The dialect can also have a positive influence on learning English intonation. Gyeongnam speakers are familiar with stressing a syllable using pitch; they are used to the idea of ups and downs of intonation. This gives students an advantage in learning the concept of English intonation.

One thing that differentiates the study from previous ones is that subjects were students, not adults. This helps understand English intonation of the younger generations of this region. In addition, this study not only focused on the overall pitch contours, but also included other areas in analysis. This helps find out subtle and detailed effects and traits of the dialect.

On a side note, it cannot be stressed enough that this study does not imply that certain accents are superior or inferior to others. When an accent does not affect the communicative process, it only represents one's identity and originality, which is something to be proud of. It is thus an important task for researchers to carefully differentiate harmful traits from innocuous ones. Jenkins (2006) also mentioned that the distinction "between learner error and local variety" should be made so that Englishes from outer and expanding circles can be embraced. Future studies on this topic will be able to guide teachers and learners to decide on the degree of efforts they have to put in to lessen the effects of the dialect.

The pedagogical implication of the study is that students can overcome the dialectal influence through education as the results suggest. This implies that the role of a teacher is important since many students are unaware of the influence of the dialect. As explicit and implicit instruction can be effective in accentedness, comprehensibility, and intelligibility (Jang, 2019), it can be the first step of teaching intonation to let students know the dialectal effects. Mentioning the concept of a positive and negative transfer can be helpful. It

can help students be attentive to characteristics of the dialect and how it affects intonation. Effects of the dialect on initial pitch contours and word stress patterns should be addressed more than anything since they are the most conspicuous characteristics among others. Students then can learn English intonation with various activities in class. Since transfer is a mechanism learners develop to incorporate the target language into their language system, it would be beneficial for teachers to find ways to guide students to understand and make use of transfer and acquire the target language successfully.

Lastly, limitations of the study should be mentioned. First, the sample size was not big enough to generalize the results. Although it was bigger than most previous studies, still each student group only consists of 10 students. Second, student's level of English was not considered in analyzing the results. This unfortunately left out the opportunity to find out speaking patterns based on different levels of English. Third, it was not possible to record the authentic speaking of subjects since reading materials were provided in advance. Fourth, all subjects were female so there was no way of knowing male students' English intonation.

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<Korean Abstract>

정서린, 정현성. (2020). 동부 경남 방언이 영어 억양에 미치는 영향 연구: 학습가능성을 중심으로. *외국어교육연구, 34*(1), 191-214.

본 연구의 목적은 동부 경남 방언이 학생의 영어 억양에 미치는 영향을 알아보는 데 있다. 실험 목적은 다음과 같이 두 가지다. 첫째, 동부 경남 방언이 영어의 문두 및 문미 억양, 피치 범위, 단어 강세, 핵강세 주변 음의 높낮이에 유의미한 영향이 있는지 파악한다. 둘째, 방언의 영향에서 중학생과 고등학생 사이에 차이가 있는지 확인한다. 중학생 열 명, 고등학생 열 명, 원어민 두 명이 연구에 참여하였으며 모두 여성이었다. 원어민은 영어 문장 여덟 개를, 경남 학생은 구어체인 동부 경남 방언 문장 일곱 개와 영어 문장 여덟 개를 읽고 녹음하였다. 녹음자료는 음향분석프로그램인 Praat와 IBM SPSS로 분석하였다. 영어녹음자료를 바탕으로 문두 및 문미 억양 곡선, 피치의 범위, 단어 강세 패턴, 핵강세 주변 음의 높낮이를 분석한 결과는 다음과 같다. 문두 억양 곡선에서, 대부분 학생이 동부 경남 방언의 영향을 받은 것으로 보이는 곡선을 보였다. 문두 억양은 처음에 높은 음조로 시작해서 평조를 유지하거나 하강조를 보였다. 반면, 원어민은 대부분 문장에서 상승조의 곡선을 보였다. 한 가지 특이한 점은 문장의 첫 단어가 관사나 조동사일 때는 학생이 하강조를 보이지 않았다는 것이다. 문미 억양 곡선에서는 원어민과 경남 학생 사이에 뚜렷한 차이를 관찰할 수 없었다. 단어 강세에서도 방언의 특성이 드러났다. 학생은

익숙한 단어의 경우 강세 오류를 범하지 않았지만 낯설거나 외래어로 쓰이는 단어에서는 방언의 강세 규칙을 따라 많은 강세 오류를 범했다. 오류 개수에서 학년 간 차이를 보이지 않았다. 우리말과 영어를 발화할 때 모두 학생이 원어민에 비해 좁은 피치 범위를 보였다. 핵강세와 핵강세 주변 음절의 F0값의 차이를 살펴본 결과 원어민과 중학생이 비슷했으며 고등학생이 적은 F0값의 차이를 보였다. 이는 중학생이 고등학생보다 강세 음절과 비강세 음절을 피치로 잘 구분한다는 것이다. 본 연구는 방언이 영어 억양에 전이될 수 있는 가능성에 초점을 두고 실험과 분석을 진행하였다. 연구 결과는 동부 경남 방언이 여러 영역에서 영어 억양에 영향을 미칠 수 있으며 이 영향은 학년과 관계없이 비슷한 정도로 나타난다는 것을 보여준다.

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