A Relationship between Reading and Listening Proficiency of Korean ESL College Students: Listening Potential

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This study was purposed to discuss an educational concept of listening potential in ESL/EFL contexts as a counterpart of the reading potential concept in L1 contexts. As a preliminary condition for the concept of listening potential, this study investigated a relationship between reading and listening proficiency of ESL/EFL learners, focusing on roles of grammar knowledge in reading and listening comprehension. Reading and listening comprehension and grammar knowledge test scores of 231 Korean college students studying at a university in the U.S. were analyzed for this study. This study found that there was a positive correlation between reading proficiency and listening proficiency of Korean ESL college students. Grammar knowledge played significant roles accounting for reading and listening comprehension. Furthermore, this study found a difference between the reading proficiency and the listening proficiency across the stages of language development. However, results of this study did not empirically verify the concept of listening potential.

[reading proficiency/listening proficiency]

I. INTRODUCTION

Language can simply be defined as the ability to understand and use abstract symbols for communication including both oral and written forms (Hammill & McNutt, 1980). Hammill and McNutt described terms for four abilities as basic components to construct a language: oral receptive ability, oral expressive/productive ability, written receptive ability, and written expressive/productive ability. These four components are known as listening comprehension, speaking, reading comprehension, and writing respectively. The relationship among these four constructs of the language has been interests of researchers in a field of language acquisition.

In particular, considerable research has been conducted to explore the relationship between reading comprehension and listening comprehension in the context of the larger discussion on the relationships among the four basic components of the constructs of the language (Danks, 1980; Hammill & McNutt, 1980; Sticht & James, 1984). On this research trend, Lund (1991) says that "in the first language context, researchers have long been interested in the relationship between reading and listening, and a substantial research base on the issue exists" (p. 196).

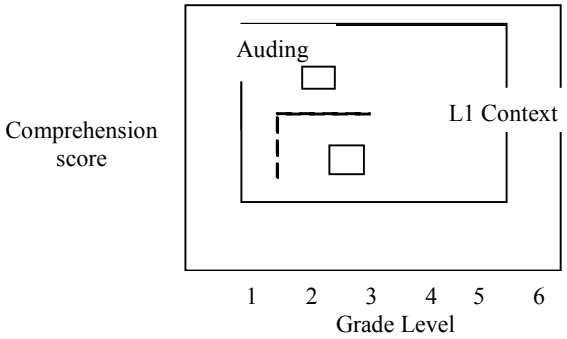
Likewise, the relationship between reading comprehension and listening comprehension has been interests of researchers in a second language acquisition (SLA) field including ESL/EFL contexts. As a result, substantial studies about the relationship have been reported in the ESL/EFL contexts (e.g., Hedrick & Cunningham, 1995; Nuwash, 1997; Y. Park, 1996; G. Park, 2004).

However, an educational concept, for instance, "reading potential" (Sticht & James, 1984) proposed in L1 contexts, which is based on the relationship between reading comprehension and listening comprehension, has never been explored in L2 contexts. Thus, it is worth to explore whether the concept of reading potential could be applicable in the L2 contexts or it needs to be extended to include a different concept, saying *listening potential* which might be more plausible in the L2 contexts.

The reading potential is one of the assumptions held in the relationship between reading and listening in a first language. In the auding-reading model, Stitch and James (1984) defined the reading potential concept as the following: "people first develop vocabulary and comprehension skills by means of the oral language skills of auding (listening comprehension) and speaking. Then, when they begin to read, they learn to comprehend by reading what they previously could comprehend only by auding" (p. 295). Stated otherwise, because people typically start to learn listening before reading, their listening ability is higher than their reading ability. That is, there is a certain gap between listening proficiency and reading proficiency. However, they have a capability of reading as much as their listening ability and the gap is their reading potential. Sticht and James explained the reading potential concept in a first language context through a hypothetical graph (see Figure 1 adopted from Sticht & James, 1984, p. 295).

FIGURE 1

Hypothetical Graph for the Reading Potential Concept



However, in the second language contexts the situation is not the same as that of the first language. Acquisition of written languages and spoken languages begins at almost the same time. Furthermore, in other cases learning to read precedes listening in the second language contexts. In this particular situation, it might be reasonable to suggest the listening potential concept in L2 contexts including the EFL/ESL contexts. That is, there can be a certain gap between ESL/EFL learners' reading proficiency and listening proficiency. However, their capability of listening proficiency can be as high as their reading proficiency and the size of the gap would be their listening potential.

The present study discussed the educational concept of listening potential in L2 contexts as a counter part of the reading potential concept in L1 contexts. In order to discuss the listening potential concept, this study explored the relationship between reading proficiency and listening proficiency of ESL/EFL learners which is a premise for the concept.

II. LITERATURE REVIEW

The questions, "Is the comprehension in listening and reading the same or different?" or "Is there a relationship between oral and written languages?" are a research topic that many researchers have been interested in for the past decades. Thus, substantial empirical results have shown the relationships between reading and listening in English as a first language (Bell & Perfetti, 1994; Palmer, MacLeod, Hunt, & Davison, 1985; Sticht & James, 1984; Townsend, Carrithers, & Beveret 1987). Recently, with debates of whether it is reasonable or not to apply theories and practical research results in the first language acquisition or learning directly to the second/foreign language acquisition or learning, studies examining the questions have been done in the perspective of the second or foreign language acquisition, particularly in ESL/EFL contexts (Lund, 1991; Nuwash, 1997; Y. Park, 1996; G. Park, 2004; Reves & Levine, 1988).

1. The Relationship between Reading and Listening in L1

It is normally accepted as truth that children have a basic command of language aspects including syntax, phonology, and semantics developed by experience of listening and learning vocabulary before they start to learn reading in a first language situation (Nuwash, 1997). Goodman and Goodman (1979) state "Written language development draws on competence in oral language, since both written and oral language share underlying structures and since, for most learners, oral language competence reaches a high level earlier" (p. 150). That is, it is believed that there is a certain relationship between written language (e.g., reading) and oral language (e.g., listening), and the relationship enhances development of the learners' reading and listening proficiency as an interactive way.

Scholars claiming that there is the relationship between reading and listening in a first language assume two crucial concepts to be explained by the relationship: the reading potential concept and the listening-to-reading transfer concept. Whether instruction in listening comprehension can lead improvement of reading comprehension, and to a lesser degree, whether instruction in reading comprehension can lead to listening comprehension has been another question in the area of research on the relationship between reading comprehension and listening comprehension (Devine, 1968; Sticht, Beck, Hauke, Kleiman, & James. 1974; Sticht & James, 1984). The listening-to-reading transfer concept is an assumption to answer the question and is also taken as natural inference of the concept of reading potential. This concept is defined that improvements in aural/oral language proficiency transfer to improvements in reading proficiency. By analyzing empirical studies about the listening to reading transfer, Sticht et al. (1974) concludes that twelve studies were found adequate to meaningfully evaluate transfer from auding to reading. Ten of the twelve studies showed successful transfer of comprehension skills trained by auding to reading situations, while only two studies failed to demonstrate successful transfer.

2. The Relationship between Reading and Listening in ESL/EFL

Some studies provided empirical evidence that shows the existence of the relationship between reading and listening in ESL/EFL contexts. A part of the results of Y. Park's (1996) study showed that there was a relationship between reading comprehension and listening comprehension of Korean ESL students (N=111), although the correlation was low (r =.23, p < .05), which was significant. However, she drew a tentative conclusion that reading comprehension equals listening comprehension in L1, but reading comprehension

does not seem to be equal to listening comprehension in L2. According to Nuwash's (1997) research examining the correlation between three different measures (Semantic, Syntax, and Category Reading and Listening Tests), all measures showed very high correlation (r = .76, .78, and .88, respectively) between reading and auding (listening comprehension) of 206 ESL students consisting of ten different native languages. Based on the results of her study, Nuwash concluded that one underlying factor accounts for reading and listening in English as a second language as in English as a native language.

In Reves and Levine's (1988) research, they found the relationship between reading and listening comprehension of 68 EFL students speaking Hebrew as L1. They explored the relationship in the two modalities, reading and listening in various sub-skills: (1) Lexical Items and Words Meaning Deduction, (2) Comparison and Contrast, (3) General Statement and Illustrative Support, and (4) Cause-Effect Relationships. Their correlations ranged from .23 to .72. Except for the correlation (r = .23) between recognition of cause and effect relationships in reading and the same sub-skill in listening, the rest were modest or high in the correlation coefficient between reading and listening skills. In addition, they showed the correlation between scores at pre-tests and post-tests in reading and in listening: r = .45 at the pre-test and r = .59 at the post-tests. With these results, Reves and Levine tentatively concluded that the sub-skills of the reading comprehension process are to some extent similar to those of the process of listening comprehension, and the development of specific reading sub-skills may lead to the development of the same sub-skills in listening comprehension.

Aspects of Reves and Levine's conclusions show that there might be reading-to-listening transfer in the ESL/EFL situation as a counterpart of the listening-to-reading transfer concept in a first language situation. Sticht and James (1984) addressed the "literacy to[1] oracy transfer concept" in a first language. But this literacy to oracy concept, according to Sticht and James, in a first language seemed to be applicable to very limited cases such as highly educated and widely reading persons having a larger vocabulary and knowledge base and highly literate parents transferring their literacy to the oral language skill of their children.

3. Linguistic Knowledge in L2 Reading and Listening Comprehension

Research focusing on the relationship between reading comprehension and listening comprehension has led to studies examining common underlying factors, for examples, linguistic knowledge and background knowledge, accounting for both reading

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[1] Sticht and James (1984) used a term of "oracy" for listening and speaking as a counterpart of literacy in their article.

comprehension and listening comprehension. In particular, considerable studies have been conducted to explore the roles of linguistic knowledge in L2 reading comprehension and listening comprehension (e.g., S. Choi, 2007; B. Kim, 2006; Lee & Schallert, 1997; Levine & Reves, 1994; G. Park, 2004). For example, Lee and Schallert (1997) investigated the effects of L2 proficiency (measured by vocabulary and grammar knowledge) and L1 reading proficiency on L2 reading comprehension of Korean EFL students. Results of this study were that both vocabulary and grammar knowledge accounted for a total variance of 56% in L2 reading comprehension and L1 reading accounted for a total variance of 30% in L2 reading comprehension. Thus, Lee and Schallert concluded that L2 proficiency plays a more critical role in L2 reading than does L1 reading ability. Similarly, Choi's (2007) study showed that vocabulary knowledge has a strong positive predictive value for reading comprehension of Korean EFL learners.

Levine and Reves (1994) investigated the effects of linguistic, content, and formal schemata on L2 reading comprehension of EFL college students. This study showed that all three types of schemata played significant roles in FL reading comprehension. Furthermore, linguistic knowledge (linguistic schemata) was a determining factor in FL reading comprehension as well as the content schemata while the formal schemata was of minor importance.

In a similar vein, G. Park (2004) investigated the effects of linguistic knowledge (measured by vocabulary and grammatical structure), background knowledge, and question types in L2 reading and listening comprehension of Korean EFL students. Results of this study showed that the combination of linguistic and background knowledge played significant roles in L2 reading and listening comprehension, but linguistic knowledge was significant in both reading comprehension and listening comprehension while background knowledge was significant in listening comprehension only.

Previous studies have shown that there is the relationship between reading and listening comprehension in L2. In addition, both reading comprehension and listening comprehension are similar in terms of underlying factors accounting for both skills. Even though the previous studies have confirmed the relationship between reading comprehension and listening comprehension in L2, the educational concept of reading potential which is based on the relationship and widely held in L1 has never been discussed in L2. Thus, this study was purposed to discuss if the new educational concept of listening potential is plausible in ESL/EFL contexts after reconfirming the relationship between reading comprehension and listening comprehension.

In order to fulfill the purpose, this study explored the relationship between reading proficiency and listening proficiency of Korean ESL college students, focusing on the effects of linguistic knowledge, more specifically grammar knowledge on reading and listening comprehension. The present study addressed the following research questions:

1. Do Korean ESL college students who have high reading proficiency in English also tend to have high listening proficiency in English?

2. To what degree does grammar knowledge account for reading comprehension and listening comprehension of Korean ESL college students?

3. How is the difference between Korean ESL college students' reading proficiency and listening proficiency related to stages of language development?

III. METHOD

1. Subjects

231 Korean students in total enrolled in an ESL program at a university in a Midwestern area in the U.S.A. from 2001 through 2008. The students were primarily undergraduate (Under) and graduate (Grad) students who were admitted to academic programs at the university, and students (ESL-only) who enrolled in the ESL program for the only purpose of language learning (see Table 1). Of 231 students, 114 were females and 117 were males.

TABLE 1

Subjects at Each Academic Semester (N = 231)

Year	Semester	Under	Grad	ESL-only	Sub-total
2001	Fall	1			1
2002	Summer	4		1	21
	Fall	14	1	1	
2003	Spring	16			46
	Summer		2	3	
	Fall	10	9	6	
2004	Spring	13	1	8	41
	Summer	5		1	
	Fall	7		6	
2005	Spring	2	1	2	22
	Summer		1		
	Fall	11	3	2	
2006	Spring		5	5	27
	Summer	2		2	
	Fall	10	1	2	
2007	Spring	2	2	8	43
	Summer	7			
	Fall	17	3	4	
2008	Spring	9		4	30
	Summer	2		1	
	Fall	10	1	3	
Sub-total		142	30	59	231

The center of the ESL program provides an intensive ESL course based on one

academic semester. The course consists of three different sub-classes: Speaking/Listening class, Reading/Writing class, and Grammar class. Each sub-class is divided into five levels: first, second, third, fourth, and fifth level. Students take the classes based on their own level. The level of the students is decided by results of the English proficiency exam.

2. Instruments

The center of the ESL program has developed its own English proficiency exam to measure ESL learners' English proficiency. The exam is designed to assess international students' English proficiency, which the university' academic expectations demand. The results of the exam are used as a measurement to judge whether the international students whose native language is not English, meet the minimum English proficiency required to be successful in academic life at the university. As for reliability and validity issues for the exam, pretesting was performed on all forms of the tests and statistics were done and analyzed before they were initially launched. Furthermore, the proficiency exam has been administrated over the past 30 years and it has performed well at its own purpose.

The center of the ESL program administrates the exam twice at every semester: at the beginning of the semester and at the end of the semester. The exam administrated at the beginning and the end of the semester respectively is not exactly the same one but it is the same type of the exam. To put it in another way, both the exams have the same degree of difficulty, the same number of test items and passages, and the same format. That is, the center has a pool of tests, it administrates one out of the pool of tests each time, and in principal it avoids overlapping in selecting the tests from the pool for the two exams administrated in one semester.

The center of the ESL program does not open test items and sources of the original exam publically but keeps them confidentially and provides a sample of the exam (see Appendix). Meanwhile, the center releases the results of the exam with limited demographic information of test-takers when they are requested for only a research purpose.

The English proficiency exam consists of four sub-tests: Reading, Writing, Listening, and Grammar. Results of reading, listening, and grammar tests were used for the current study. The results of the exam taken by the subjects at the beginning of the semester and at the end of the semester were used as pre-test results and post-test results respectively for this study. As described above, the pre-test and the pot-test are different one, and therefore it is assumed that there are no practice effects by test-retest.

1) Reading and Listening Comprehension Test

The reading and listening comprehension tests of the English proficiency exam were used to measure students' reading and listening proficiency. The reading comprehension test consisted of 50 multiple-choice questions based on five reading passages. In the reading comprehension test, the students were required to read the passages of varying subject matter and answer questions on the basis of the contents of the passages. The passages average about 225 words each. 50 minutes were given to complete the test.

The listening comprehension test had three dialogues and two short lectures consisting of 61 questions and was delivered by audiocassette. In the listening comprehension test, the students were required to listen to various recorded English stimulus materials and respond with short written answers to the questions printed in English in the test booklet. Complete sentences for the short written answers were not necessary, and, furthermore, it was not a spelling or grammar test. 35 minutes were taken to complete the test.

2) Grammar Knowledge Test

The construct of linguistic knowledge is a complicated one. Various components, for example, phonetic, phonological, morphological, syntactic, and semantic knowledge, construct the linguistic knowledge. Of various components constructing the linguistic knowledge, grammatical structure knowledge was measured to define students' linguistic knowledge for this study.

Grammar test of the English proficiency exam was used to measure students' grammatical structure knowledge. The grammar test had 40 items for guided paraphrase. Each item had a paired sentence consisting of an A sentence and a B sentence. The B sentence had one or more blank spaces and the students were required to fill in the blanks to make the two sentences be grammatically equal. 30 minutes were given to complete the test.

3. Data Collection and Analysis

The center of the ESL program informs the students of that their test results could be used for the only purpose of research, and the center obtains their permission before administrating the exam.

This study used the results of the exam that were collected from 2001 Fall to 2008 Fall. There was no a specific reason for using the data collected during the specific period of time. The researcher wanted to have samples as many as possible and the data was all that the researcher was able to access through the center of the ESL program.

In order to analyze the data, descriptive statistics including means and standard deviations, Pearson Product-Moment Correlations, and linear regression analysis were performed on reading, listening, and grammar test scores. The data were analyzed through SPSS 15.0, with an alpha level of .05 set as the significance level.

Further analyses were performed with subjects divided into subgroups. Subjects were divided into groups of three levels according to their standard deviation distance from the means of reading and listening scores. A group of high level was those subjects who scored over one standard and up, while a group of low level was those who scored under one standard deviation and below the means of both the reading and listening scores. In addition, only subjects who were assigned to the same level of both the reading and listening proficiency were selected for the further analyses. Of 231 students, there were quite number of students who were assigned to a different proficiency level in reading and listening respectively. Accordingly, the number of the subjects for the further analyses was smaller than the original number of the subjects and there were uneven numbers among the subgroups: 19, 101, 8 subjects for Low, Intermediate, High level respectively based on the pre-test results; 19, 112, 9 subjects for Low, Intermediate, High level respectively based on the post-test results.

IV. RESULTS

In order to answer the first research question, reading and listening comprehension scores were computed, followed by Pearson Product-Moment Correlations for the degree of the relationship between the two variables. The reading score ranges from 0 to 100, and the listening score ranges from 0 to 200.

The mean of the pre-test reading scores was 63.52 (S.D. = 16.61), and the scores ranged from 4 to 94; the mean of the pre-test listening scores was 130.80 (S.D. = 26.45), and the scores ranged from 34 to 183. The mean of the post-test reading scores was 69.17 (S.D. = 14.68), and the scores ranged from 28 to 97; the mean of the post-test listening scores was 142.37 (S.D. = 23.49), and the scores ranged from 34 to 183. As expected, the mean of the reading and listening scores increased from the pre-test to the post-test.

As shown in the table 2, there was a positive relationship between reading and listening. “For behavior sciences, correlation coefficients of .10, .30, and .50, irrespective of sign, are, by convention, interpreted as small, medium, and large coefficients, respectively” (Green & Salkind, 2005, p. 256). Therefore, the medium coefficient sizes indicated that the relationship between reading and listening was medium. This means that Korean ESL college students who have high reading proficiency in English also tend to have high listening proficiency in English and/or Korean ESL college students who have high

listening proficiency in English also tend to have high reading proficiency in English.

TABLE 2

Correlation Coefficients between Reading and Listening Scores (N = 231)

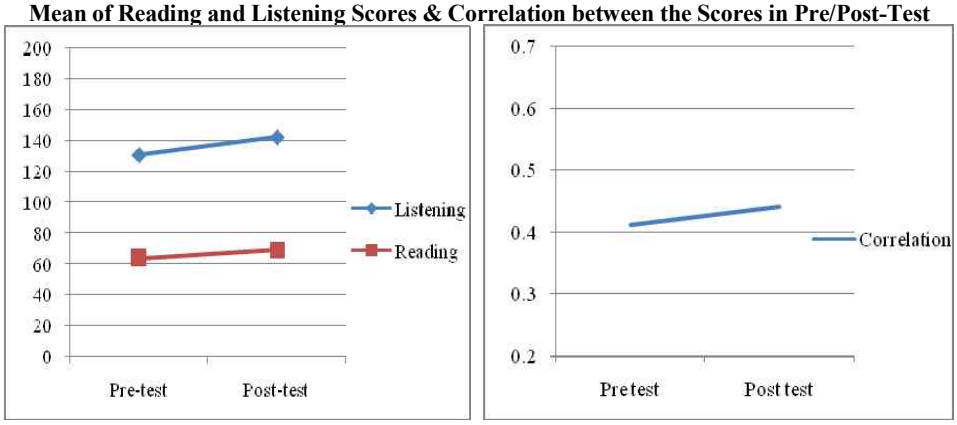
	Pre-test Reading	Post-test Reading
Pre-test Listening	.412**	-
(Sig.)	(.001)	
Post-test Listening	-	.441**
(Sig.)		(.001)

** Significant at the .01 level (2-tailed)

Furthermore, the relationship between the reading proficiency and listening proficiency grew with increase of the students' reading proficiency and listening proficiency from the pre-test to the post-test as shown in graphs in Figure 2. One possible explanation for this result is that common underlying factors accounting for both reading and listening seem to be more critical as the reading proficiency and the listening proficiency increase.

FIGURE 2

Mean of Reading and Listening Scores & Correlation between the Scores in Pre/Post-Test



In order to answer the second research question, grammar knowledge test scores were computed, followed by linear regression analyses to identify the amount of variance accounted for by grammar knowledge in reading and listening comprehension. The grammar knowledge score ranges from 0 to 100.

The mean of the pre-test grammar knowledge scores was 53.31 (S.D. = 15.26) and the scores ranged from 3 to 84; the mean of the post-test grammar knowledge scores was 64.45 (S.D. = 14.70), and the scores ranged from 3 to 95. Similarly as the reading and listening test scores, the grammar knowledge scores increased from the pre-test to the post-test.

The first linear regression analysis was carried out with the pre-test reading scores as the dependent variable, and the model entered the pre-test grammar scores as the predictor variable (see Table 3). The second linear regression analysis was carried out with the pre-test listening scores as the dependent variable, and the model entered the pre-test grammar scores as the predictor variable (see Table 3). As shown in Table 3, the grammar knowledge significantly accounted for a total variance of 37.5% in pre-test reading comprehension, F (1, 229) = 137.28, p < .01, and 32.2% in pre-test listening comprehension F (1, 229) = 108.77, p < .01.

Similarly as the first and the second regression analysis, two more regression analyses (see Table 3) were carried out with the post-test scores including reading, listening, and grammar test. As shown in Table 3, the grammar knowledge significantly accounted for a total variance of 45.7% in post-test reading comprehension, F (1, 229) = 194.19, p < .01, and 26.7% in post-test listening comprehension, F (1, 229) = 84.72, p < .01.

TABLE 3
Linear Regression Analyses: The Amount of Variance Explained by Grammar Knowledge in Pre- & Post-test Reading and Listening Comprehension (N =231)

Variable	b	β	*t*	R^2
Grammar (pre-test)	.67	.61	11.72**	.375
[1)]Overall Model F (1, 229) = 137.28, p < .01				
Grammar (pre-test)	.98	.57	10.43**	.322
[2)]Overall Model F (1, 229) = 108.77, p < .01				
Grammar (post-test)	.68	.68	13.94**	.457
[3)]Overall Model F (1, 229) = 194.19, p < .01				
Grammar (post-test)	.83	.52	9.20**	.267
[4)]Overall Model F (1, 229) = 84.72, p < .01				

[1)] Dependent Variable: Pre-test Reading scores
[2)] Dependent Variable: Pre-test Listening scores
[3)] Dependent Variable: Post-test Reading scores
[4)] Dependent Variable: Post-test Listening scores
**. p < .01

The amount of variances in the reading comprehension accounted by the grammar knowledge increased from the pre-test to the post-test (i.e., 37.5% for pre-test, 45.7% for post-test), whereas the amount of variance in the listening comprehension accounted by the grammar knowledge decreased from the pre-test to the post-test (i.e., 32.2% for pre-test, 26.7% for post-test).

Lastly, in order to answer the third research question, reading scores and listening scores were compared across stages of language development. The stages of language development were defined as three levels of proficiency: Low, Intermediate, and High. As described in the sub-section of the data collection and analysis in chapter 3, the subjects were divided into three subgroups and each subgroup was assigned to low, intermediate, and high level respectively. An additional adjustment was needed to make direct comparison of the reading scores and the listening scores because the reading test and the listening test had different scale of scores. Thus, the scores were converted to the proportion of each earned score to the total score (i.e., 100 for reading, 200 for listening), and then the proportions of the earned reading scores and listening scores were compared. The proportions range from 0.0 to 1.0. The mean proportions of each group were shown in Table 4.

TABLE 4

The Proportions of Reading and Listening Scores of Each Proficiency Level

		Pre-test		Post-test	
		Reading	Listening	Reading	Listening
Low	Mean	.32	.42	.44	.51
	S.D.	.10	.07	.08	.06
	N	19	19	19	19
Intermediate	Mean	.65	.66	.69	.72
	S.D.	.09	.06	.08	.07
	N	101	101	112	112
High	Mean	.85	.82	.89	.85
	S.D.	.03	.01	.03	.01
	N	8	8	9	9
Total	Mean	.61	.63	.67	.70
	S.D.	.16	.11	.13	.11
	N	128	128	140	140

FIGURE 3

Difference between Reading and Listening Proficiency across Proficiency Levels

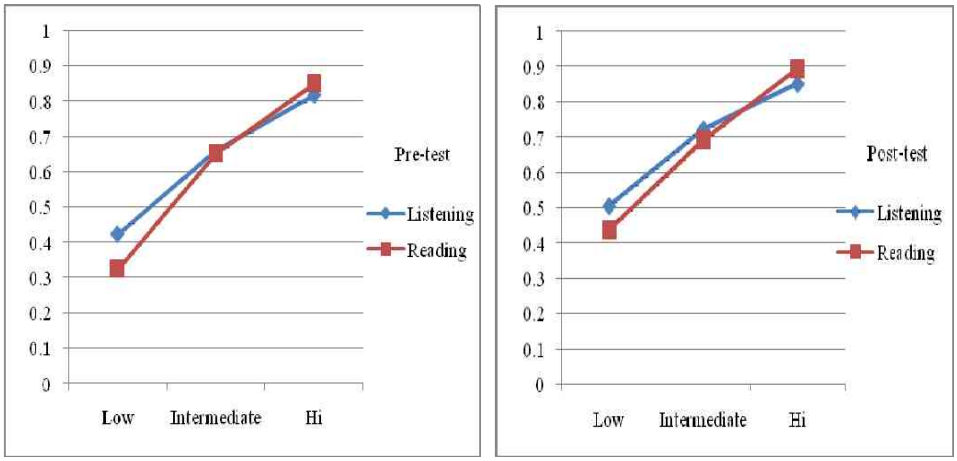


Figure 3 shows the difference between the reading proficiency and the listening proficiency across the stages of language development. In both the pre-test and the post-test, a pattern of the difference between the reading proficiency and the listening proficiency was very similar. The listening proficiency was higher than the reading proficiency in the low proficiency level. In the intermediate level the listening proficiency was still higher than reading proficiency but the difference was not critical unlike the difference in the low proficiency. Interestingly, in the high level the reading proficiency was higher than the listening proficiency although the difference was not that critical.

V. DISCUSSION

Before discussing about the findings of this study, it is needed to clarify that this study was not an experimental study to verify the educational concept of the listening potential which is assumed more plausible than the reading potential in ESL/EFL contexts. This study was purposed to confirm the relationships between reading and listening comprehension which are the premise of the concept of listening potential and then to discuss it based on the premise.

A result of this study showed that there was a moderate predictable correlation between reading comprehension and listening comprehension of the Korean ESL college students. This result supported results of the previous studies (Nuwash, 1997; Y. Park, 1996; Reves & Levine, 1988). More importantly, the relationship between reading and listening played a critical role as a preliminary condition to discuss about the listening potential concept in the ESL/EFL contexts.

Another finding is that the grammar knowledge significantly accounted for both reading comprehension and listening comprehension. This finding confirms other studies showing

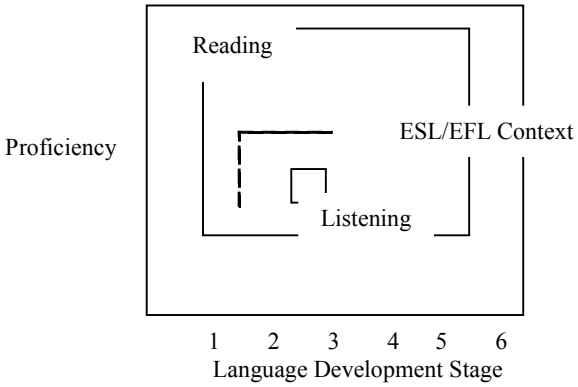
that grammar knowledge plays significant roles in both L2 reading and listening comprehension (Y. Choi, 1994; Lee & Schallert, 1997; Levine & Reves, 1994; G. Park, 2004). This result makes the existence of the relationship between reading and listening clearer by showing a role of the common underlying factor in both reading comprehension and listening comprehension. In addition, accountability of the grammar knowledge was stronger in the reading comprehension than in the listening comprehension. The grammar knowledge accounted for a total variance of 37.5% (pre-test), 45.7% (post-test) in the reading comprehension and 32.2% (pre-test), 26.7% (post-test) in the listening comprehension. Differences of accountability of the grammar knowledge might be due to, in part, two different modalities of input. That is, reading comprehension involves a written text in which a reader can look back and thus check his/her comprehension with his/her own grammar knowledge. Listening comprehension, however, involves an oral text which a listener is not able to access for re-listening and thus has limited time to check his/her comprehension with his/her own grammar knowledge.

Even though the grammar knowledge accounted for large amount of variances both in the reading comprehension and in the listening comprehension, it is limited to say that the grammar knowledge is only one common underlying factor accounting for the reading and listening comprehension. According to the results in this study, there are still remained variances of about 55-60% in the reading comprehension and about 70-75% in the listening comprehension to be accounted for. In particular, in spite of increase of the relationship between reading and listening comprehension from the pre-test to the post-test (i.e., r = .412 for pre-test; r = .441 for post-test), the amount of variances in the listening comprehension accounted by the grammar knowledge decreased from the pre-test (i.e., 32.2%) to the post-test (i.e., 26.7%). This result indicates that there might have been another common underlying factor which accounted for both reading and listening comprehension and made increase of the relationship. This finding suggests that a variety of other factors involve in reading and listening comprehension. For example, background knowledge, which this study did not include, would be another primary factor as mentioned in the literature review. In addition, learning strategies, type of a text, and another linguistic knowledge such as vocabulary knowledge could be significant underlying factors accounting for reading and listening comprehension.

Lastly, it is debatable of whether it is reasonable or not to apply theories and practical research results in a first language acquisition directly to a second/foreign language acquisition. Given the debates, it might be plausible to discuss a new concept, listening potential, in ESL/EFL contexts as a counterpart of the reading potential in first language contexts. In the first language contexts, it might have been impossible to suggest the concept of listening potential because development of listening occurs prior to development of reading in the first language contexts.

As Sticht and James (1984) explained the reading potential concept in a first language context through the hypothetical graph (see Figure 1), the listening potential concept in ESL/EFL contexts might be explained through a similar hypothetical graph (see Figure 4).

FIGURE 4
Hypothetical Graph for the Listening Potential Concept



This study empirically showed the moderate correlation between reading and listening comprehension of the ESL/EFL learners as Sticht and James's hypothetical graph was based on the correlation between reading and listening. Unexpectedly, however, the hypothetical graph for the listening potential concept (Figure 4) was not supported by results of this study as shown in the graphs in Figure 3. The graphs reflecting the results of this study were more like supporting the reading potential concept rather than the listening potential concept. One possible explanation for this result is that the concept of reading potential might be reasonable even in ESL/EFL contexts even though the ESL/EFL contexts are different from the L1 context in terms of the order of acquisition of written language and oral language. Another more plausible explanation is that this result might be due to current trends of English teaching and learning in Korea where oral language communication ability is considered more important than written language communication ability. Even though the subjects were Korean college students beginning to study in the

U.S.A., they had most formal or informal English instruction in Korea before coming to the U.S.A. Accordingly, the trends of English instruction in Korea influenced the students' development of reading and listening proficiency. If it is true, the concept of reading potential might be more applicable at least in the EFL context of Korea rather than the concept of listening potential can be.

VI. CONCLUSION

This study investigated the relationship between reading and listening proficiency of Korean ESL college students, focusing on the roles of grammar knowledge on reading and listening comprehension. In addition, this study discussed the educational concept of listening potential in ESL/EFL contexts. This study showed empirically that Korean ESL college students who have a good English reading proficiency tend to have a good English listening proficiency, and/or Korean ESL college students who have good listening proficiency in English also tend to have good reading proficiency in English. In addition, grammar knowledge plays significant roles in their reading and listening comprehension. However, this study did not empirically support the new educational concept of the listening potential which this study proposed to discuss although there was a certain pattern of development of reading and listening proficiency across the stages of development.

This study has theoretically proposed to discuss the new educational concept of listening potential. Considering that the concept of reading potential in L1 is theoretically meaningful and L2 contexts are different from L1 contexts, it is believed that the concept of listening potential can also be meaningful to be discussed theoretically in L2 including ESL/EFL contexts. In terms of that this study has proposed to discuss the concept of listening potential for the first time, this study has its own meaning even though the concept was not supported by the results of this study.

This study also has the pedagogical implications as follows: ESL/EFL students should be reminded that grammar knowledge is significant in their reading and listening comprehension. Teachers need to help the students build grammar knowledge so that the students can bring grammar knowledge to improve their reading and listening comprehension. Students, particularly having low listening proficiency or low reading proficiency compared to their reading proficiency or listening proficiency respectively, should be encouraged that they have potential in listening proficiency or reading proficiency as high as their reading proficiency or listening proficiency. Teachers need to help the students bridge the gap between their reading and listening proficiency.

This study showed that grammar knowledge plays significant roles in reading and

listening comprehension without considering other variables. Thus, more studies should be conducted in the future to confirm this study and to shed further light on what other factors play significant roles in reading and listening comprehension. Most importantly, the concept of listening potential and/or reading potential should be verified through further research in the future. The further research might have more sophisticated research methodology like a real experimental design. Finally, this study had its own limitations as follows: the instrument for this study was not standardized one like TOEFL or TOEIC. Therefore, reliability and validity of the measures for this study can be an issue. The subjects for the present study were not necessarily representative of all Korean ESL college students. Thus, the generalization of the results of the present study should be limited to the population similar to those described in the present study.

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APPENDIX

Sample of Applied English Center Proficiency Exam

I. READING COMPREHENION (Multiple-Choice; 5 reading passage, 50 questions)

Please note that the passages on the actual test average about 225 words each, so they are longer than this sample passage.

(1) From 1850 to 1900, the field of anthropology in the United States was dominated by evolutionists. (2) These men combined fieldwork with information derived from missionaries, travelers and others. (3) They contributed much to our understanding of human culture. (4) In spite of that, their knowledge of various specific cultures was limited. (5) A number of cultures were not observed at all while some were observed poorly and inaccurately. (6) The evolutionists themselves did good fieldwork, but the material received from other sources was often poor. (7) As a result, they sometimes made mistaken generalizations that did not fit information gathered later. (8) When they lacked material and functional data, they occasionally supplied hypothetical data to fill the gaps. (9) However, their work was arguable scientific and the generalizations which they made ultimately contributed to the advancement of science.

1. The main purpose of this paragraph is to provide…
a. a balanced evaluation of the work of the evolutionists.
b. negative criticism of the evolutionists.
c. a description of cultural anthropology.
d. a description of "evolutionism."

2. According to the author, the major weakness in the evolutionists' generalizations was that…
a. they ignored material received from missionaries and travelers.
b. they were based on incomplete or incorrect information.
c. the study of cultures is not a science.
d. all the data was hypothetical.

3. From this passage we can infer that evolutionists…
a. no longer exist.
b. made no scientific contributions.
c. have studied every human culture.
d. cooperated with other people to complete their work.

4. What does THAT refer to in sentence 4?
a. evolutionists' fieldwork
b. the contributions of evolutionists
c. our understanding of every culture
d. our knowledge of specific cultures

II. LISTENING COMPREHENSION (61 questions)

For each dialogue and lecture: First, you read and hear the topic. Then, you read the questions. Last, you write answers to the questions while you listen to the dialogue or lecture.

Section A: A Sick Student

Part 1

Your friend Donna and her roommate Alice are talking about being sick.

The tape will be played only once. As you listen to the tape, answer the questions below. Compete sentences are not necessary. You now have 30 seconds to study the questions.

1. What does Donna's roommate complain about? _____

2. What has Donna been doing to fix this problem?_____

What symptoms does Donna have?

3. _____

4. _____

5. Does Donna have a fever?_____

Section B: Environmental Studies Lecture

You are a student in an environmental studies course. You are studying energy sources.

Part 1

You will hear a lecture on changes in energy sources in the United States. As you listen to the tape, answer the questions below. Complete sentences are not necessary.

You now have 30 seconds to study the questions.

What did energy get used for?

16._____

17._____

18. What fuel did people use in 1850?_____

19. What was oil first used for?_____

III. Grammar (Guided Paraphrase; 40 items)

Each item has an A sentence and a B sentence. The B sentence has one or more blank spaces.

- Put one or more words in each space. Your sentence B must have the same meaning as sentence A.
- Don't add any ideas or take out any ideas.
- Don't change any punctuation in sentence B.
- Don't change any printed words.

Example:
A. Our teacher will be at the party.
B. Our teacher is going *to be* at the party.

1. A. I read some pages, but not many.
   B. I read a _____ pages.
2. A. Harry can't drive a motorcycle. He's not old enough.
   B. Harry is _____ young _____ a motorcycle.
3. A. The class discussed the ideas.
   B. The ideas _____ by the class.
4. A. Students should join the International Club.
   B. It is a good idea _____ to join the International Club.

5. A. There are reports that Professor Johnson is extremely angry.
   B. Professor Johnson is reported _____ .

Examples in: English
Applicable Languages: English
Applicable levels: Post-secondary

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