

The Effects of Focus-on-form Pronunciation Instruction on the Evaluation of High School Students' Utterances

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The purpose of this paper is to attempt to draw out the effects of focus-on-form (FonF) pronunciation instruction during the evaluation of high school students' utterances by closely observing the processes involved in Public Speaking and Presentation (PSP) classes, which find out how FonF pronunciation instruction and different types of assessment affects the evaluation (such as accentedness, comprehensibility, and intelligibility, rhythm, fluency, and the pronunciation of English vowels). 64 Korean high school students, with their average English proficiency ranging from an intermediate to an advanced level, participated in this study. Findings were that their overall accentedness, comprehensibility, intelligibility, rhythm, and fluency were improved through the FonF pronunciation instruction. Moreover, their pronunciation of English vowels became much clearer and more typical after the FonF pronunciation instruction. Types of assessment affected the students' accentedness, comprehensibility, and fluency, while intelligibility and rhythm were not directly affected by the assessment type. Thus, it suggests meaningful implications for teaching pronunciation, emphasizing the effects of FonF pronunciation instruction.

I. Introduction

As communicative competences become more important all over the world, the status of English as an international language (EIL) became more influential. People with varying L1 using English as a communicative medium to communicate with each other has become pervasive (Galloway, 2017). The number of users who speak the varieties historically regarded as 'standard English (American, British, etc.)' have been the minority (Kang et al., 2020; Li, 2009).

Despite the fact that in Korea a large portion of English classes deal with speaking and listening skills as a consequence of the era of globalization, some Korean English as a Foreign Language (EFL) classes

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still focus on standard English, setting goals of acquiring standard English. One of the the reasons is that the EIL paradigm is barely reflected in language skills in the English textbooks. Only cultural elements are emphasized in them. Accordingly, many Korean high school students tend to just memorize what they want to deliver without consideration for any active communicative interaction with a variety of English speakers. These days, however, L2 learners' perceptions of pronunciation have dramatically changed. For better communication, a speaker's intelligible pronunciation and a listener's comprehensibility are more crucial factors than accurate and "native-like" pronunciation (Min & Chung, 2018). However, intelligible and comprehensible speech cannot be naturally acquired when learning a second language (Jenkins, 2006). Thus, pronunciation instructions are mainly discussed in this paper.

Pronunciation instructions are mainly divided into three types: focus-on-form (FonF), focus-on-forms (FonFs), and focus-on-meaning (FonM). These have been suggested in second language grammar studies by convincingly showing effects of instructional treatments integrating form and meaning (Spada & Tomita, 2010). Based on the overall results of the three types of instruction on grammatical development, their feasibility in pronunciation instruction has been explored. Among them, in this paper, only FonF instruction is applied to pronunciation teaching. FonM is not beneficial, mainly because the target language or pronunciation features are almost unnoticeable. To raise learners' consciousness is important for improving L2 learners' utterances, but FonM is hard to draw their attention. FonFs is also not suitable both for better communication and for the goal of English learning in Korea. Thus, this paper will show whether FonF instructions positively affects each pronunciation factor, as in accentedness, comprehensibility, intelligibility, and in suprasegmental and vowel pronunciation.

Accordingly, research questions are addressed as follows: (1) What are the effects of focus-on-form pronunciation instruction on learners' accentedness, comprehensibility, and intelligibility? (2) What are the effects of focus-on-form pronunciation instruction on learners' fluency and rhythm? (3) What are the effects of focus-on-form pronunciation instruction on the pronunciation of English vowels? (4) What are the effects of the types of assessment on the listeners' evaluation of learners' pronunciation? The motivation for setting up these research questions will be stated below.

II. Literature Review

1. Accentedness, Comprehensibility, and Intelligibility

Accentedness, comprehensibility and intelligibility are all correlated as a basis for pronunciation pedagogy (Munro & Derwing, 1995). Researchers conceptualized accentedness as the listener's perception of how different a language accent is 'from the variety of English commonly spoken in the community,' and comprehensibility as 'the listener's perception of the degree of difficulty encountered when trying to understand a speaker's utterance.' As for intelligibility, they defined it as 'the extent to which the speaker's intended utterance is actually understood by a listener.' To put it briefly, accentedness and

comprehensibility mainly deal with a listener's perceptions while intelligibility refers to listeners' actual understanding of what a speaker says.

In this part, intelligibility will be more specifically described: One of the elements in intelligibility is the interlanguage speech intelligibility benefit (ISIB). This term is the phenomenon that non-native speech is as intelligible as or sometimes more intelligible to non-native listeners than native listeners when the non-native speakers and listeners share the same L1 (Bent & Bradlow, 2003). Intelligibility can be differently assessed depending on the listener's language.

Presently, much research has focused on various topics of L2 speech including the relationship between accentedness, comprehensibility, and intelligibility (Derwing & Munro, 2015; Munro, 2008). The research has shown that accentedness, comprehensibility and intelligibility are at least 'partially independent dimensions' of L2 speech (Munro & Derwing, 1995). It means listeners' accentedness ratings for the L2 speaker's utterance did not consistently correlate to comprehensibility or intelligibility ratings. That is, a certain speaker could have a strong foreign accent, yet still be highly intelligible. Even if an L2 speaker's speech is heavily accented, he/she is not always rated as difficult to understand, while a speaker who shows unintelligible speech can be rated as difficult to understand.

Perceptual evaluation of accentedness, comprehensibility, and intelligibility has been also examined. Most studies have mainly revealed perceptual evaluation of three criteria simultaneously. To identify their relationship, Derwing and Munro (2009) examined whether listeners could distinguish a native accent from a non-native accent when sentences were spoken backwards. They asked listeners to listen to some passages of 36 words or single words. The results they found were that a speaker's L1 can influence their target language accent. Also, even though their utterances are with an accent, it does not mean that communication always breaks down. In the case of comprehensibility, they found the more accented utterances learners speak, the more difficult it is to comprehend them. In conclusion, accentedness is related to 'difference,' while comprehensibility is down to the 'listener's effort.' Some studies have found accentedness and comprehensibility can be affected by suprasegmental features, such as speech rate, pause frequency, and pause duration (Kang, 2010).

Derwing and Munro (2009) also evidenced that intelligibility and accentedness are totally independent. They asked listeners to transcribe what speakers said to assess their intelligibility, leading to the fact that accented English is sometimes much more intelligible. Other studies have explored a relation between comprehensibility and intelligibility. Kim (2008) found there is no correlation between them. According to Derwing and Munro (1997), however, they asserted that these two constructs correlate moderately using *Z*-transformed Person's $r = .51$, $p < .05$. Saito (2011) and Levis (2018) also found that they are correlated depending on phonology for L2 listeners due to L2 listeners' tendency to usually rely on lexis, syntax, and context. Moreover, some studies have investigated the roles of linguistic backgrounds when measuring comprehensibility and intelligibility. When the speakers' L1 is different from the listeners' L1, it can have an effect on intelligibility and comprehensibility.

2. Rhythm and Fluency

Rhythm and fluency are suprasegmental features, which are important for effective communication. First, rhythm is one of the three aspects of prosody, along with stress and intonation. The fluency of utterances is more affected by rhythm than by intonation. It is how a speaker uses a combination of stressed and unstressed words in sentences. According to Zhang (2002), rhythm is the basic recurrence of elements in alternation with opposite or different elements. It consists of different components, such as intensity, length, and F0, and is divided into two types: (a) syllable-based rhythm, and (b) stress-based rhythm (Laver, 1994). Syllable-based rhythm is the rhythmic beat by the recurrences of syllables, instead of stresses. Korean, Spanish, and French are examples. On the contrary, English and German are good examples of stress-based rhythm, which is when stressed syllables tend to occur at roughly equal intervals in time (Yavaş, 2020). However, Low (2006) has showed that each language cannot be strictly classified as syllable-based or stress-based. They tend to instead have either more syllable-based or stress-based features. Nonetheless, the distinction between the two types of language is definitely important in the fact that learners' L1 can be different rhythmically from stress-based English. According to Grabe and Low (2002), there is a third type of rhythm, mora-based. The use of the mora in the language processing is classified as mora-based rhythm, such as Japanese. Mora-based rhythm is a distinct rhythmic category, but it usually patterns with the syllable-based languages.

Table 1. Measurement of rhythm

Measurement	Description
%V	The sum of vocalic interval duration divided by the total duration of vocalic and consonantal intervals and multiplied by 100 (Ramus, Nespors, & Mehler, 1999)
ΔV	The standard deviation of vocalic interval duration (Ramus, Nespors, & Mehler, 1999)
ΔC	The standard deviation of consonantal interval duration (Ramus, Nespors, & Mehler, 1999)
VarcoC	The standard deviation of consonantal interval duration divided by the mean consonantal interval duration and multiplied by 100 (Dellwo, 2006)
VarcoV	The standard deviation of vocalic interval duration divided by the mean vocalic interval duration and multiplied by 100 (White & Mattys, 2007)
PVI (Pairwise Variability Index)	The difference in duration between immediately consecutive intervals and average these differences over an utterance (Low & Grabe, 2002)
rPVI	The raw non-normalized PVI $rPVI = \left[\sum_{k=1}^{m-1} d_k - d_{k+1} / (m-1) \right]$
nPVI-V	The vocalic normalized PVI $nPVI-V = 100 \times \left[\sum_{k=2}^n \left \frac{d_k - d_{k-1}}{(d_k + d_{k-1})/2} \right / (n-1) \right]$
VI (Variability Index)	The normalized duration of consecutive syllables (Deterding, 2001)

Many researchers have studied how a speaker's rhythm can be measured and quantified (Dellwo, 2006; Deterding, 2001; Low et al., 2000; Ramus et al., 1999; White & Mattys, 2007). Table 1 shows the various measurements of rhythm.

Second, fluency is regarded in which language learners freely communicate with each other as a speaker or a listener, which means it significantly deals with meaning negotiation (Willis, 1996). The aspects of fluency consist of three things: (a) cognitive fluency; (b) perceived fluency; and (c) utterance fluency. Cognitive fluency is an ability of the L2 speaker to smoothly translate thoughts into L2 speech, while perceived fluency is a subjective measure of what listeners perceive about an L2 speaker's cognitive fluency. What this paper focuses on is utterance fluency due to the fact that it is an objective acoustic measure of an utterance. Proposed measures can be seen in Table 2.

Table 2. Proposed measures of fluency

Measures	Description
Speech Rate (SR)	Syllables divided per total time
Articulation Rate (AR)	Syllables divided by phonation time
Phonation-time Ratio	Phonation time divided by total time
Mean Length of Runs	Number of silent pauses divided by number of syllables
Number of Silent Pauses per Minute	Number of silent pauses divided by total time
Mean Pause Duration	Total length of silent pauses divided by total number of silent pauses
Number of Filled Pauses per Minute	Number of filled pauses divided by total time
Number of Repairs per Minute	Number of repetitions, restarts and repairs divided by total time
Mean Syllable Duration	Number of syllables divided by phonation time

3. Focus-on-form Pronunciation Instruction

The term, form-focused instruction (FFI), is usually used for language learning. Since L2 learners can focus on both target linguistic features and meaningful contexts through FFI, it can be one of the most effective integrated instructions. FFI is also divided into three types: focus-on-form (FonF), focus-on-forms (FonFs), and focus-on-meaning (FonM). These three instructions are effective tools for language pronunciation. More specifically, in FonF pronunciation instructions, attention to a target phonological form is made in the communicative context either implicitly or explicitly, while in FonFs pronunciation instructions, a series of specific phonological features are primary things for language learners to focus on in decontextualization. FonM pronunciation instructions just deal with communication and meaning, not the pronunciation itself, thus it is hard to acquire its accuracy (Jang, 2017; Macdonald et al., 1994; Saito, 2011). In this paper, FonF pronunciation instructions will be explored among them.

Many researchers have argued that one of the most powerful pronunciation instructions could be FonF instructions. Saito and Lyster (2012) used FonF instruction for testing how this instruction can promote the acquisition of the English sound /ɹ/ by adult Japanese English learners. They developed some tasks in which Japanese students were guided to pay attention to a focused pronunciation feature while learning English argumentative skills through public speaking activities. Moreover, Saito (2013) also reexamined the effects of FonF instruction on L2 pronunciation. These two studies showed learners' considerable improvement through pronunciation instruction. The results of the ANOVAs indicated that the learners who studied pronunciation with FonF tasks demonstrated moderate improvement with medium effects ($M = 14.71, 14.07$ Bark, $d = .74$).

Avery and Ehrlich (2008) devised FonF activities for teaching pronunciation. For segmental features, matching exercises, chain stories, or the survival pronunciation game can be used during the classes. These are focusing not only on communication but also on target phonological features without communication breakdown. Using the activities, the language learners can acquire much more accurate segmental and suprasegmental features. The same results have been seen in Spanish as well as in English.

Another study conducted by Kennedy and Trofimovich (2010) evidenced the effects of FonF pronunciation instruction. In this study, along three dimensions — accentedness, comprehensibility, and fluency — 10 ESL participants' pronunciation was assessed while receiving FonF instruction focusing on suprasegmental features in English lessons during one semester. The aims of this study were to raise the participants' awareness of English pronunciation patterns and to encourage them to improve their fluency and intelligibility. Accordingly, the instructor used some context-based activities from Hahn and Dickerson's (1999) *Speechcraft* textbook series. Interestingly, they also analyzed quantitative and qualitative aspects of L2 learners' language awareness comments related to the three dimensions via a series of Spearman correlations. Conducted both pre- and post-test, only for the post-test, these analyses revealed a significant relationship between the three dimensions and the number of qualitative awareness comments — accentedness ($r = .55$, $p = .049$), comprehensibility ($r = .60$, $p = .03$), and fluency ($r = .67$, $p = .017$). It means higher pronunciation ratings were strongly connected to the greater students' qualitative language awareness comments. This finding implies that L2 learners' pronunciation can be improved if they become aware of what they learn due to their language awareness.

Additionally, providing feedback to language learners is essential when they are asked to use phonological features correctly (Celce-Murcia et al., 2010). Some studies have showed the importance of giving feedback about L2 learners' utterances. Kissling (2013) first focused on the types of pronunciation instruction for 95 English learners of Spanish as a foreign language. She compared the effects of explicit instruction to implicit instruction. Accordingly, the results of her study showed both Spanish student groups receiving either explicit or implicit instruction improved their pronunciation. The most interesting finding is that giving feedback is much more important than the mere type of instruction. Saito and Lyster (2012) also investigated whether FonF with or without corrective feedback can be facilitative to learners' pronunciation development. They focused on /ɹ/ sounds by Japanese learners. The outcome showed that exposing learners to FonF tasks alone was insufficient to improve their pronunciation acquisition of the /ɹ/ sound. FonF instruction with corrective feedback about learners' mispronunciation, however, demonstrated much more effective impacts on their pronunciation development, which means FonF instruction played an important role of teaching pronunciation when it is combined with corrective feedback.

4. Types of Pronunciation Assessment

L2 learners' pronunciation can be assessed using various types of assessment: (a) reading-aloud tasks, (b) prepared speech tasks, and (c) impromptu speech tasks. Each task can affect L2 learners' accentedness, comprehensibility, intelligibility, and even suprasegmental or segmental features. In other words, the difference of speaking styles shows the different acoustic variables.

The most controlled task, a reading-aloud task, accounts for nearly half of the positive results for global improvement (Hardison, 2004; Thomson & Derwing, 2015). Much research suggests the effects of controlled tasks for improving L2 learners' pronunciation. It can be much easier to give pronunciation instructions and

feedback when teachers use controlled tasks, such as reading-aloud tasks. However, according to Thomson and Derwing (2015), these tasks are not likely to guarantee a high ecological validity and to be authentic in reality. Furthermore, the tasks are sometimes useless for communicative language learning classes. They cannot generalize spontaneous speech because they are not representative of language learners' real productions. Thus, reading-aloud tasks are not considered in the current study.

Prepared speech tasks involve learners sharing their opinions after memorizing their scripts. This type of task allows planning time and also affects learners' accentedness, comprehensibility, intelligibility, segmental and suprasegmental features. Learners can prepare what they will say in front of listeners by practicing their speech many times. According to Ortega (1999), if a speaker prepares his speech, his cognitive burden can decrease, which means the speaker's automatization and restructuring could be easily shown when he uses the target language. Thus, the evaluation of a speaker's utterances could be improved as he becomes more fluent. Moreover, Ochs (1979) explained the differences between prepared speaking tasks and impromptu speaking tasks. The prepared speech is more grammatically correct, consists of more complex sentence constructions and does not show any repetitive expressions compared to an impromptu speech, thus its intelligibility, comprehensibility, and fluency are much better.

Impromptu speech is quite different from prepared speech because the speaker has to perform without any preparation, script, or other additional notes. Basically, most communication in daily life happens without any scripts or notes. This is the same with an impromptu speech, in other words, an unprepared talk (Ali & Winda, 2019). Picture tasks, which are a kind of test involving contextualized use of language, contribute more information not only about the suprasegmental and segmental features, but also learners' accentedness, comprehensibility and intelligibility. Also, the most naturalistic phonological features can be assessed through these tasks. However, there is major criticism that these tasks do not assess intelligibility in the strictest sense compared to reading-aloud or prepared speech tasks. Despite its disadvantage, the main goal of judging students' spontaneous speech is to measure the speech intelligibility of the speaker's real-life production.

III. Methodology

1. Participants

A total of 95 high school students (aged 18-19) in Sejong City participated in this study. All of the participants are native speakers of Korean and have been learning English for more than nine years. They are students of S high school, with their average English proficiency ranging from an intermediate to an advanced level. The proficiency was determined by their achievement in a mock test. Their grades of the mock test in June in 2019 were reported by 95 of the participants ($M = 1.75$, $SD = 8.12$). Five intact classes were randomly assigned. Every class received the same FonF pronunciation instruction in speaking classes (Public Speaking and Presentation) for one semester.

2. Procedure

This study was carried out during specialized-English classes, Public Speaking and Presentation (PSP). Table 3 shows the overall research procedure. The structure of the current study consists of five sessions based on the previous research (Kennedy & Trofimovich, 2010; Kissling, 2013; Saito & Lyster, 2012).

Table 3. Overall procedure of the study

Session	Process	Instruction	Teacher
Session 1	Read articles of various topics.		
Session 2	A Korean teacher explains the target pronunciation form and the content of the article.	Explicit pronunciation instruction	Korean teacher
Session 3	Do activities related to the article.	FonF pronunciation instruction	Korean and native teachers
Session 4	Write learners' opinion about the article and share it.	Feedback	Korean and native teachers
Session 5	Present their opinion about the article. - prepared speech/impromptu speech	Types of assessment	Other learners and Korean and native teachers

In Session 1, participants read articles of various topics, such as human rights, the economy, politics and so on. They are highly fascinating topics for the students. After reading, the Korean English teacher explained the target pronunciation form in each article with some background knowledge of the topic during Session 2. With a three-week interval, each class received the same steps (Session 1-2) by changing from the article to the target form. The effects of FonF pronunciation instruction could be confirmed in Session 3. Korean and native English teachers taught the classes together using different activities which contained the target form and the topic. Learners engaged in free writing to share their own opinion about the topic in Session 4. During this session, both teachers gave feedback about their pronunciation for both segmental or suprasegmental features. After this production activity, they shared their opinions of the article. At first, they did a prepared speech, and then added an impromptu speech when they read the subsequent articles.

3. Instruments and Data Analysis

1) Focus-on-form Pronunciation Instruction

Based on the topic taught in each class, five FonF pronunciation activities were implemented. Each class topic included a certain target pronunciation feature, i.e., text-based input, thus FonF instruction was focused on these features during each topic. The target features were chosen based on a high relative functional load (RFL), which refers to the importance of certain features in making distinctions in a

language. Each class was designed to encourage the participants to notice and practice the target sound in the context of the class topic. The teacher explained each target sound briefly and read the article that contained the target. By reading the article and doing each FonF activity, the participants acquired the target feature intuitively.

In addition, all classes dealt with suprasegmental features. Although there were no target sentences to confirm the suprasegmental features, general rhythm or fluency was mentioned. In the case of the last class's topic, there was no target feature. Rather, the teacher focused on vowels because, in fact, the challenge of teaching vowels lies in how to find authentic and rich contexts for practice. Thus, in the last class, vowels were targeted the most. Moreover, if students made some errors (not only the target forms, but any other forms) when they spoke, the teacher gave any feedback to them, usually using recast. Table 4 shows the class topic, the target feature and each activity, respectively.

Table 4. Focus-on-form pronunciation activities

Class Topic	Target Feature	FonF activity
Inferiority Complex	/i/ vs. /ai/ vs. /i/ suprasegmental features	explicit explanation card game
Sharing Economy 1	/ei/ in status suprasegmental features	explicit explanation chain story
Sharing Economy 2	/ɪ/ or /ʌ/ in onset or coda vowels suprasegmental features	explicit explanation chain story
The Origin of Religion	/ɪ/ or /ʌ/ in onset vowels suprasegmental features	explicit explanation Find Your Twin game
Mowgli Children & Critical Period	vowels suprasegmental features	Find Your Twin game

In summary, during each class, the target features were explicitly explained and implicitly exposed. While the students spoke out their opinions about the topic through FonF activities, if they made some errors, the teacher gave them feedback, usually implicitly, as mentioned previously.

2) Prepared and Impromptu Speech Tasks

Both types of assessment were recorded in the same way during the same period. Each pre-test was recorded before the class started, and each post-test after the class finished. Because a maximum of ten students could present in one class, two classes were needed for each test. Samsung Digital camcorder SMX-F34SD was used for recording students' speeches, and each recording sample was encoded by using an encoding program.

Each prepared speech task was performed based on what each student wrote about the topic. Prior to doing a public speech for three minutes, students could prepare their scripts in advance. For the pre-test, the prepared speech topic was random, which means students could choose what they wanted to deliver,

while for the post-test, the broad topic was about 'equality or inequality.' Students could narrow down the broad topic considering what they want to major in in the future. An impromptu speech task is different from the prepared speech task in terms of time, topic and the way to speak. Students had to describe one or two photos for more than one minute. The speech topic was given to them. 'School life,' 'Past, Present, and Future,' or 'Equality or Inequality' were the given topics. They could choose one of them and talk about their opinions related to the photo which were picked randomly.

3) Transcription and Data Analysis

All data was coded and transcribed according to a transcription sample, and was checked again by the researcher. Since this study focuses on both suprasegmental features and vowels, the utterances were transcribed. For the analysis, the forced-alignment was carried out to annotate individual segments in TextGrid using a Praat script. After being recorded, some speech samples, of which the quality was not good, and other samples, of which the speaking ability was evaluated to be native-like, were excluded in order to maintain the reliability of the present study. The cases which were of too low a quality were 22 in number, and the number of students who were native-like was nine. Thus, the total is 64 students' speeches. More specific analyses are as follows.

(1) Accentedness, Comprehensibility, and Intelligibility

For analyzing students' accentedness, and comprehensibility, the Likert scale was utilized by three native speakers, three Korean teachers, and students in the same class as the speaker (in total, 25 listeners per sample). Scales almost always have an odd number of points, ranging from five to nine, and a five-point scale was considered best to get satisfactory and appropriate results. The overall impression was assessed based on the evaluators' intuitive judgements. The evaluating session was conducted individually and took approximately 120 minutes. In total there were 256 speech samples (Prepared_pre 64, Prepared_post 64, Impromptu_pre 64, Impromptu_post 64 speech samples) and they were played in a randomized order to make their judgement more reliable. In order to enhance the reliability of the evaluators, this study added two extra activities. First, to enhance intra-rater reliability, they were given specific instruction to make sure that only aspects of pronunciations should be judged, not lexico-grammatical features (Derwing & Munro, 1997). Second, to enhance inter-rater reliability, six listeners gathered and did a warm-up session by judging five sample sounds randomly selected from the data after listening to the definition of accentedness and comprehensibility. They checked how they individually evaluated and then compromised together. The students as listeners also received the same procedure. The information of the native and Korean teachers as listeners are written in Table 5.

Table 5. Listeners' information

Listener	Nationality (Hometown)	Age	Years of teaching experience in Korea
Native 1	UK (Belfast)	35	10 years
Native 2	Canada (Toronto)	30	6 years
Native 3	USA (New York)	34	3 years
Korean 1	Republic of Korea (Daejeon)	31	6 years
Korean 2	Republic of Korea (Seoul)	29	5 years
Korean 3	Republic of Korea (Daejeon)	29	5 years

Following the listening evaluation, Statistical Package for Social Science (SPSS v. 12.0) was utilized in analyzing the above data collected from the two types of speech instruments. These four measures were confirmed to get internal consistency reliability using Cronbach's alpha analyses. According to Cronbach's alpha analyses, the evaluators showed a satisfactory level of consistency in their accentedness judgement of the speech samples ($\alpha = .74$). As the Cronbach's α was above the suggested benchmark value of .70 (Larson-Hall, 2010), the evaluators' accentedness scores were averaged across each speech sample. On the contrary, the evaluators' comprehensibility judgement of the speech samples did not show a satisfactory level of consistency ($\alpha = .46$). It can be interpreted that changes of comprehensibility differ depending on who the evaluators are. Although most of their judgements increased in a similar way, the increases were different compared to the accentedness judgements.

For analyzing the students' intelligibility, evaluators transcribed what they had heard (Justin et al., 2020). In this case, they transcribed not every sentence but two to three sentences that they had heard. To do so, the evaluators listened to each speech once again after checking accentedness and comprehensibility scales. Based on the transcriptions, an intelligibility score was ascribed separately to each speech sample's utterances evaluated by each evaluator ($N = 256$). Due to the variation in the evaluators' phonological loop capacity, only the focal vowels were assessed to maintain construct validity. Also, spelling mistakes were accepted because they could be assessed in the same realization of phonemes. For instance, in the first period, the target sounds were /i/ and /i/. Regarding the original sentence, 'I had been nursing a grievance against my friends for months,' *greevance*, *greivance*, and *gri-vance* were accepted, as the target vowel sound had been transcribed with a possible spelling variant. *grivance*, however, was not accepted, as the vowel sound differed. The total transcription errors per whole words in sentences were calculated as a percentage (100% - the error percentage). If the whole sentences consist of 30 words, and there are five errors in transcription, then the intelligibility percentage is 83.33%.

Each factor was then measured in terms of (a) a degree of improvement between pre- and post-tests using a paired samples *t*-test; (b) a difference between listeners using a one-way ANOVA; and (c) a comparison between the types of assessment via an independent samples *t*-test, respectively.

(2) Rhythm, Fluency and the Pronunciation of English Vowels

Praat (Boersma & Weenink, 2021) was utilized in analyzing acoustic features (i.e. rhythm, fluency, or

other pronunciation features). To analyze rhythm, nPVI-V was used. Concretely, the vowel duration measurement by Grabe and Low (2002) was applied: Vocalic intervals were defined as the stretch of signal between vowel onset and vowel offset, characterized by vowel formants, regardless of the number of vowels. Accordingly, the difference in duration of vowels between successive syllables multiplied by 100 was calculated by using Praat scripts and Python scripts.

Additionally, SPSS was also used to analyze rhythm in each pre- and post-test, and each type of assessment. Using a paired samples *t*-test, each rhythm of the pre- and the post-tests either in prepared speeches or in impromptu speeches was compared specifically. The mid-point of each vowel was annotated by hand to get the formants of vowels. The formants can show the rhythm of the utterance. For example, if the distribution of schwas is not so much deviated from the center of the vowel formant chart, we could say that the reduction of unstressed vowels is well represented, which means that the speaker's speech is stress-based.

In the case of fluency analysis, speech rate (SR) and articulation rate (AR) were used to measure it. The difference between the pre and the post speech samples, and the comparison between the types of assessments in terms of fluency were analyzed using *t*-test. Generally the number of pauses (Npause) and the duration of pauses (Durp) were used to analyze fluency. In the present study, however, background noise of the speech samples was hard to distinguish from the speeches themselves, which brought about unreliable results. Thus, Npause and Durp were excluded as fluency variables.

To analyze vowels, a Praat script was also used. Though both vowels and consonants were dealt with during the classes, as mentioned previously, this study especially focused on the vowels by describing a vowel chart. The vowels are easier than the consonants in revealing the improvement of pronunciation. And they also show how the rhythm is properly implemented in connected speech. To confirm differences between vowels of the pre- and the post-tests, the students' vowel formants (F1, F2) were analyzed via the Praat program too. Diphthongs, monophthongs with an adjacent glide such as /eɪ/ and /oo/, and rhotic vowels were excluded from the analysis, because their formants are not static. The locations of vowels can be visually described using the first and second formants (F1, F2). In this paper, the raw values of each formant were converted into Bark scale using a Praat script to normalize the gender difference of vowel formants. To get the data of their vowel formants, 256 speech samples were analyzed and combined into four data sets, which were impromptu pre-tests, impromptu post-tests, prepared pre-tests and prepared post-tests.

(3) Types of Assessment on the Listeners' Evaluation of Learners' Pronunciation

Overall the above analyses investigated the differences between types of assessments. Thus, the above results of the data are described again in this part focusing on two types of assessment on the listeners' evaluation of learners' pronunciation: prepared speech tasks and impromptu speech tasks.

IV. Results

1. Effects of Focus-on-form Pronunciation Instruction on Students' Accentedness, Comprehensibility and Intelligibility

A paired samples *t*-test, results revealed that FonF pronunciation instruction was effective to improve the students' accentedness ($t(3199) = -37.96, p = .000$), comprehensibility ($t(3199) = -38.78, p = .000$), and intelligibility ($t(3199) = -42.35, p = .000$) regardless of the type of pronunciation assessment. Table 6 summarizes the results.

Table 6. Comparison between pre- and post-tests in accentedness, comprehensibility, and intelligibility

Pair	<i>N</i>	Mean	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>
Acc_pre	3200	2.84	1.05	-37.96	3199	.000
Acc_post	3200	3.44	.92			
Com_pre	3200	3.54	.92	-38.78	3199	.000
Com_post	3200	4.20	.70			
Intel_pre	3200	64.26	4.83	-42.35	3199	.000
Intel_post	3200	88.96	3.75			

A one-way ANOVA was also conducted to investigate the difference between listener groups in each test. The ANOVA results confirmed that the three different listener groups significantly differed in the pre-test scores on accentedness, $F(2, 3197) = 12.58, p = .000$, on comprehensibility, $F(2, 3197) = 84.58, p = .000$, and on intelligibility, $F(2, 3197) = 3.43, p < .05$, while in the post-test, scores on accentedness only showed a significant difference, $F(2, 3197) = 12.58, p = .000$. No difference was found in scores on comprehensibility, $F(2, 3197) = .14, p = .87$, and on intelligibility, $F(2, 3197) = .14, p = .86$, as shown in Table 7.

Table 7. Summary of ANOVAs for pre-test scores

DV		Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>Sig.</i>
Acc_pre	Between Groups	27.59	2	13.79	12.58	.000
	Within Groups	3505.03	3197	1.10		
	TOTAL	3532.62	3199			
Acc_post	Between Groups	71.56	2	35.78	43.65	.000
	Within Groups	2620.65	3197	.82		
	TOTAL	2692.21	3199			
Com_pre	Between Groups	137.26	2	68.63	84.58	.000
	Within Groups	2594.24	3197	.81		
	TOTAL	2731.50	3199			
Com_post	Between Groups	.14	2	.07	.14	.87
	Within Groups	1579.235	3197	.49		
	TOTAL	1579.38	3199			
Intel_pre	Between Groups	107.17	2	68.63	3.43	.02
	Within Groups	2582.60	3197	10.41		
	TOTAL	2689.77	3199			
Intel_post	Between Groups	232.31	2	88.46	11.94	.19
	Within Groups	2126.22	3197	7.41		
	TOTAL	2391.61	3199			

Post hoc multiple comparisons were conducted to determine which specific groups differed from each other. The Tukey HSD test was used in this study. The results of the post hoc multiple comparisons are presented in Table 8.

Table 8. Summary of a post hoc multiple comparison for pre-test scores

DV	Listener	Listener	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
						LB	UB
Acc_pre	Native	Korean	-.276*	.076	.001	-.45	-.10
		Student	.011	.057	.980	-.12	.15
	Korean	Native	.276*	.076	.001	.10	.45
		Student	.287*	.057	.000	.15	.42
	Student	Native	-.011	.057	.980	-.15	.12
		Korean	.287*	.057	.000	-.42	-.15
Acc_post	Native	Korean	-.286*	.065	.000	-.44	-.13
		Student	.166*	.050	.002	.05	.28
	Korean	Native	.286*	.065	.000	.13	.44
		Student	.452*	.050	.000	.34	.57
	Student	Native	-.166*	.050	.002	-.28	-.05
		Korean	-.452*	.050	.000	-.57	-.34
Com_pre	Native	Korean	-.362*	.065	.000	-.51	-.21
		Student	-.619*	.049	.000	-.74	-.50
	Korean	Native	.362*	.065	.000	.21	.51
		Student	-.257*	.049	.000	-.37	-.14
	Student	Native	.619*	.049	.000	.50	.74
		Korean	.257*	.049	.000	.14	.37
Intel_pre	Native	Korean	-4.37*	.065	.000	-.25	-6.59
		Student	-8.25*	.057	.000	-6.74	9.78
	Korean	Native	4.37*	.065	.000	3.21	6.51
		Student	-3.88*	.049	.000	-2.37	-4.14
	Student	Native	8.25*	.057	.000	6.50	9.74
		Korean	3.88*	.049	.000	2.14	5.37

As for the pre-test scores on accentedness, the Tukey post hoc multiple comparison showed that a significant mean difference was found between [Native-Korean], $MD = .276$, $p = .001$, and between [Korean-Student], $MD = .287$, $p = .000$. As for the post-test scores on accentedness, it shows a significant discrepancy between [Native-Korean], $MD = .286$, $p = .000$, between [Native-Student], $MD = .166$, $p < .5$, and between [Korean-Student], $MD = .452$, $p = .000$. In the case of comprehensibility, only for the pre-test scores, the Tukey post hoc multiple comparison confirmed that [Native-Korean], $MD = .362$, $p = .000$, [Native-Student], $MD = .619$, $p = .000$, and [Korean-Student], $MD = .257$, $p = .000$, showed statistically significant differences. Intelligibility showed the same results. Only for the Intel_pre, the three listener groups' judgements were statistically significant for [Native-Korean], $MD = 4.37$, $p = .000$, and for [Native-Student], $MD = 8.25$, $p = .000$, and for [Korean-Student] $MD = 3.88$, $p = .000$, respectively.

Therefore, it seems that if the pronunciation instruction is implemented during the classes, English

learners will enhance their production in various aspects.

2. Effects of Focus-on-form Pronunciation Instruction on Students' Rhythm and Fluency

Through a paired samples *t*-test, changes between the pre-tests and the post-tests in terms of the students' vocalic normalized pairwise variability index (nPVI-V), the speech rate (SR), and the articulation rate (AR) are analyzed and distributions of schwa sounds are also presented. Table 9 displays the results of the *t*-test.

Table 9. Variables comparison between pre- and post-tests

	Pair	Types of Assessment	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>
rhythm	nPVI-V_pre	impromptu	64	73.60	11.26	1.77	63	.082
	nPVI-V_post	speeches	64	71.37	6.95			
	nPVI-V_pre	Prepared	64	71.37	8.26	-2.12	63	.038
	nPVI-V_post	speeches	64	73.78	8.81			
fluency	SR_pre	impromptu	64	3.76	.53	-8.27	63	.000
	SR_post	speeches	64	4.36	.37			
	SR_pre	Prepared	64	4.06	.40	-3.82	63	.000
	SR_post	speeches	64	4.29	.28			
	AR_pre	impromptu	64	4.07	.40	-5.70	63	.000
	AR_post	speeches	64	4.41	.35			
	AR_pre	Prepared	64	4.06	.40	-4.00	63	.000
	AR_post	speeches	64	4.30	.28			

According to Table 9, in terms of rhythm, nPVI-V scores were compared to examine the mean differences between the pre- and post-tests. Only the prepared speech had a statistically significant difference between the pre and the post-test, $t(63) = -2.12$, $p < .05$. There was statistically no significant difference between the scores for the nPVI-V_impre ($M = 73.60$, $SD = 11.26$) and the nPVI_impost ($M = 71.37$, $SD = 6.95$); $t(63) = 1.77$, $p > .05$. It can be interpreted that the majority of the students' obtained a native-like rhythm, i.e., the ceiling effect. This will be identified again in the discussion section.

In terms of fluency, the paired sample *t*-test verified the effects of focus-on-form pronunciation instruction. SR, and AR were compared to examine the mean differences between the pre- and post-tests. All temporal variables did show statistically significant differences between the impromptu speeches, [SR] $t(63) = -8.27$, $p = .000$, [AR] $t(63) = -5.70$, $p = .000$, and the prepared speeches, [SR] $t(63) = -3.82$, $p = .000$, and [AR] $t(63) = -4.00$, $p = .000$.

As seen in Figure 1, the impromptu post speeches (shown in dashed line) showed the tendency to make the schwa converge more on the mid-central position in the vowel space compared to the impromptu pre speech (shown in solid line). In the case of the impromptu speeches, the students were properly articulating reduced vowels instead of using full vowels when they produced their free speech. It showed the effects of the FonF instruction.

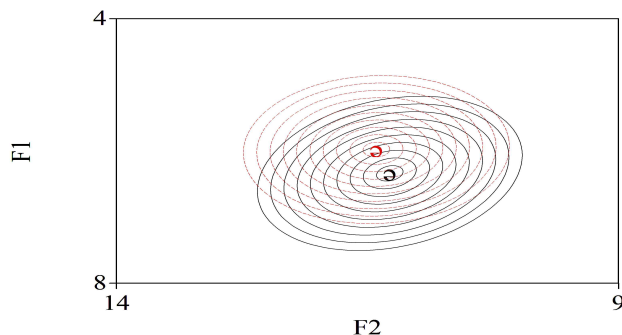


Figure 1. Comparisons of the schwa sound distribution of the impromptu speeches

In the case of the prepared speech, the schwa sounds were well pronounced in unstressed syllables without any discrepancy between them, as seen in Figure 2. The solid line circles refer to the pre speech, while the dashed line circles refer to the post speech. There was sufficient time to practice the prepared speech, thus the students could articulate the unstressed syllables naturally without any help of the pronunciation instruction.

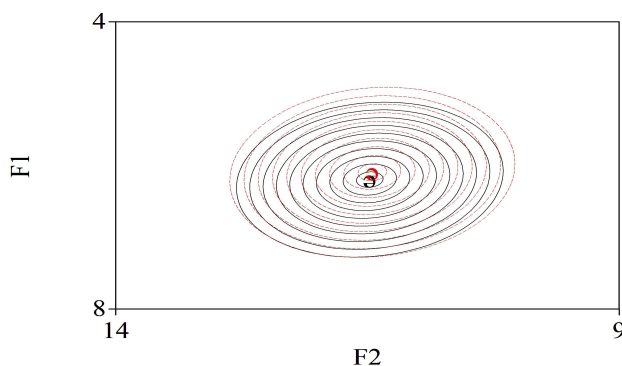


Figure 2. Comparisons of the schwa sound distribution of the prepared speeches

3. Effects of Focus-on-form Pronunciation Instruction on Students' Vowel Pronunciation

The vowels from both types of pronunciation assessment, impromptu and prepared speech tasks, in the pre- and the post-tests were analyzed in this part. Firstly, Figure 3 combined vowel charts of the students' impromptu speeches. IPA symbols in solid line represent the students' pre-speeches, while those in dashed line represent their post-speeches of the impromptu speech.

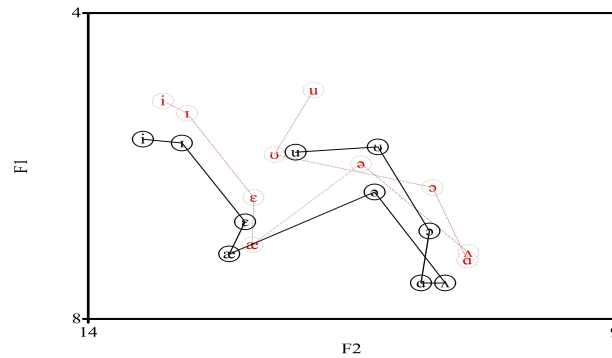


Figure 3. Combined vowel chart in impromptu speech

The overall distinction between vowels in Figure 3 tends to become much clearer. For instance, the high frontal vowel /i/ became positioned at a higher line, so that the distinction between /i/ and its lax counterpart /ɪ/ became more noticeable. The vowel /u/ also moved to a higher position compared to the pre-speech. Meanwhile, the lax vowel /ɜ/ moved to a central position, which shows frontalization. This situation, however, is also quite normal and natural in the natives' production.

Concerning the high back vowels, /ɔ/ came to be used as /ʊ/ after the instruction. Both back vowels became centralized, as they are used in the southeastern USA (Yavaş, 2020: 87). In the aspect of the other back vowels, /ʌ/ and /ɑ/, the pair was not spectrally separated across all the impromptu speeches. This was partly because of the negative L1 transfer. To be specific, the back vowel /ɑ/ is not included in the Korean language, but the central back vowel /ʌ/ is shared both in English and Korean vowel systems. As a result, the students in this study generally consider the vowels /ʌ/ and /ɑ/ as the one vowel /ʌ/. It can be interpreted that the FonF pronunciation instructions targeting the central back vowels should be implemented.

Next, Figure 4 presents the vowel chart of the students' prepared speeches. IPA symbols in solid line represent the students' pre-speeches, while those in dashed line represent the post-speeches of the prepared speech.

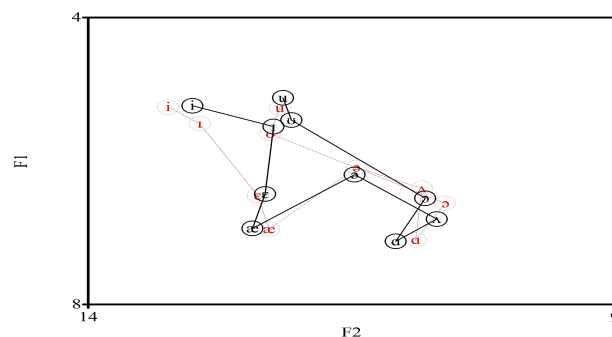


Figure 4. Combined vowel chart in prepared speech

As in English in southeastern USA (Yavaş, 2020), the vowels /u/ and /ʊ/ were slightly centralized in this study. Back vowels /ʌ/ and /ɔ/ in the pre speech were atypical, but after the instruction, they tended to become typical. It means that the vowel /ʌ/ goes to the central position and the vowel /ɔ/ moves to the back position. Although those back vowels were not included in the target feature during the classes, if the students made some mistakes with the back vowels and the teachers gave them feedback related to them, there were some significant changes. In other words, feedback is quite effective when fixing the back vowel pronunciation. Other vowels are similar in their positions without any significant changes regardless of the speech tasks.

4. Effects of the Types of Assessment on the Listeners' Evaluation of the Students' Pronunciation

1) Accentedness, Comprehensibility, and Intelligibility

To investigate if there was a statistically significant difference between the scores of accentedness, comprehensibility, and intelligibility depending on the types of pronunciation assessment, the independent samples *t*-test was conducted. Table 10 shows how the impromptu or prepared speeches in the post-test affected the students' accentedness, comprehensibility, and intelligibility.

Table 10. Post-test scores of the types of assessment

	Type	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>
Acc_post	Impromptu	1600	3.21	.94	-15.18	3198	.000
	Prepared	1600	3.68	.83			
Com_post	Impromptu	1600	4.16	.71	-3.20	3198	.001
	Prepared	1600	4.24	.69			
Intel_post	Impromptu	1600	88.93	3.56	-2.41	3198	.175
	Prepared	1600	89.23	3.54			

According to Table 10, the difference between the impromptu speech and the prepared speech in terms of Acc_post was statistically significant, $t(3198) = -15.18$, $p = .000$. The difference between Com_post of the impromptu speeches ($M = 4.16$, $SD = .71$) and Com_post of the prepared speeches ($M = 4.24$, $SD = .96$) was also statistically significant. However, in terms of intelligibility, the difference between the impromptu speeches and the prepared speeches in terms of Intel_post was statistically insignificant, $t(3198) = -2.41$, $p > .05$. After the FonF pronunciation instruction, the students' speech qualities were remarkably improved regardless of the type of assessment, which means in both types of speech their speech intelligibility increased noticeably.

2) Rhythm and Fluency

The independent samples *t*-tests were carried out to investigate any significant differences between the

types of pronunciation differences in terms of the students' rhythm (nPVI-V, distributions of the schwa sound) and fluency (SR, and AR). Table 11 and Figure 5 present the results of each variable of the post-tests.

Table 11. Post-test scores of the types of assessment

	Type	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>
nPVI-V_post	Impromptu	64	71.36	6.94	-1.81	63	.076
	Prepared	64	73.78	8.81			
SR_post	Impromptu	64	3.76	.53	-3.65	63	.001
	Prepared	64	4.06	.37			
AR_post	Impromptu	64	4.40	.35	1.99	63	.05
	Prepared	64	4.30	.28			

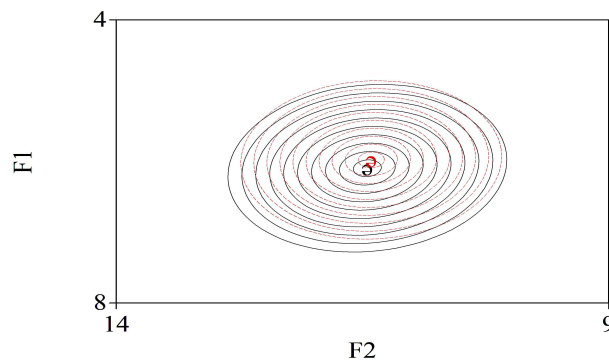


Figure 5. Combined distribution of schwa sound in the post speech

According to Table 11, the two types of assessment did not make any difference to the score of nPVI-V in the post-tests, $t(63) = -1.81$, $p > .05$. It can be interpreted that the students' rhythm is not directly affected by the assessment type. In the cases of SR and AR, the prepared speech showed better SR scores ($M = 4.06$, $SD = .37$) than the impromptu speech ($M = 3.76$, $SD = .53$), which shows a statistically significant difference, $t(63) = -3.65$, $p = .001$. AR also showed any differences between the types of pronunciation assessment, $t(63) = 1.99$, $p < .05$. This can be interpreted that the students' fluency improved regardless of the type of speech and their fluency is not directly affected by the assessment type.

Additionally, the distribution of the schwa sound showed the similar result, as seen in Figure 5. The solid line circles refer to the prepared speech, whereas the dashed line circles indicate the impromptu speech. The dashed distribution moved to the central part, so both distributions were positioned in the similar part. It means that the assessment type did not directly affect the students' rhythm.

3) Pronunciation of the English Vowels

Figure 6 describes the vowels from both post-speeches. The phonetic symbols in solid line refer to the prepared speech, whereas the ones in dashed line present the vowels of the impromptu speech. The distribution of vowel formants in both speeches proved the effects of the pronunciation instruction in that the distribution became similar and more typical. However, the central back vowels /ʌ/ and /ɑ/ are quite different. In impromptu speech, /ʌ/ and /ɑ/ are positioned adjacently compared to the prepared speech. It means that the central back vowels of the prepared speech were better pronounced than the impromptu speech. This is because the students could still have the time to practice what they spoke when producing the prepared speech.

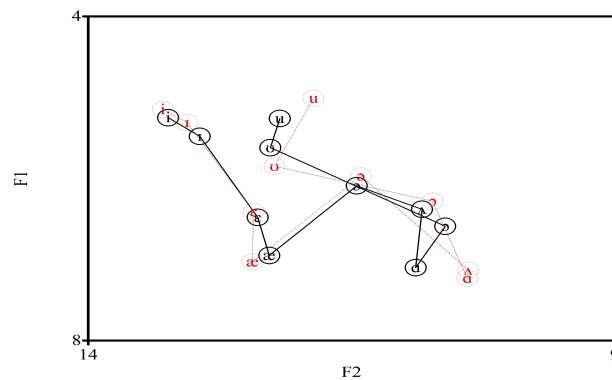


Figure 6. Post-speech of the impromptu and the prepared speeches

V. Discussion and Conclusion

This study attempts to draw out the effects of FonF pronunciation instruction during the evaluation of high school students' utterances by closely observing the processes involved in Public Speaking and Presentation (PSP) classes, which find out how FonF pronunciation instruction and different types of assessment affects the evaluation. This study investigated the accentedness, comprehensibility, intelligibility, rhythm, fluency, and vowel pronunciation of the students' utterances. Prepared and impromptu speech tasks were utilized as the types of pronunciation assessment after pronunciation activities based FonF pronunciation instruction were given to the students. The evaluation was made by three different listener groups: native English teachers, Korean teachers, and the students themselves.

Regarding the first research question, the students could improve their production in terms of accentedness, comprehensibility, and intelligibility. Statistically, overall scores improved, in other words, the students' speech became more native-like, comprehensible, and intelligible. However, we cannot conclude that the more native-like a pronunciation they produce, the more intelligible speech they can articulate. The results in the previous studies (Bradlow & Bent, 2008; Huang, 2013) were also proved in this study. The greater familiarity with a speaker's accentedness, the easier it is to understand what they say. Accordingly, the ultimate aim of English pronunciation instruction in Korea should focus on "intelligible speech."

Secondly, their rhythm and fluency in both assessment types improved significantly. Without

continuously instructing any explicit explanations about the suprasegmental features, maintaining the usual classes while implicitly providing feedback related to those features could be helpful for English learners to enhance their production. One notable detail is that the students' nPVI-V scores both in impromptu and prepared speech tasks were similar or higher compared to those of native speakers. According to Grabe and Low (2002), nPVI-V scores for native English speakers were shown to be 57.2. Low et al. (2000) also suggested that the nPVI-V of native speakers of British English was 79. The empirical findings generally showed that nPVI-V scores of Korean speakers of English were 54.44 (Jang, 2008), and 64.61 (Chung, 2013).

By interpreting the results we can see that the majority of the students already obtained a native-like rhythm, though there were significant improvements in the prepared speech during the instruction. Most students' English proficiency in the study ranges from an intermediate to an advanced level, and consequently, the overall nPVI-V scores were high compared to average Korean students.

Concerning the distributions of the schwa sound, the distributions of the schwa sound in both pre speeches are slightly differed. In the impromptu speech, its position is quite upwardly in the vowel space. However, in the post speeches, both distributions were positioned in the similar part. Thus, two things could be inferred. First, the students' production in the prepared speech was better than the impromptu speech in that they could appropriately articulate the reduced vowel, /ə/. Second, the FonF pronunciation instruction affected the impromptu speech more than the prepared speech since the noticeable and positive changes were found in the impromptu speech tasks.

Third, in terms of segmental features, some vowels that were not focused on during the classes were still well pronounced, especially during impromptu speeches. However, concerning the vowels /ʌ/ and /ɑ/, the pair was not spectrally separated across all the prepared speech tasks. To make it better, continuous FonF instruction should be implemented by focusing on overall vowels. If students' drawbacks are identified in advance, the target features can be easily appointed.

As for the effects of the types of assessment, the students' accentedness, comprehensibility, fluency, and vowel pronunciation were directly affected by the assessment types. Intelligibility, and rhythm were not influenced by them in that they were remarkably improved in both types of assessment. The students' production in the prepared speech tasks were basically considered to be better than in the impromptu speech tasks. It is because the students had enough time to practice their production before the prepared speeches were given. The more practice they had, the more native-like, comprehensible speech they produced, and the more distinctively the vowels were pronounced. Though both types of pronunciation assessment were affected by the FonF instruction, another factor, practice time, was also influential.

The present study is limited in several ways. First, students as the participants could not be easily generalized. Their English proficiency tends to be superior to average Korean students. Although statistically significant results were gained, for average EFL students, the activities and articles used with the FonF pronunciation instruction during PSP classes should be reconsidered. Second, both types of speaking tasks used in the research still focus on 'delivery,' not 'interaction.' A real communicative situation needs interaction between interlocutors. In this study, however, the purpose of PSP class was to

improve students' public speaking skills, thus, speech delivery without any interaction was dealt with. The methodological issue could be improved by setting other class objectives for the future research. Third, this paper only used FonF instruction. To verify the effects of other different types of pronunciation instruction, FonFs or FonM can be applied in the future research. Last, the evaluators in the present study were native speakers and Koreans. As Kang et al. (2020) and Li (2009) mentioned that the number of users who speak the varieties historically regarded as 'standard English' have become the minority, listeners who we will meet in the future come from a variety of nations. To analyze more meaningful evaluations of speakers' utterances, evaluators from various countries are needed.

In conclusion, thanks to the FonF pronunciation instruction, the students could improve their speech skills. If this pronunciation instruction is included in the English education curriculum in Korea, English learners will experience a realistic lingua franca situation. Therefore, it is worth mentioning that the FonF pronunciation instruction can lead to positive changes of evaluations on the students' utterances.

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<Korean Abstract>

육지선, 정현성. (2021). 형태 초점 발음 교수가 고등학생 발화 평가에 미치는 영향. *외국어교육연구*, 33(3), 225-250.

이 연구의 목적은 고등학생의 영어 발화 향상을 위한 발음 형태 초점 교수의 효과성을 알아보기 위함이다. 세종특별자치시에 위치한 고등학생 64명의 즉흥 말하기와 준비된 말하기를 사전, 사후 평가를 통해 녹음하여 액센트, 이해도, 이해가능성, 리듬, 유창성, 그리고 영어 모음의 발음 향상에 대해 양적 연구를 실시하였다. 그 결과 발음 형태 초점 교수에 참여한 학생들의 전반적인 액센트, 이해도, 이해가능성, 리듬, 유창성이 향상했으며, 그들의 영어 모음 발화도 더 뚜렷이 구분되었다. 말하기 형태에 따른 결과는 액센트, 이해도, 유창도에서는 차이를 보였으나, 이해가능도, 리듬에서는 큰 차이를 확인할 수 없었다. 이를 통해 발음 교수, 특히 발음 초점 교수 학습이 미치는 영향과 그 필요성에 대해 시사하고자 한다.

Key words: Teaching pronunciation, Focus-on-form pronunciation instruction, Intelligibility / 발음 교수, 형태 초점 교수, 이해가능성

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