

Reading Ability in Korean as a First and Second Language Achieved During the Early Phase of Korean/English Immersion Education in America

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In this paper the reading ability developed by two groups of students enrolled in an immersion program during the early phase of elementary immersion implementation is reported. The subjects were Korean-American students and non-Korean-American students from Kindergarten to Grade 2, the second grade students being the first cohort group of this program. This immersion program operates in North America. The Korean language is thus the first language for the Korean-American students; it is a foreign language for the non-Korean-American students in the same program. This report is based on the results of the test of reading in Korean. The degrees of mastery of reading in Korean achieved by the two immersion groups are reported using criterion-referenced measurement. In addition, the reading ability of the immersion Korean-American group is compared with that of Korean-American students in monolingual classes in Los Angeles and Seoul. The results from this study make unique contribution regarding heritage language conservation for Korean-American students (largely, immigrants' second- or third-generation children) and foreign language acquisition for non-Korean-American students (broadly, English-dominant children) in America. Finally, the utility of the reading test instrument developed and used in this study is noteworthy for educators looking for a measure to assess reading skills of children.

Key words: Reading skills, immersion, single-language classes

1. Introduction

1.1. Immersion Approach to Language Education

In immersion programs students' second or foreign language is used along with their first language as a medium for teaching the general curriculum. The premise is that no matter what first language background students may come from, they will become proficient in two languages concurrently with their mastery of the general academic-content lessons. The immersion approach to language education originated in a French-English immersion program in Canada, where English and French are the two official languages. In this program, the English-speaking children received instruction of all school subjects delivered in French, their second language, while instruction in English, their first language, was gradually introduced in the later school years. This innovative language teaching model and the impressive outcomes affected language educators in the United States where similar multilingual social situations exist. With the first Spanish immersion program established in Culver City, California, in 1971 (Campbell, 1984), similar immersion programs have been launched across the United States. As of May 2005, 315 schools are implementing two-way immersion programs in the United States, and five language groupings are represented, which include Spanish/English (296 schools), French/English (7 schools), Chinese/English (5 schools), Korean/English (4 schools), Navajo/English (2 schools), and Japanese/English (1 school) (Directory of Two-Way Bilingual Immersion Programs, 2005).

1.2 The Korean/English Two-Way Immersion Program (KETWIP)

The first immersion program that introduced the language grouping of Korean and English as the languages of curricular instruction is the Korean/English Two-Way Immersion Program (KETWIP). This program was launched in three schools in the Los Angeles Unified School District (LASUD) in 1992 (Campbell et al., 1994). The students consist of both Korean-Americans and non-Korean-Americans.

1.2.1. Goals and Instruction

KETWIP aims to achieve linguistic development: Korean-American stu-

dents and non-Korean-American students enrolled in the program will develop high levels of Korean and English language abilities in academic and general areas (Campbell et al., 1995; Bae, 1995).

From this goal, the present study will focus on Korean language ability. This immersion program operates in the U.S. In this situation, Korean is a home language for the Korean-American students who are second-generation Koreans in America; it is, however, a foreign/second language for the non-Korean-American students in the same classes who are English-dominant children.

To achieve the above goal, the program creates a bilingual class environment. First, both languages are used for curricular instruction. For example, morning classes are taught in Korean, and afternoon classes in English. Table 1 shows the proportions of instruction in Korean and English that have been implemented in this program.

Table 1. Percentage of Curricular Instruction in Both Languages

	Kindergarten	First grade	Second grade
English	30%	40%	50%
Korean	70%	60%	50%

As Table 1 shows, in the lower grades the majority of subject matter instruction is conducted in Korean (which in the U.S. context is the minority language), while instruction in English is increased gradually. The greater proportion is given to the minority language at the initial stage because the opportunity for exposure to the majority language outside of school is more for all students. Instruction will eventually be divided equally between the two languages as the students move on to higher grades. Acquiring Korean and English takes place naturally, albeit purposefully, in this context (Lapkin & Cummins, 1984; Met, 1998; Swain, 1996). The premise of content-based language instruction is foundational for immersion-based language teaching. Content-based language instruction believes that language is acquired most effectively when used as the medium for conveying informational content of interest and relevance to the learner (Brinton & Master, 1997; Kasper et al., 2000).

1.2.2. Class Composition

Two-way immersion programs provide a classroom environment where

half of the students are model speakers of the target-languages. In KETWIP classes, one group of children consists of Korean-Americans, whose home language is Korean, and the other group non-Korean-American children, who are English-dominant. In this environment, instruction in both languages begins in kindergarten. Each language group benefits from the other as they interact. The mixture of two language groups in the same classroom in two-way immersion programs thus provides excellent opportunities for acquiring both target languages (Campbell, 1995). This two-way environment is consistent with whole language approaches (Goodman et al., 1989; Pressley, 1998), which integrate language learning with students' experience through two group peer interactions, cooperative learning, and individual and group project work.

1.2.3. Language Testing Project

Scholars at the University of California at Los Angeles (UCLA) through the Language Resource Program and the immersion program's teaching staff collaboratively worked to develop instruments that would evaluate the learners' progress toward meeting the program's linguistic goals listed earlier. There are measures that can be used to assess and infer students' academic knowledge and English skills. No previously existing tests were found, however, that would assess Korean as a primary and/or foreign language designed for young children. Therefore, the KETWIP testing team worked on the design and implementation of tests of Korean proficiency for children.

Focusing on the program's goal towards linguistic development, this paper addresses the development of Korean reading skills by the KETWIP immersion students. The results of various studies of the outcomes from one-way immersion programs have been available (e.g., Cummins, 2000; a collection of reports in *Studies on Immersion Education*, 1984). At the same time, a large number of studies on the two-way immersion programs are assessable as can be found in the database of bibliographies by the Center for Applied Linguistics (e.g., Gort, 2002; Howard, Christian, & Genesee, 2003; Pérez, 2004; Potowski, 2002; see others at <http://www.cal.org/twi/bib.htm>). The majority of these reports involve Spanish/English immersion. Only a handful of reports are available concerning non-Spanish/English programs. Reports unique from these non-Spanish/English programs would be immigrants' second or third generation children's ability to conserve their primary language

skills, particularly literacy skills. Another unique area is English-speaking children's acquisition of a foreign language. KETWIP is one of the few immersion programs that implement a dual language combination other than Spanish/English. Besides, KETWIP is the pioneer of future Korean/English immersion programs. Thus, this study provides useful information about the topics of literacy development in immersion programs: conservation of first language for immigrants' second-generation children; and foreign language learning for English-dominant students.

1.3. Research Questions

The purpose of this paper is to make inferences about Korean reading ability developed by the two groups of KETWIP students during the early stage (Grades K to 2) in the immersion program. It aims to document the progress toward KETWIP's goal of Korean linguistic development to provide useful information for future immersion programs.

For these purposes the following research questions are addressed:

- To what extent do the Korean-American (KA) students and Non-Korean-American (NKA) students develop Korean reading skills during the early phase of immersion (K to Grade 2)?
- How does KETWIP KAs' reading ability compare to those of (a) KAs in English-only classes in Los Angeles and (b) Koreans in Korean-only classes in Seoul at the same grade level?

1.4. Assessment Theory Used

The approach used in the KETWIP assessment is criterion-referenced testing with the incorporation of norm-referenced interpretations. Criterion means a well-defined assessment domain or domain of ability content. A criterion also signifies level or levels of ability. For instance, a school might say, "It took one year to get our students up to criterion," In this example, we think of the criterion as a level of performance, or as a desired level against set educational objectives (Popham, 1990). A common term scoring criteria addresses both meanings of criterion, that is, the levels represented by numeric scale points and the content of ability (e.g., grammar, coherence) that describes the scale points. Containing

both meanings of criteria, criterion-referenced measurement (CRM) is well known by the principles: (a) a clear specification of the ability domain and levels (i.e., criteria); (b) sample items that are representative of the criteria; and (c) score interpretation in reference to such criteria defined (e.g., Davidson, Hudson, & Lynch, 1985; Gronlund & Linn, 2000; Popham, 1990). The first two principles relate to test development, and the third relates to score interpretation.

In contrast to CRM, norm-referenced measurement (NRM) aims to discriminate amongst or compare the test-takers. Thus an individual's test performance is interpreted relative to the performance of other students who have completed the test (Bachman, 1990; Gronlund & Linn, 2000).

The KETWIP testing, as stated earlier, aims to examine whether, and to what extent, KETWIP students, on the average, have met the specified goals. To infer students' ability from test data, it is thus important to make clear what abilities we are dealing with and what levels are involved. Thus, in this study, we emphasize a clear description of the ability domain and levels involved, to which the inferences of scores will be made. As such, we believe that criterion-referenced testing is most relevant to our testing purpose. While stressing this approach, by which we have a better idea of what a student's test performance signifies, we also note that even with criterion-referenced tests, comparative data help us understand individuals' test performance (Gregory, 2004; Popham, 1990, pp. 146-147). We therefore incorporate norm-referenced score interpretations to better make sense of KETWIP students' performance by comparing them with that of students from monolingual classes as well as within KETWIP.

2. Method

2.1. Study Variables

The study variables are the reading scores (dependent variable) and the groups (independent variable). The group variable has two levels within KETWIP (KA and non-KA) and two other levels outside KETWIP (comparison groups in LA and Seoul). These groups are specified below.

2.2. Groups

The test was given to all students in the immersion program and the comparison groups in monolingual classes in Los Angeles and Seoul (a total of 288 students). Students' age ranged from five to nine years.

2.2.1. KETWIP Immersion Groups

The immersion program KETWIP was composed of three schools with kindergarten and first grade classes at each school and one second grade class at one school. There were 115 Korean-American (KA) students and 60 non-Korean-American (NKA) students. KA students were born in the U.S. The NKA students are of Spanish, Tagalog, and Anglo ancestry. The NKA students had no ability in Korean when they entered the program. Both KA and NKA students were admitted to the program upon parents' agreement and on a first-come basis.

2.2.2. Comparison (Non-KETWIP) Groups

Two comparison groups were used. One group was from English-only classes in Los Angeles (LA), and the other Korean-only classes in Seoul. The comparison group from Los Angeles consisted of 43 Korean-Americans from two neighborhoods with sizable Korean populations in LAUSD. Approximately half came from a school in Korea Town and half from a school in the San Fernando Valley. The 22 KA first graders and 21 KA second graders were attending an English Language Development Program (ELDP) operated in the two schools. The instruction in the ELDP classes was conducted exclusively in English: that is, the students had no formal immersion in Korean. Their Korean language ability was due to their parents and weekend Korean classes offered in the Korean communities and by Korean churches.

The comparison group from Seoul consisted of 70 native Koreans. The 35 first graders and 35 second graders are typical of the students in Ewha Elementary School (a private school attached to Ewha Women's University in Seoul). This school maintains the general ethos of traditional Korean elementary school education. The percentage of instruction in the Korean language is 100%.

The main factor that distinguishes KETWIP and comparison groups from each other was the percentage of curricular instruction in Korean. Within KETWIP, the two groups were different in their home language,

Korean or non-Korean. Although, initially, the level of Korean *oral* proficiency differed among the groups according to their home language difference, the initial Korean reading proficiency was nil, or very little, for all groups.

2.3. Test Instrument

The assessment domain of this study is broadly Korean reading ability. The specific domain is a set of reading abilities as manifest in reading test tasks. The reading test consisted of four tasks. Across all grades an identical reading test was designed. Table 2 outlines the number of items and the abilities tested in the reading tasks. Figure 1 shows sample reading tasks.

Table 2. Reading Test Format

	# of items (Total: 59)	Reading abilities
Task 1	9	Comprehending abstract words on an information sheet
Task 2	25	Recognizing single words: concrete nouns
Task 3	10	Comprehending words, sentences, and paragraphs in context
Task 4	15	Comprehending written questions about students themselves

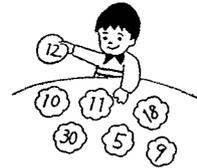
<p>Task 1: Information Sheet</p> <p>이름: _____</p> <p>학교이름: _____</p> <p>학년 (동그라미하세요): 유치원, 1 학년, 2 학년, 3 학년</p> <p>나이: _____</p> <p>생일: _____</p> <p>집 전화 번호: _____</p> <p>(The Korean words includes: Name, Age, Birthday, Home phone number...)</p>	<p>Task 2: Single Words</p> <p>연필 창문 시계</p>  <p>(The Korean words include: desk, pencil, window, clock, calendar, teacher, box...)</p>
<p>Task 3: Words and Sentences</p> <p>가장 작은 숫자 (The smallest number)</p> 	<p>Task 4: Questionnaire</p> <p>1. 어느 도시에 살아요? _____ (Which city are you living in?)</p> <p>2. 무슨 색깔을 좋아해요? _____ (What colors do you like?)</p> <p>3. 생일날 누구를 초대하고 싶어요? _____ (Who would like to invite to your birthday?)</p>

Figure 1. Sample Reading Tasks (For K to Grade 2).

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Task 1 (Comprehending words on an information sheet): This task tested students’ ability to comprehend basic written words with abstract meanings relating to themselves. Subjects were required to read and fill in an information sheet. Numerous vocabulary pertaining to personal information (e.g., name, school, grade, age, birthday) was written on this page.

Task 2 (Recognizing single words: concrete nouns): This task intended to measure students’ ability to recognize single written words that are

concrete nouns pertaining to common daily life and school experience. Students were given pictures of two scenes common to their school and daily life (classroom and kitchen scenes). Surrounding the pictures were numerous single words relating to the picture content. Students were asked to draw lines matching the words with the correct objects in the pictures.

Task 3 (Comprehending words, sentences, and paragraphs in context): In this task, students were given pages with pictures and reading material commonly seen in their daily life on the right side of the page (e.g., calendar, a letter, material from classroom bulletin board). They were asked to circle the words or objects in the pictures that correspond to the written language prompts on the left side of the page. The written language was presented in progressively complex content and linguistic structures: singles words - phrases - sentences - and paragraphs. The task tested the ability to comprehend such written material.

Task 4 (Comprehending written questionnaire): The fourth task measured students' ability to comprehend written Korean sentences presented in question form. The questionnaire asked questions about the students themselves, relating to their daily experience. Students were required to read the questions and write their answers in either Korean or English or numerically. Scoring for this task was based on students' comprehension of the written questions as judged from their answers, and not on the linguistic accuracy. The order of item presentation increased in complexity in terms of length and linguistic structure.

2.4. Scoring

A score of one point for each correct response was assigned, and then aggregated to form a total score, which was converted to a percentage correct score (a correct score out of 100) for each task. In introducing scoring in this section it is appropriate to address the second issue of criterion: levels. The following level (scale) of ability was used:

Zero _____	Perfect score (% correct: 100)
(No ability)	(Complete at 2nd grade level)

Figure 2. Level (or scale) of Ability in the Early Elementary School Phase (K to 2).

According to Bachman (1989, p. 25), if the results of the criterion-referenced tests are not only useful for the evaluation of a program but also applicable to program-free, context-free language proficiency, the scores must be referenced to an absolute scale of ability, and the end points of ability should be defined so as to provide an absolute scale. Following this requirement, the two ends of the ability scale in this assessment were thus defined as follows. The one end point (score of zero) represented nil. The other end point (perfect score) represented a complete level of the reading ability in Korean for second grade students, the second grade being the highest grade in this study and in the early elementary school phase defined in this study.

This scale is intended for a 'common metric scale' for students from K through 2 who are learning Korean in the early immersion setting, independent of different schools. These criterion-referenced scales (Bachman, 1990, pp. 340-348; Bachman & Palmer, 1996, p. 212) allow us to make inferences about students' reading proficiency (e.g., 40% mastery of the reading domain skills out of the complete state for second grade level, 100%) and not merely how well students perform relative to their peers. This usefulness applies even when we are comparing students' performance.

2.5. Test Administrations

The test was administered in June, 1995 toward the end of the academic year in Los Angeles. The students were allowed 50 minutes to complete the test. To ensure consistent administration across the groups, identical instructions in detailed test administration guides were presented at all test administrations. KA and NKA were separated. KA students were given instructions orally in Korean by a native Korean speaker. In a separate room, NKA were instructed orally in English by a native speaker of English.

Native Korean students in Seoul were given instructions by another native Korean instructor who had been trained to administer the test in a manner consistent with that in Los Angeles. The students' teachers were present in both L.A. and Seoul.

2.6. Analysis

Descriptive statistics, alpha reliability coefficients, and analysis of variance (ANOVA) were calculated on SPSS release 12.0.

3. Results

3.1. Reliability

Reliability coefficients were estimated for the entire data. Both alpha (treating the four tasks as four items) and Kuder-Richardson 21 item reliability coefficients were calculated. Because the data for reading consisted of total scores for each task, rather than 0/1 item scores, KR 21 was used. Alpha was calculated with the four tasks treated as 4 items. The coefficients were .971 (alpha) and .985 (KR 21), indicating high internal consistency of the reading test items. Presumably these high coefficients were attributed to the following factors. First, the items' high degree of internal consistency to measure the reading ability contributed to this remarkable test quality: this was the result of the efforts made in that direction during the test development process, particularly a result of the content validity emphasis intrinsic in the CRM approaches. Second, a great variation in language abilities among these individual students along the learning curve became a statistical advantage to inherently increase reliability coefficients.

3.2. KA Students

3.2.1. Mastery of Content Domain

This section will answer the following research question: To what extent do the Korean-American (KA) students develop Korean reading skills during the early stage of immersion (K to Grade 2)? To answer this question, the KA students' test scores are reported in terms of degrees of mastery of the reading assessment domain using percentage correct scores and descriptive terms. Then, the mean scores are compared with those in the comparison groups.

Figure 3 represents KETWIP KA groups' degrees of mastery of the reading domain, expressed in the percentage correct scores of the means for the test tasks. The average of the four tasks is given in the final col-

umn in the figure for each group.

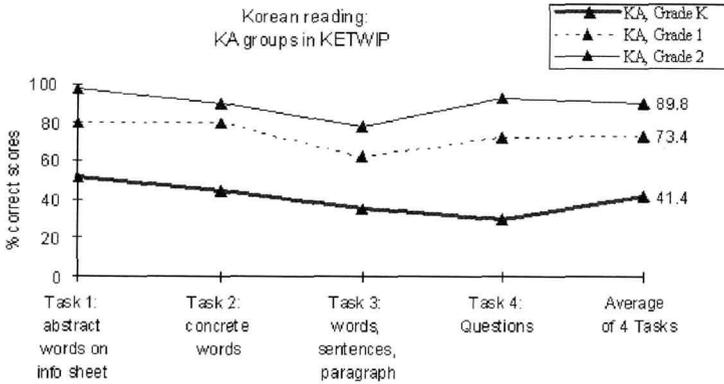


Figure 3. % Correct Scores for Korean Reading: KA Grade Groups in KETWIP.

As shown in Figure 3, on the four-task reading test identical for all grade groups, the KA groups mastered, on average, about 41% correct (K), 74% correct (first graders), and 90 % correct (second graders) on the ability scale with its end point (100%) being the complete level for second graders. These KAs showed a steady development of the reading skills as the grades went higher.

3.2.2. Performance Compared with Monolingual Classes

This section answers the following research question stated earlier: How does the KETWIP KAs’ reading ability compare to KAs in English-only classes in Los Angeles and Koreans in Korean-only classes in Seoul at the same grade level? To answer this question, we will compare the mean scores for these groups.

First, the test performances of second grade groups are compared visually. Figure 4 represents the percentage correct mean scores for Korean reading tasks.

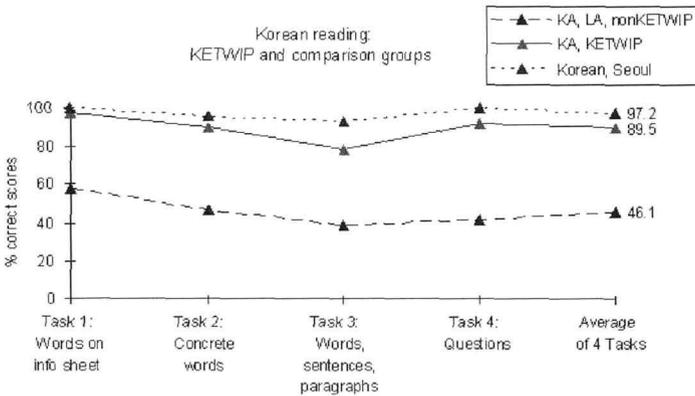


Figure 4. 2nd Grade Groups from KETWIP and Single-language Classes in LA and Seoul.

As shown in Figure 4, the KETWIP second-grade KAs' performance was very close to that of Korean peers in Seoul. At the same time, compared to the KA peers in English classes in Los Angeles, the KETWIP second-grade KAs demonstrated remarkably higher competency in all these areas.

These differences in means were tested for statistical significance. The total reading score (raw score) was used as the dependent variable. The independent variable is the group with the three levels (KA, KA in non-KETWIP, and Seoul). Thus one-way analysis of variance (ANOVA) was estimated for the second grade groups, and in addition, separately for the first grade groups. The means and standard deviations for the reading total (raw score) are provided for these groups (see Table 3). The F statistic (52.91 and 65.97, first and second grade groups, each) for the dependent variable was significant at the 0.05 level (see Table 4). Thus, for each grade level, the results indicate that there is a significant overall group effect, indicating that not all of the groups are equal in the reading ability.

Subsequently, Turkey post hoc pairwise comparisons were performed with the individual alpha levels adjusted for the multiple comparisons of pairs. The results are provided in Table 5.

Table 3. Descriptive Statistics for Dependent Variable Reading Total

		<i>N</i>	<i>Mean</i>	<i>SD</i>
First grade	KA	48	42.63	14.2
	KA (non KETWIP)	22	19.32	15.8
	Seoul	35	53.80	4.8
	Total	105	41.47	17.4
Second grade	KA	17	52.65	6.31
	KA (non KETWIP)	21	26.81	17.4
	Seoul	35	57.26	1.36
	Total	73	47.42	16.4

Table 4. Results of Analysis of Variance of Reading Total

<i>Source of variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
First grade groups				
Between Groups	16180.51	2	8090.26	
Within Groups	15597.62	102	152.92	52.91**
Total	31778.13	104		
Second grade groups				
Between Groups	12772.03	2	6386.02	65.97**
Within Groups	6775.81	70	96.80	
Total	19547.84	72		

*** $p < .05$

Table 5. Results of Post Hoc Analysis

	Mean Difference for Reading Total (raw perfect score = 59)	
	First Grade Groups	Second Grade Groups
KA(KETWIP) - KA (non-KETWIP)	23.31***	
KA (KETWIP) - Seoul	11.18***	
KA (non-KETWIP) - Seoul	34.48***	
KA (KETWIP) - KA (non-KETWIP)		25.84***
KA (KETWIP) - Seoul		4.61
KA (non-KETWIP) - Seoul		30.45***

Note. “-” in the first column stands for minus (subtraction of means).
Alpha = 0.05; significant mean differences are indicated by ***

As shown in Table 5, the post hoc results show the following:

3.2.3. KA (KETWIP) vs. KA (English-only, Los Angeles):

Both KA first graders and KA second graders in KETWIP performed significantly better than did their KA counterparts in English-only classes in Los Angeles on the reading test. The KETWIP KA students performed about twice as well as KAs in English-only classes. These mean differences were significant.

3.2.4. KA (KETWIP) vs. Seoul (Korean-only):

The means for the first-grade KAs in KETWIP were significantly lower than those of the first graders in the Korean-only class in Seoul. However, the KETWIP second grade KAs' mean scores were not significantly different from those of Korean second graders in the Korean-only class in Seoul.

3.3. NKA Students

In this section the following research question is addressed: To what extent have the Non-Korean-American (NKA) students in KETWIP developed Korean reading skills? We will report the NKA students' test scores in terms of degrees of mastery of the reading content domain using percentage correct scores and descriptive terms. The NKA students' performance on the reading test is given in Figures 5.

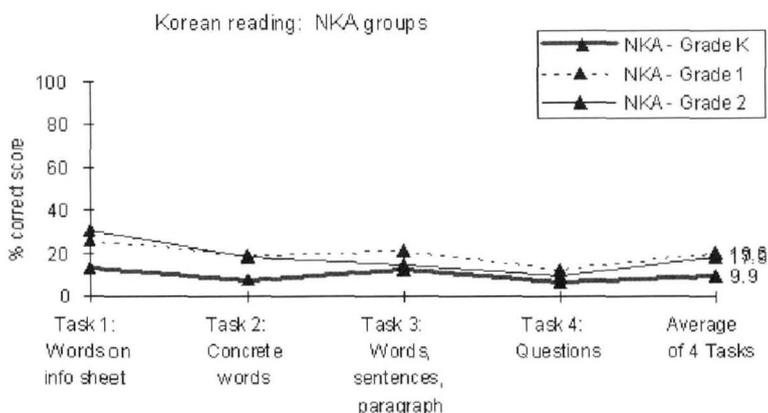


Figure 5. % Correct Scores for Korean Reading: NKA Grade Groups.

As shown in Figures 5, on the same reading test tasks, the NKA students achieved 9% correct (K), 20% correct (Grade 1), and 18% correct

(Grade 2) based on the average of the four reading tasks.

NKA did not demonstrate a steady growth in means on the test as the grade progressed from 1 to 2. The first-grade NKAs showed noticeably higher means than those of kindergartner NKAs; however, the means for the NKA second-grade group did not show a noticeable increase from those achieved by the first grade NKAs. Two explanations are possible:

One factor can be the group characteristics of the second-grade NKAs. Several upper-level NKA students from this group (who had one class only) had transferred to other schools due to families moving, and these remaining 7 NKA students happened to show low performances in other areas as well.

A second factor is associated with less-experienced instruction that these first NKA cohort group had received. This group was the unprecedented case where instruction in and about Korean was given to NKA children. Anecdotal information and studies in the subsequent year indicated that improved instruction and performance applied to NKAs. For example, the NKA second grade groups (N=17) in the subsequent year (1995-96) demonstrated noticeably better performances in all areas on the identical test of reading than did NKAs (N=7) being reported in the present paper (1994-95). The mean scores of these second grade groups in the two adjacent years are compared in Figure 6.

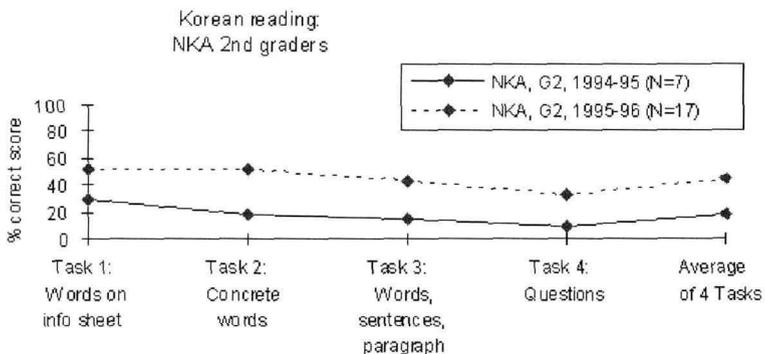


Figure 6. Korean Reading: NKA 2nd Grade Groups (First and Second Cohort Groups).

As can be seen in the dotted line in Figure 6, the higher means for the second grade NKAs in the subsequent year are demonstrated.

Because the identical test was given to them, this comparative data supports the possibility that the instruction might have improved for the NKAs in the subsequent year as the program gained experience and knowledge about teaching strategies for NKA children (L. Bachman & R. Campbell, 1996, personal communications). Further follow-up results from these and other NKA groups in the future years may illuminate these factors (see e.g., Ha, 2001).

The final factor maybe the relatively more drastic linguistic distance, or typological difference, between Korean and English. The Defence Language Institute Foreign Language Center (LIFLC) conducted an empirical study on comparative EFL learning difficulties for native speakers of other languages. Among some 40 languages Korean was found to be one of a few languages that are most difficult for native English speakers to learn (Lett & O'Mara, 1990, quoted in Wilson, 2001). This finding suggests the greater difficulty facing NKAs in learning Korean than learning other languages, such as Danish, Dutch, French, Italian, Spanish, and Portuguese; the language categories labelled least difficult for native speakers of English in Lett & O'Mara's (1990, p. 224) study above. Besides, upon entering kindergarten, while KAs have already internalized the Korean linguistic system, as in native-like oral proficiency in Korean as a home language, the NKA children entered the program with no prior knowledge of Korean linguistic system. The NKA students would thus require a considerable period of time to reach a desired Korean literacy level. An appropriate expectation should be set for these students. When it comes to English skills, it was found that both NKA and KA students were on a par with typical English-only classes in the same school (Bae, 2000). Given this, anything that these students learned about Korean should be taken as a gain in the context of the United States.

4. Conclusion

This paper reported the extent to which the two groups enrolled in the Korean/English Two-Way Immersion Program located in the Los Angeles Unified School District achieve the program's goal towards Korean reading ability development. The early phase of elementary immersion, defined as Kindergarten to Grade 2, was addressed.

4.1. Korean-American (KA) Students

Mastery of content domain: KAs' mastery of the reading task domain was about 41% correct, 75% correct, and 90% correct for grades K, 1, and 2, respectively. All in all, KA's reading skills demonstrated a constant, remarkable progress toward the complete second grade level as the grade went higher.

Performance compared with monolingual classes: Both KA first graders and KA second graders in KETWIP performed significantly better than did their counterparts in English-only classes in Los Angeles on the reading tests. Secondly, the KETWIP KA first graders' reading skills were significantly lower than those of first graders in the Korean-only class in Seoul. However, there were no significant difference in means between the second grade KAs in KETWIP and the second graders in the Korean-only class in Seoul. This comparative data thus further illuminated the positive outcome of acquiring the KA students' Korean reading skills as a first language in the early immersion phase.

4.2. Non-Korean-American (NKA) Students

On the common literacy domain tasks with the same scale, NKAs' mastery of the reading domain was 9% (K), 20% (grade 1), and 18% (grade 2). This development reached about 19% (for K) to 29% (first graders) of the average performance of their KA classmates.

Overall, the first grade NKA group showed noticeably better performances than did the kindergartner NKAs, but the second grade NKAs did not show an growth in means compared with that for the first grade NKAs. Possible explanations for this and associated areas were given in the main body of this paper.

Finally, the present paper has reported the results of the reading ability achieved during the early phase of elementary immersion using the 1994-95 results. The KETWIP students' language skills since the results in this paper would be of interest. Several of them formally reported through publications include the following. First, Kwon (1999) conducted a longitudinal study of writing features for the KKA students observed over the early phase. Bae (2001) investigated the English writing features for the KA and nonKA students in the areas of cohesion, coherence, content, grammar, and text length developed during the early phase. Second, the performances in

the later phase of elementary immersion education are also accessible. Bae and Bachman (1998) investigated the factorial nature of Korean listening and reading abilities using performance of KETWIP students in grades 2 through 4. Bae (2000) examined the concurrent development of English and Korean writing skills for the KETWIP students in grades 2 through 4. Rolstad (1999, 2002) reported the effects of KETWIP immersion education on the ethnic identification, attitudes, and enrichment of the immersion students who speak a third language beyond the two languages.

4.3. Limitations

The groups in this study were not selected by random selection but convenient samples. Besides, it was not possible to use a statistical covariate to control for the individual and group differences that might have existed in addition to the instructional factor. Pretests for all subjects and a standardized IQ test were not possible to use. For program/non-program comparison, variables for all groups on a comparable standardized scale were also not possible to identify. For example, the value of money is different between the two countries, so the conversions are misleading. Perception of degree of education and socio-economic status is also presumably different between the two countries. Thus, the best efforts within our reach were made to find the groups judged similar based on the anecdotal information, except for the clear main differences in the instructional treatment. Even when it is possible for a study to randomly select schools and classes, however, the number of schools and classes are often too small to say that the random sampling gives a representative group (Bentler, 1997; Hatach & Lazaraton, 1991). Thus the sampling limitation of a study is to some extent inevitable. It is noted that in addition to the main effect of instructional treatment, possible factors we may benefit from understanding may include the following: (a) differences in student backgrounds such as socio-economic status, parental interest, predominant language at home; (b) student motivations and attitudes, and (c) teacher variation. Investigations into these factors will further give us a more complete understanding of the differences in the instructional and environmental treatment.

4.4. Implications for Similar Immersion Education

The immersion program in this study is the pioneer of immersion programs in which both Korean and English are used as the medium of curricular instruction. The results of this study will serve as a useful reference for those wanting to establish a Korean/English immersion program in the United States, Korea, and other parts of the world. Besides, KETWIP is one of the few two-way immersion programs that implement a language grouping other than more common Spanish/English and French/English combinations. It is hoped that this study will be a unique addition to the literacy skills literature in the following topics: heritage language development for immigrants' second or third generation children; and foreign language acquisition for English-speaking children.

Finally, the utility of the reading test developed and used in this study is noteworthy. Those wanting to assess Korean reading skills in children may utilize the test instrument. In addition, the generic formats and tasks can make useful applications for developing a reading test in any language.

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