

## **The Effects of a Phonological Awareness Instruction with Phonetics on the Oral and Aural English Proficiency**

**Chulwoong Bae**<sup>\*</sup>

(Daejeon Gwanjeo Middle School)

**Yong-Koo Kahng**<sup>\*\*</sup>

(Kongju National University)

**Hae Sung Sohng**<sup>\*\*\*</sup>

(Kongju National University)

**Bae, Chulwoong, Kahng, Yong-Koo & Sohng, Hae Sung. (2012). The effects of a phonological awareness instruction with phonetics on the oral and aural English proficiency. *English Language & Literature Teaching*, 18(1). 1-22.**

This study explores the effects of phonological awareness instruction with phonetics on listening comprehension and speaking. For the test of measuring the improvement of listening comprehension, two nationwide listening comprehension tests were used for pre-test and post-test. To find out the improvement of speaking ability, students were required to take the Level-3 NEAT speaking tests. There was a notable correlation between phonological awareness instruction with phonetics and listening ability. Also a significant correlation between phonological awareness instruction with phonetics and speaking ability was found. The group with phonological awareness class with phonetics received higher scores in listening and speaking test than the group without phonological awareness class with phonetics in the post-test. This study implies that phonological awareness class with phonetics is helpful for the improvement of listening and speaking ability. With this research, we can also say that students' communicative competence increased.

**[pronunciation/phonological awareness instruction/phonetics/proficiency/listening speaking/NEAT/communicative competence]**

### **I. INTRODUCTION**

According to the Ministry of Education, Science, and Technology of Korea (hereafter,

---

<sup>\*</sup> first author, <sup>\*\*</sup> corresponding author, <sup>\*\*\*</sup> second author

MEST), the National English Ability Test (hereafter, NEAT) which was developed by Korea Institute for Curriculum and Evaluation (hereafter, KICE) is likely to replace the current English language section of the College Scholastic Ability Test (hereafter, CSAT) starting from 2016. The NEAT is different from the English language section of the CSAT in several areas. First of all, the present English language section of the CSAT contains only listening and reading parts: there are 17 listening questions and 33 reading questions. There are no speaking and writing parts in the English language section of the CSAT, even though they insist the listening and reading parts are designed to test students' speaking and writing indirectly. On the other hand, the NEAT, which covers all four English skills (listening, speaking, reading, and writing), aims to enhance Korean high school students' communicative competence in English through the strengthening of English education and evaluation. Second, while the English language section of the CSAT is a paper and pencil test, the NEAT is an Internet-Based Test (IBT). There are 3 levels in the NEAT: Level-1 test, Level-2 test, and Level-3 test. Level-1 test is for college students or adults and Level-2 test and Level-3 test are for high school students. Level-1 test is designed to help college students prepare for graduation accreditation, studying abroad, finding jobs, and promotion. Level-2 test emphasizes academic and practical English abilities. Level-3 test puts emphasis on practical English abilities.

The current 8th graders (middle school students in the second year) may be required to take the NEAT beginning in 2016, if the MEST decides to replace the English language section of the CSAT in 2012. Therefore, the NEAT has become very important to the middle school students as well as the high school students and it is necessary for the middle school students to prepare for the NEAT in advance. The speaking parts of the NEAT have become especially important because unlike English as a Second Language (hereafter, ESL) students, English as a Foreign Language (hereafter, EFL) students usually do not have enough opportunities to use and practice speaking.

Then how can we help the students improve listening and speaking ability in an EFL situation such as Korea? There can be many ways but one of the effective ways to improve not only listening skills but also speaking skills is phonological awareness instruction with phonetics.

## **II. LITERATURE REVIEW**

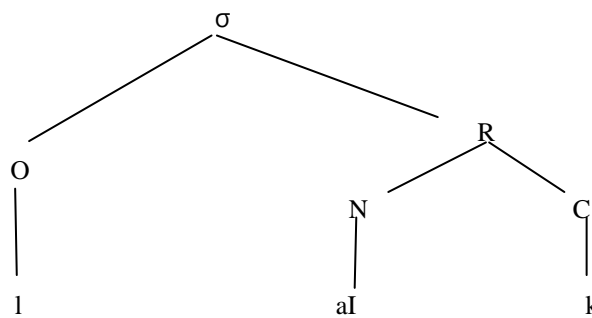
### **1. Phonological awareness**

Phonological awareness means an understanding that words are composed of units such as syllables, onsets, rhymes, and phonemes. It also refers to the ability of a learner to

manipulate phonemes in words (Smith, Simmons & Kameenui, 1998). To understand the definition of phonological awareness, it is necessary to understand some basic concepts such as onset, rhyme, nucleus, coda, syllable, and phoneme.

A syllable is often considered the phonological “building blocks” of words. According to Carr (2002), a syllable is made up of an optional onset and an obligatory rhyme (an obligatory nucleus and an optional coda). As shown in Figure 1, rhyme can be subdivided into the constituent nucleus and coda. Nucleus is most often a vowel and coda is generally a consonant. The initial and final coda is optional. Thus, in the word *like*, /l/ is onset and /aɪk/ is rhyme. The diphthong /aɪ/ constitutes nucleus and the consonant /k/ constitutes coda. The constituency of the single-syllable morpheme *like* can be represented like the following.

**FIGURE 1**



In Figure 1, Greek ‘σ’(sigma) stands for ‘syllable’, ‘O’ stands for ‘onset’, ‘R’ stands for ‘rhyme’, ‘N’ stands for ‘nucleus’, and ‘C’ stands for ‘coda’. A syllable such as *like*, which contains one or more consonants in coda position, is called a closed syllable, whereas a syllable which does not include any consonants in coda position is referred to as an open syllable. One of the examples of open syllable is *buy*.

The size of a syllable is that of a phoneme or larger than a phoneme and smaller than a word. The followings are possible English syllable structures.

1. Vowel: I, eye, owe, etc.
2. Consonant+ Vowel: low, high, do, etc.
3. Vowel + Consonant: it, eat, etc.
4. Consonant +Vowel+ Consonant: cat, dog, pig, etc.

A word like *dog* that consists of a single syllable is called monosyllabic, a word such as *rider* that consists of two syllables is bisyllabic, and a word that has three syllables like *elephant* is trisyllabic. Morphemes that contain more than one syllable is called polysyllabic. Examples are *player*, *monkey* (which are bisyllabic), *dependent*, *vegetable* (which are trisyllabic), *independent*, *encouraging* (which have four syllables) and so on.

The number of phonemes in English varies from dialect to dialect, and any actual number of phonemes depends on the interpretation of the researchers who are doing the counting. For instance, the Longman Pronunciation Dictionary by John C. Wells indicates 24 consonants and 23 vowels, which are used in Received Pronunciation (RP). RP is the accent of the 'prestige' accent in British society and associated with the speech of the graduates of the English public schools. It is thus defined largely in terms of the social class of its speakers. In addition, there are two additional consonants and four additional vowels which are used in foreign words only. For General American (GA), it provides for 25 consonants and 19 vowels, with one additional consonant and three additional vowels for foreign words. Unlike RP, GA is defined in terms of the geographical location of its speakers and is an idealization over a group of accents whose speakers live in a vast proportion of the United States.

On the other hand, the American Heritage Dictionary suggests 25 consonants and 18 vowels (including r-colored vowels) for American English. Besides, there are one consonant and five vowels for non-English terms. Phonemes (vowels and consonants) are two of the five factors relating to the intelligibility of English spoken by Korean university students and teaching how to pronounce phonemes is very important (Kim, 2004).

Phonological awareness is composed of the abilities to blend (synthesize) and segment (analyze) sounds in words (Wagner, Torgesen & Rashotte, 1994). Fitzpatrick (1997) summarizes it best by saying the phonological awareness is "the ability to listen inside a word".

Many people confuse the concept of phonological awareness, phonemic awareness, and phonics using them interchangeably, but they are different. Phonological awareness refers to an understanding of the sound structure of language. In other words, it is an understanding that language is made up of words, syllables, rhymes, and sounds (phonemes). This knowledge takes place initially in oral language. Students do not have to know how to name letters or their corresponding sounds in order to show phonological awareness. Phonemic awareness is one component of phonological awareness. It refers to knowledge of words at the level of individual sounds (phonemes). Phonemic awareness is to know how to segment (divide), blend (mix), or manipulate individual sounds in words. Phonics refers to an understanding of the sound and letter relationships in a language. Phonological awareness is necessary in order to employ this phonics knowledge effectively.

## 2. Phonetics

Phonetics is a branch of linguistics that comprises the study of the sounds of human speech and there are three basic areas of study: articulatory phonetics, acoustic phonetics, and auditory phonetics. Articulatory phonetics is the study of the production of speech sounds by the articulatory and vocal tract by the speaker. Acoustic phonetics is the study of the physical transmission of speech sounds from the speaker to the listener. Auditory phonetics is the study of the reception and perception of speech sounds by the listener. Phonetics is different from phonology. Phonetics concerns with the production, transmission, and perception of the physical phenomena which are abstracted in the mind to constitute these speech sounds or signs. On the other hand, phonology concerns with systems of phonemes which distinguish the words of a language.

## 3. The role of phonological awareness

### 1) Phonological awareness and reading

According to numerous studies, phonological processing variables differentiate not only between children with and without reading disability but also between good and poor readers at all age levels (Bradley & Bryant, 1983; Liberman & Shankweiler, 1985; Lundberg, Olofsson & Wall, 1980; Smith et al., 1998; Stanovich, 1982, 1988; Wagner & Torgesen, 1987).

In addition, many longitudinal studies have shown that phonological awareness which is measured in kindergarten predicts word reading in the primary grades, even when variance in intelligence was controlled (Adams, 1990; Blachman, 1989; Griffith & Olson, 1992; Smith et al., 1998; Stanovich, 1986; Vellutino & Scanlon, 1987; Wagner, 1988; Wagner et al., 1994; Wagner et al., 1997).

A great number of studies have also shown that phonological awareness increases phonological abilities and expedites early reading acquisition when it is taught explicitly to young children (Ball & Blachman, 1991; Bradley & Field-Barnsley, 1993; Cunningham, 1990; Fox & Routh, 1984; Tangel & Blachman, 1992; Torgesen, Morgan & Davis, 1992).

### 2) Phonological awareness and listening

The ability to discriminate sounds in a new language has been shown to affect listening in that language (Hagiwara & Kuzumaki, 1982; Okabayashi, 1991). Furthermore, instruction on pronunciation in a new language has been shown to improve listening comprehension in that language (Champagne-Muzar, 1996). Therefore, phonological

awareness which has to do with discriminating sounds and instruction in pronunciation is related to the improvement of listening comprehension.

### 3) Phonological awareness and speaking

Differences in phonological awareness were related to differences in speech comprehensibility and speaking (Venkatagiri & Levis, 2007). Comprehensibility is the perceived ease of understanding (Munro & Derwing, 1995). Phoneme discrimination which is one of the parts of phonological awareness is an integral part of speech processing when EFL learners learn to converse in English (Min & Pak, 2007).

## III. RESEARCH RATIONALE

### 1. The necessity of phonological awareness instruction with phonetics

As the MEST announced, the NEAT is very likely to replace the English language section of the CSAT beginning 2016. Therefore, it is necessary for the students to prepare for the changing tests and it is teachers' and researchers' duty to find effective ways to help students to be prepared for the listening and speaking parts of the NEAT.

As mentioned, most phonological awareness research has been done on acquisition of reading in an ESL situation. But, now it is also important to do phonological awareness research which especially has to do with listening and speaking because of the importance of helping students prepare for the approaching NEAT which stresses listening and speaking. Furthermore, it is necessary to find whether phonological awareness is helpful in an EFL situation as well as ESL environment.

Phonological awareness is usually used before the children enter kindergarten in ESL situation and it is natural for the ESL kids to acquire phonological awareness because formal and informal phonological awareness class is done using students L1, but students in EFL environment need to get more detailed explanation about how to make target language (English) sounds which are different from their mother tongue. Therefore, to give the insight on the structure of target language, students need to understand how to pronounce the phonemes and phonological awareness instruction with phonetics is a way to help students be aware of the place of articulation and manner of articulation.

### 2. Research questions and hypotheses

The present study was designed to find the effect of phonological awareness instruction

with phonetics and research questions are as follows:

Research question 1: Does phonological awareness instruction with phonetics help increase the listening ability for the EFL students with limited English proficiency?

Research question 2: Does phonological awareness instruction with phonetics help improve the speaking ability for the EFL students with limited English proficiency?

General hypothesis is that phonological awareness instruction with phonetics will be helpful for the development of students' language proficiency. The specific hypotheses are as follows:

Hypothesis 1: EFL students with phonological awareness instruction with phonetics will have better listening ability than those who do not have phonological awareness instruction with phonetics.

Hypothesis 2: EFL students with phonological awareness instruction with phonetics will have better speaking ability than those who do not receive phonological awareness instruction with phonetics.

## **IV. METHOD**

### **1. Participants & Settings**

The school in the present research was a middle school located in the outskirts of a large metropolitan city in the center of South Korea. A total of 27 middle school students with basic or minimal English proficiency level participated in this research: there were 14 students in the experimental group and 13 students in the control group. Phonological awareness program with phonetics was continued during the 45 minute-class a period, three times a week, for a total of 30 hours of instruction in the experimental group. According to the self-report survey and class observation, none of the students possessed any substantial knowledge in phonological awareness and none of them had formal instruction on English pronunciation.

### **2. Instrumentation**

The instrument employed in this study consisted of 2 sets of nationwide English Listening Comprehension tests for middle school students and the Level-3 NEAT speaking test.

The study began by administering two pre-tests (listening and speaking pre-tests) in the

first week of October and two post-tests (listening and speaking post-tests) were conducted at the end of the phonological awareness instruction in the last week of December. For measuring listening ability, a nationwide Listening Comprehension Test for middle school students was used for the pre-test and another nationwide Listening Comprehension Test for middle school students was used for the post-test.

The Level-3 NEAT speaking test was conducted in a computer room and students responses were audio-recorded using Microsoft Sound Recorder installed as a basic tool of Windows. The Sound Recorder program is usually located under “‘entertainment’: start-programs-accessories-entertainment-Sound Recorder.” Students recorded their voice responding to the 9 questions of Level-3 NEAT pre-test and later did the recording again for the post-test. Students saved their recorded files on the students’ desktop and later the files were collected using an USB after the recording job was done.

### 3. Procedures

During each class session, the participants in the experimental group were provided with phonological awareness instruction with phonetics: however, the control group did not receive any phonological awareness instruction or phonetics. Each class session was forty five minutes and the participants in the experimental group learned how to segment, synthesize, and manipulate phonemes using the words in the textbook. They also learned the organs of articulation, places of articulation and manners of articulation using audio-visual materials. For the control group, each lesson consisted of participation in classroom activities that did not contain any explanation about phonological awareness and phonetics. The first author taught experimental group and control group using the same text book entitled “Middle School English 3” from Doosandong (Kim et al., 2011).

**TABLE 1**  
**Phonological awareness instruction with phonetics content**

Period	Class Content	Period	Class Content
1	Organs of articulation	16	Phonological blending
2	Organs of articulation	17	Phonological blending
3	Places of articulation	18	Phonological manipulation
4	Places of articulation	19	Phonological manipulation
5	Places of articulation	20	Phonological manipulation
6	Manner of articulation	21	Phonological manipulation
7	Manner of articulation	22	Onset-rhyme awareness
8	Manner of articulation	23	Onset-rhyme awareness



9	Manner of articulation	24	Onset-rhyme awareness
10	Phonological segmentation	25	Suprasegmentals: Stress
11	Phonological segmentation	26	Suprasegmentals: Stress
12	Phonological segmentation	27	Suprasegmentals: Stress
13	Phonological segmentation	28	Suprasegmentals: Intonation
14	Phonological blending	29	Suprasegmentals: Intonation
15	Phonological blending	30	Suprasegmentals: Intonation

Principal organs (lips, teeth, alveolar ridge, palate etc.) of articulation, places of articulation (bilabial, labiodentals, dental, alveolar, etc.), and manners of articulation (stop, fricative, affricate, nasal, etc.) were explained to the students using the site titled *Phonetics* (<http://www.uiowa.edu/~acadtech/phonetics/english/frameset.html>) for 9 periods (from 1 to 9 periods). This site contains very good features for each of the consonants and vowels of American English as follows: (1) a real-time flash animated articulatory diagram of each phonemes, (2) an annotated step-by-step description of how the sound is produced, (3) video and audio of the sound spoken in context, etc.

Participants in the experimental group were presented with the basic concept of phonological awareness, phoneme, syllable, rhyme, onset, nucleus, and coda at the beginning of the class. Students had limited English proficiency, therefore, pictures, diagrams, and L2 (English) as well as students L1(Korean) were used to explain phonological awareness.

Phonological segmentation classes were conducted for 4 hours. Phonological segmentation is the ability to divide a word into phonemes and syllables. Students were required to divide a word into its speech sounds (phonemes): e.g., “What sounds do you hear in the word *cat*?”, “How many syllables are there in the word *book*?”

There were 4 phonological blending classes in this instruction. Phonological blending is the ability to blend phonemes into syllables and syllables into words. Participants were required to blend individual sounds they heard from the teacher into words: e.g., “What word do these sounds make: *m...oo...n*?” The participants responded by writing a word that they thought consisted of the sequence of sounds they heard. The spelling had to be correct in order to be counted as correct. For example, if a participant writes *back* on a practice paper after they listen to /bæk/, it was counted as one correct answer.

4 Phonological manipulation classes were done in the present research. Phonological manipulation is the ability to add, delete, substitute, or rearrange phonemes or groups of phonemes within a word or a phrase: e.g., “Say *coat*. Now say it again but don’t say /k/(phoneme deletion)”, “Say *dash*. Now say it again, but instead of / æ/ say /I/ (phoneme substitution)”, “Exchange the initial sounds of words in two-word phrases (*felt made* becomes *melt fade*).”

There were 3 onset-rhyme awareness periods. As mentioned before, words can be divided into onsets and rhymes. The onset refers to any sound that comes before the vowel. The rhyme is any sound from the vowel to the end of the word. For example, in the word *man*, /m/ is onset, /æ/ is vowel, and / æ n/ is rhyme. Students were asked if two words they heard were rhyme: e.g., “Do these words rhyme: shell bell?” In addition, participants did rhyme detection or rhyme oddity task: e.g., “Which word does not rhyme: fish, dish, hook?”

There are numerous pedagogical resources on ESL/EFL pronunciation that support teaching nonnative speakers suprasegmentals such as stress, rhyme, and intonation to improve the intelligibility of their speech. Intelligibility is the extent to which a listener actually understands an utterance or message (Derwing & Munro, 2005). Among the many suprasegmentals, stress, rhyme, and intonation were chosen for this research.

3 stress-related classes for the experimental group were conducted. The importance of stress to increase intelligibility was found by Hahn (2004). According to his research, when Native English speakers (NSs) were listening to an international teaching assistant’s speech with correct primary stress, the participants recalled significantly more content and evaluated the international teaching assistant significantly more favorably than when primary stress was aberrant or missing. These findings provide insights into how using primary stress affects intelligibility and the importance of primary stress.

Nida (1957) states that proper intonation contributes a high percentage to the total intelligibility of speech. Based on the research, intonation was chosen for the instruction of suprasegmentals in this project. There were 3 classes on intonation.

Students responses were recorded in the school computer room during the regular classes using the Microsoft Sound Recorder which can be found in most of the computers and microphones attached to the headphones were used for the recording. 3 Native English Speaking Teachers (NESTs) did scoring using the revised NEAT speaking test rubric on a 6-point scale (see Appendix 3). Compared to the original NEAT test rubric, the revised rubric had an additional category (accuracy) because the researchers strongly believed that there is a high correlation between accurate pronunciation and intelligibility based on many previous studies (Banal, 1969; Jenkins, 2002; Hahn, 2004, etc.).

The rubric was explained to the raters and the raters scores were added up and divided by the number of raters (three) to get the average scores of raters and to make sure there was no big gap between 3 raters and to have inter rater reliability. In addition, the average scores of 3 raters were rounded off to the nearest integer. For instance, if rater A’s score is 1, rater B’s score is 2, and rater C’s score is 2, the final score of a test taker is 2.

#### 4. Data Analysis

In order to collect the data, nationwide Listening Comprehension Tests for the first year in middle school students as pre-tests and post-tests were administered, and the paired *t* test was conducted to determine the statistical differences between the scores. The statistical analyses were conducted using SPSS 18.0 for Windows with alpha level 0.05. In addition, to measure the speaking ability of the students, Level-3 NEAT speaking tests were conducted (see Appendix 1 and 2).

### V. RESULTS

As shown in Table 2, there were no significant differences between experimental group and control group on the nationwide Listening Comprehension Test scores of the compared pre-tests because *p* is .211. Therefore, we can say that both groups have a similar level of listening proficiency.

**TABLE 2**  
Listening Comprehension Test Scores of Pre-test Compared (paired *t* test)

Group	N	Mean	SD	<i>t</i>	<i>p</i>
Experimental	14	6.36	1.692	1.285	.211
Control	13	5.54	1.613		

As noted in Table 3, the pre-test showed no significant difference in the proficiency level of speaking ( $p=.365$ ). Therefore, we can say that both groups have similar speaking proficiency.

**TABLE 3**  
NEAT Speaking Test Scores of Pre-test Compared (paired *t* test)

Group	N	Mean	SD	<i>t</i>	<i>p</i>
Experimental	14	1.43	.646	.923	.365
Control	13	1.23	.439		

Table 4 shows the Listening Comprehension Test scores of the comparative pre- and post-test together for both groups.

**TABLE 4****Listening Comprehension Test Scores of Pre-test & Post-test Compared (paired *t* test)**

Group	Test	N	Mean	MD	SD	t	<i>p</i>
Experimental	Pre-test	14	6.36	1.28	1.692	-7.870	.000
	Post-test	14	7.64		1.336		
	Pre-test	13	5.54	1.613			
Control	Post-test	13	5.77	.23	1.536	-1.389	.190

As indicated in Table 4, the pre-test showed a significant improvement on Listening comprehension Test scores of the experimental group ( $p=0.000$ ). Although both groups Listening Comprehension Test scores improved, the experimental group's improvement on the listening comprehension test scores (MD=1.28) was higher than the control groups' scores (MD=.23).

**TABLE 5****NEAT Speaking Test Scores of Pre-test & Post-test Compared (paired *t* test)**

Group	Test	N	Mean	MD	SD	t	<i>p</i>
Experimental	Pre-test	14	1.43	.57	.646	-4.163	.001
	Post-test	14	2.00		.555		
	Pre-test	13	1.23	.439			
Control	Post-test	13	1.31	.08	.480	-1.000	.337

As shown in Table 5, the mean value difference between the experimental and control group is .69 and there was a significant improvement on speaking test scores for the experimental group ( $p=.001$ ). This shows that the Speaking Test scores of the experimental group (M=2) improved more significantly than the control group (M=1.31). On the other hand, the control group's mean did not increase much and the statistical difference was not significant ( $p=.337$ ).

## VI. DISCUSSIONS

Trying to find ways to improve listening and speaking ability in EFL situations have always been interesting topics for numerous researches. The present study introduced a way to do so: phonological awareness with phonetics.

The effects of phonological awareness with phonetics for the students with limited English proficiency to improve listening and speaking proficiency was significant. It will

be also necessary to find whether there is any difference of the effects of phonological awareness between groups (advanced, intermediate, beginner) for the development of aural and oral English proficiency.

In the original speaking test rubric, there was no area of accuracy part, but in the present research, the accuracy part was added because students can pronounce words fluently even though they pronounce words inaccurately. The intelligibility, which is most current aims of pronunciation, is affected by whether the utterance produced by speakers has accurate stress, intonation, and prosody. Therefore, not only fluency but also accuracy is necessary to improve speakers intelligibility and to help students receive higher scores for the NEAT.

Classroom observation and interview with participants show they get more involved in the class when phonological awareness instruction with phonetics is presented using multimedia such as audio, flash, and video clips. They have more confidence in listening and speaking because they have the ability to look into words, understand the structure of the target language, and pronounce the target language accurately using the phonetics knowledge.

To improve not only fluency but also accuracy, it is necessary to teach the organs of articulation, places of articulation, and manners of articulation. Understanding the accurate point of articulation is the first step to pronounce target language phonemes correctly.

The limitation of this research is phonological awareness instruction time was not long enough and the number of participants was rather small. If we extend the instruction time, the effect of phonological awareness instruction may increase, but we need more research to find out whether the expectation is correct or not.

## **VII. CONCLUSION**

In Korea most students usually study English only by reading or writing. They rarely focus on pronunciation because pronunciation is considered not that important and is not required to get good scores in the current standardized test. But things are changing very rapidly because of the new upcoming evaluation system, the NEAT. Consequently, students are facing new challenges when preparing for the NEAT and the necessity to practice speaking is greater than ever. That is why we need to help students improve their pronunciation, and phonological awareness with phonetics is one way to improve listening and speaking skill as shown in the present study.

When we say one has phonological awareness, it means he or she has the awareness that sentences can be broken down into words, and words can be divided into syllables, onsets, nucleus, rhymes, and coda. In addition, phonological awareness is the ability to handle, manipulate, talk about, and reflect upon sounds. It is also the understanding that written

language (symbol) and spoken language (sound) are closely related. Therefore, research on the relationship of phonological awareness and writing skills would be a good topic in the near future.

From this study, we can tell see the effects of phonological awareness instruction with phonetics in the group with limited English proficiency. As the present research has proved that phonological awareness instruction with phonetics helped students have confidence and understanding of the correct pronunciation of the target language (English) phonemes.

To help students improve their listening and speaking proficiency, it is necessary to provide students with systematic and ongoing phonological awareness instruction with phonetics. Furthermore, the development of phonological awareness and phonetics material to support the in-service teachers' teaching and students learning is necessary.

In addition, to increase reliability between raters, it is necessary to make a clear speaking test rubric so that everyone can understand the test rubric easily and to provide raters training program. Providing more test sample NEAT items in all four areas (listening, speaking, reading, and writing) with NEAT testing programs will be necessary so that students can have more practice tests before the actual test.

Last but not least, it is also necessary to provide teachers and students with more test information and to furnish infrastructure such as testing facilities (more upgraded computers, IBT practice rooms, test centers, and recording equipments etc.).

## REFERENCES

- Adams, M. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.
- Ball, E. W., & Blachman, B. A. (1991). Does phoneme segmentation training in kindergarten make a difference in early word recognition and developmental spelling? *Reading Research Quarterly*, 26, 49-66.
- Banal, R. (1969). *The intelligibility of Indian English*. Hyderabad, India: Central Institute of English.
- Blachman, B. A. (1989). Phonological awareness and word recognition: Assessment and intervention. In A. Kamhi & H. Catts (Eds.), *Reading disabilities: A developmental language perspective* (pp. 138-158). Needham Heights, MA: Allyn & Bacon.
- Bradley, L., & Bryant, P. (1983). Categorizing sounds and learning to read: A casual connection. *Nature*, 301, 419-421.
- Bradley, L., & Field-Barnsley, R. (1993). Evaluation of a program to teach phonemic awareness to young children: A one year follow-up. *Journal of Educational Psychology*, 85, 104-111.

- Carr, P. (2002). *English phonetics and phonology: An introduction*. Malden, MA: Blackwell.
- Champagne-Muzar, C. (1996). The relationship of phonetic facts to the development of auditory comprehension in a second language. *The Canadian Modern Language Review*, 52, 386-415.
- Cunningham, A. E. (1990). Explicit versus implicit instruction in phonemic awareness. *Journal of Educational Psychology*, 50, 429-444.
- Derwing, T., & Munro, M. (2005). Second language accent and pronunciation teaching: A research-based approach. *TESOL Quarterly*, 39(3), 379-397.
- Fitzpatrick, J. (1997). *Phonemic awareness: Playing with sounds to strengthen beginning reading skills*. New York: Creative Teaching Press.
- Fox, B., & Routh, D. K. (1984). Phonemic analysis and synthesis as word attack skills: Revisited. *Journal of Educational Psychology*, 76, 1059-1064.
- Griffith, P. L., & Olson, M. W. (1992). Phonemic awareness helps beginning readers break the code. *The Reading Teacher*, 45, 516-523.
- Hagiwara, A., & Kuzumaki, Y. (1982). An analysis of errors in listening dictation with specific reference to the cause of misperception of English pronunciation. *System*, 10, 53-60.
- Hahn, L. D. (2004). Primary stress and intelligibility: Research to motivate the teaching of suprasegmentals. *TESOL Quarterly*, 38(2), 201- 223.
- Jenkins, J. (2002). A sociolinguistically based, empirically researched pronunciation syllabus for English as an international language. *Applied Linguistics*, 23(1), 83-103.
- Kim, H. (2004). Pronunciation error types and sentence intelligibility of Korean EFL learners. *English Language & Literature Teaching*, 10(3), 159-175.
- Kim, S., Song, M., Yun, J., Kahng, E., Mun, D., Ryu, Y., Yeom, M., & Johanna, L. (2011). *Middle school English 3*. Seoul: Doosandong.
- Lieberman, I. Y., & Shankweiler, D. (1985). Phonology and the problems of learning to read and write. *Remedial and Special Education*, 6, 8-17.
- Lundberg, I., Oloffson, A., & Wall, S. (1980). Reading and spelling skills in the first school years predicted from phonemic awareness skills in kindergarten. *Scandinavian Journal of Psychology*, 21, 628-636.
- Min, S., & Pak, H. H. (2007). Teaching pronunciation using sound visualization technology to EFL learners. *English Language & Literature Teaching*, 13(2), 129-153.
- Munro, M. J., & Derwing, T. M. (1995). Foreign accent, comprehensibility and intelligibility in the speech of second language learners. *Language Learning*, 45, 73-97.

- Nida, E. (1957). *Learning a foreign language*. Ann Arbor, MI: Friendship.
- Okabayashi, H. (1991). Teaching English as a second language-listening and pause. *Psychologia, 34*, 227-231.
- Smith, S. B., Simmons, D. C., & Kameenui, E. J. (1998). Phonological awareness: Research bases. In D. C. Simmons & E. J. Kameenui (Eds.), *What reading research tells us about children with diverse learning needs: Bases and basics* (pp. 19-50). Mahwah, NJ: Lawrence Erlbaum.
- Stanovich, K. E. (1982). Individual differences in the cognitive processes of reading: Word decoding. *Journal of Learning Disabilities, 15*, 549-554.
- Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly, 21*, 360-407.
- Stanovich, K. E. (1988). Explaining the differences between the dyslexic and the garden-variety poor reader: The phonological-core variable-difference model. *Journal of Learning Disabilities, 21*, 590-612.
- Tangel, D. M., & Blachman, B. A. (1992). Effect of phoneme awareness instruction on kindergarten children's invented spelling. *Journal of Reading Behavior, 24*, 223-261.
- Torgesen, J. K., Morgan, S. T., & Davis, C. (1992). Effects of two types of phonological awareness training on word learning in kindergarten children. *Journal of Educational Psychology, 84*, 364-370.
- Vellutino, F. R., & Scanlon D. M. (1987). Phonological coding, phonological awareness and reading ability: Evidence from a longitudinal and experimental study. *Merrill-Palmer Quarterly, 33*, 321-363.
- Venkatagiri, H. S., & Levis, J. M. (2007). Phonological awareness and speech comprehensibility: An exploratory study. *Language Awareness, 16*(4), 263-277.
- Wagner, R. K. (1988). Causal relations between the development of phonological processing abilities and the acquisition of reading skills: A meta-analysis. *Merrill-Palmer Quarterly, 34*, 261-279.
- Wagner, R. K., & Torgesen, J. K. (1987). The nature of phonological processing and its causal role in the acquisition of reading skills. *Psychological Bulletin, 101*, 192-212.
- Wagner, R. K., Torgesen, J. K., & Rashotte, C. A. (1994). The development of reading-related phonological processing abilities: New evidence of a bi-directional causality from a latent variable longitudinal study. *Developmental Psychology, 30*, 73-87.
- Wagner, R. K., Torgesen, J. K., Rashotte, C. A., Hecht, S. A., Barker, T. A., Burgess, S. R., Donahue, J., & Garon, T. (1997). Changing causal relations between phonological processing abilities and word-level reading as children develop from beginning to fluent readers: A five year longitudinal study. *Developmental Psychology, 33*, 468-479.



## APPENDIX 1

### Speaking Test 1 (pre-test)

I. Answering the questions based on pictures. (Q1- Q3)

You will see three pictures. Each picture has one question. Answer the question based on the picture. You should answer with one or two full sentences. After each beep, record your answer **for 15 seconds**. After you hear two short beeps, stop recording. Now let's begin.

1. Is the game exciting? (15 seconds)



2. Does the girl jump higher than the boy? (15 seconds)



3. Where are they? (15 seconds)



## II. Answering the related questions (Q4 – Q7)

Suppose you plan to go on a picnic this weekend with your friend. Thus, your friend asks you the following four questions. After the first beep, record your answer. You will be given **20 seconds** to answer each question. After you hear two short beeps, stop recording. Now let's begin.

4. Where are we going? (20 seconds)
5. What time shall we meet? (20 seconds)
6. Where shall we meet? (20 seconds)
7. What should I prepare for the picnic? (20 seconds)

## III. Picture Description (1 minute)

8. You will see six pictures and tell a story based on the pictures. You have 1 minute to prepare your answer. After the beep, you will have 1 minute to record your answer. After you hear two short beeps, stop recording. Now let's begin.



## IV. Problem Solving

9. You will hear a story describing a problem. You will have one minute to think about how you would solve the problem. After the beep, you will have to record your answer. After you hear two short beeps, stop recording.

Now let's begin. (**one minute**)

One of your friends asks you if you can see a movie on Saturday. You want to go but you can't because you have to go to your grandparent's house that day. However, you can go see a movie with your friend on Sunday. In this situation, what would you say to your friend?

## APPENDIX 2

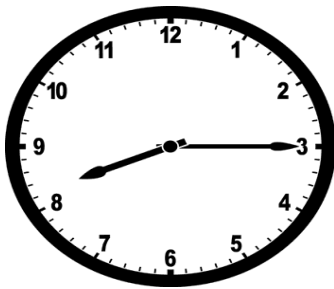
### Speaking test 2 (post-test)

#### I. Answering the questions based on pictures. (Q1- Q3)

You will see three pictures. Each picture has one question.

Answer the question based on the picture. You should answer with one or two full sentences. After each beep, record your answer for 15 seconds. After you hear two short beeps, stop recording. Now let's begin.

1. What time is it now? (15 seconds.)



2. Is the girl taller than the boy? (15 seconds.)



3. Where is he? (15 seconds.)



### II. Answering the related questions (Q4 – Q7)

Suppose you've made friends with a foreigner. On the first meeting, this new friend asks you four questions. You should answer with one or two full sentences. After the first beep, record your answer. You will be given 20 seconds to answer each question. After you hear two short beeps, stop recording. Now let's begin.

4. Who do you like most in your school? (20 seconds)
5. How long have you known her or him? (20 seconds)
6. Why do you like her or him? (20 seconds)
7. What do you like to do with her or him? (20 seconds)

### III. Picture Description

8. You will see six pictures and tell a story based on the pictures. You have 1 minute to prepare your answer. After the beep, you will have 1 minute to record your answer. After you hear two short beeps, stop recording. Now let's begin.



### IV. Problem Solving

9. You will hear a story describing a problem. You will have one minute to think about how you would solve the problem. After the beep, you will have to record your answer. After you hear two short beeps, stop recording. Now let's begin. **(one minute)**

One of your best friends likes computer games very much. Whenever he starts a game, he never stops. In the end, he doesn't do his homework or get enough sleep. So he argues with his parents a lot about his game addiction. What would you like to say to him?

## APPENDIX 3

Revised NEAT Speaking Test Rubric

Score	Fluency	Accuracy	Language Use	Task Completion
5	The test-taker answered at a very natural and steady rate of speech made proper pauses related with thought patterns. There are almost no pauses that interfere with communication.	There are almost no errors in prosody that interfere with communication.	The test-taker steadily used grammatical structures and expressions / vocabulary that are correct and suitable for the given situation.	The test-taker carried out the requested task, completely following the given instruction. Enough relevant information was provided.
4	The test-taker generally answered at a natural rate of speech and made proper pauses related with natural thought patterns. There are few pauses that interfere with communication.	There are few errors with phoneme, stress, and intonation use that interfere with communication.	The test-taker generally used grammatical structures and expressions / vocabulary that are correct and suitable for the given situation.	The test-taker carried out the requested task, generally following the given instruction. Enough relevant information was provided.
3	The test-taker answered at a somewhat unnatural rate of speech and did not make proper pauses related with natural thought patterns. There are some pauses that interfere with communication.	There are some errors with phoneme, stress, and intonation use that interfere with communication.	The test-taker used grammatical structures and expressions / vocabulary that are somewhat incorrect and unsuitable for the given situation.	The test-taker carried out roughly 50% of the requested task with some relevant information missing. Some irrelevant information was also provided.
2	The test-taker answered at a very unnatural rate of speech and made very improper pauses unrelated with natural thought patterns. There are many frequent pauses that interfere with communication.	There are many frequent errors with phoneme, stress, and intonation use though communication is possible.	The test-taker generally used grammatical structures and expressions / vocabulary that are incorrect and unsuitable for the given situation.	The test-taker generally failed to carry out the requested task providing too little relevant information.
1	The test-taker answered at an extremely unnatural rate of speech and made extremely improper pauses unrelated with natural thought patterns. There are too many frequent pauses to make communication possible.	There are too many frequent errors with phoneme, stress, and intonation use to make communication possible.	The test-taker used grammatical structures, and expressions / vocabulary that are extremely incorrect and unsuitable for the given situation.	The test-taker failed to carry out the requested task providing no relevant information.
0	- No response. - Indirect response such as "I don't know".	- No response, - Utterance other than English.	- No sentential structure.	- Not comprehensible.

**Examples in: English**

**Applicable Languages: English**

**Applicable Levels: Secondary**

Chulwoong Bae  
Daejeon Gwanjeo Middle School  
143 Gwanjeo-dong, Seo-gu, Daejeon 302-243  
Tel: 042-854-6695  
Email: rokbcw@edurang.net

Yong-Koo, Kahng  
Dept. of English Education  
Kongju National University  
182, Shinkwan-dong, Gongju-si, Chungnam, Korea  
Tel: 041-850-8188  
Email: ykahng@kongju.ac.kr

Hae Sung, Sohng  
Dept. of English Education  
Kongju National University  
182, Shinkwan-dong, Gongju-si, Chungnam, Korea  
Tel: 041-850-8191  
Email: songhs@kongju.ac.kr

Received in January, 2012

Reviewed in February, 2012

Revised version received in March, 2012