

Two-way Immersion Students' Writing Skills in Korean as a First and Foreign Language in the United States

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초록

배정옥. 2006. 06. 30. 쌍방향 한영 이중언어 몰입 프로그램 학습자들의 미국에서의 모국어와 외국어로서의 한국어 쓰기능력 평가 연구. *이중언어학* 31. 55-96. 본 연구는 한영 이중 언어 쌍방향 몰입 프로그램에 등록된 두 집단의 학생들이 초등학교 이중언어 몰입 전반기 단계에 발달시키는 한국어쓰기 수행 능력 정도를 조사했다. 학생들은 한국계-미국인 2세 초등학생들과 비한국계-미국인 초등학생들이다. 학년은 유치원, 1학년, 2학년이며, 2학년은 프로그램 출범 시 유치원생으로 시작한 첫 그룹이다. 이 몰입 프로그램은 미국에서 운영되므로, 한국어는 한국계-미국인 학생들에게는 모국어이고, 비한국계-미국인 학생들에게는 외국어이다. 본 보고는 위 학생들을 위해 개발·실시된 한국어 쓰기 수행 능력을 절대평가와 상대평가를 사용하여 유추했다. 몰입 프로그램 두 집단의 한국어쓰기 완수 정도가 초등학교 전반기 단계를 대상으로 규정된 쓰기 능력 영역과 완벽 상태를 표준으로 하여 절대 평가로 보고 된다. 이외, 상대평가로써 한국계-미국인 학생들의 한국어 쓰기 수행 능력 수준이 로스앤젤레스와 서울의 단일 언어 학습 상황 하에 공부하는 학생들과 비교 분석된다. 이 평가 결과는 한국계-미국인 학습자들 (크게는 이민 2세 학생들)의 모국어 보존과 비한국계-미국인 학습자들 (넓게는 영어권 나라 학생들)의 외국어 습득 주제에 독특한 정보를 기여한다. (UCLA)

[핵심어] two-way immersion (쌍방향 몰입), writing (쓰기) single words (단일어), grammar (문법), content (내용), cohesion (응집성), Korean-Americans, non-Korean-Americans (한국계, 비한국계 미국인)

1. Introduction

1.1 Origins of Immersion Based Language Teaching

Immersion programs offer a bilingual academic environment. In this environment, students' second or foreign language is used together with their primary language for teaching the general curriculum. The idea is that no matter what language background students may come from, they will become proficient in two languages concurrently with their mastery of the general curriculum. The immersion approach to language education originated in a French-English immersion program in St. Lambert, Canada, where English and French are the two official languages (Stern, 1981). In this program, all of the English speaking children received subject matter instruction 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 influenced language educators in the United States where similar multilingual social situations exist. Beginning with a Spanish immersion program in Culver City, California, in 1971 (Campbell, 1984), similar immersion programs have been established across the United States. According to the Directory of Two-Way Bilingual Immersion Programs in the United States, as of May 2005 in the United States, 315 schools are implementing two-way immersion programs, and five language groupings are represented—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).

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

Since 1992 the Korean/English Two-Way Immersion Program (KETWIP) has been operating in the Los Angeles Unified School District (LAUSD) (Campbell *et al.*, 1994). This program is unique in two ways: (a) it is the first Korean/English two-way immersion program; and (b) students consist of both Korean-Americans and non-Korean-Americans. As of 1996, the program consisted of three schools, with one kindergarten and one first grade class at each school, and one second grade class in one school.

1.2.1 Goals

The most important goal of KETWIP is linguistic: Korean-American students 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).¹⁾

From this goal, Korean language ability will be the focus in the present paper. The immersion program operates in the U.S. In this circumstance, 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

1) The program has two other goals. The scholastic goal aims to achieve at or above the school district's grade level on all scholastic measures. The cultural attitudinal goal concerns positive cross-cultural attitudes and high levels of self-esteem. Space limitation does not allow the inclusion and treatment of all these goals. These other goals belong to the research agendas of the central-office administration of the KETWIP program at the Los Angeles Unified School District with whom UCLA researchers were working as a partner for language assessment.

same program, who are English-dominant children.

1.2.2 Instructional System

To meet 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. Acquiring Korean and English happens naturally, albeit purposefully, in this context (Lapkin & Cummins, 1984; Met, 1998; Swain, 1996). The principles of content-based language instruction are foundational for immersion based language teaching. The rationale for content-based language instruction is 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). Table 1 shows the proportions of instruction in Korean and English that have been implemented in this program.

<Table 1. Percentage of Subject-Matter Instruction in the Two Languages>

Grade	% of subject-matter teaching	
	Korean	English
K	70%	30%
1	60%	40%
2	50%	50%

As Table 1 shows, in the lower grades the majority of subject-matter instruction happens in Korean (which in the U.S. context is the minority language), while instruction in English is increased gradually. The reason for the greater emphasis given to the minority language at the initial stage is that the opportunity for exposure to the majority language

outside of school is greater for all students. Ultimately, instruction will be divided equally between the two languages as the students move on to higher grades.

1.2.3 Students

The student groups are a unique feature of two-way immersion programs. The early French immersion programs in Canada were one-way immersion programs, in which all of the students were native speakers of English, the majority language in Canada. The only model for the target language was the French speaking teacher. Although the students achieved high levels of functional ability in the target language, most students still made errors, particularly in production abilities, even after many years of instruction (Campbell, 1995). Immersion researchers have speculated that these problems were due, in part, to exclusively teacher-centered or transmission-oriented pedagogy in the one-way environment, where the only target language speaking model is the teacher (Campbell, 1995; Cummins, 1996, 2000). Two-way immersion programs, on the other hand, provide a classroom environment where half of the students are model speakers of the target language, hence providing increased opportunities for exposure to both 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 with each other. The integration of two language groups in the same classroom in two-way immersion programs thus

provides excellent opportunities for acquiring both languages (Campbell, 1995). This environment is consistent with whole language approaches (Goodman *et al.*, 1989; Pressley, 1998), which integrate language learning with students' experience through peer interactions, cooperative learning, and individual and group project work.

1.2.4 Korean Language Assessment

The KETWIP Language Assessment Project, consisting of several researchers through the Language Resource Program at the University of California at Los Angeles (UCLA), collaboratively worked in partnership with the program's teaching and administrative staff to develop instruments to assess the students' progress toward meeting the program's linguistic goals.²⁾ There are measures that can infer students' academic knowledge and English skills. The researchers found no previously existing tests to assess Korean as a primary and/or foreign language designed for young children. Thus, the KETWIP testing worked on the design and implementation of tests of Korean proficiency for children.

Addressing the program's goal towards linguistic development, this paper focuses on the development of Korean writing skills by the KETWIP immersion students. The results of various studies about the outcomes from one-way immersion programs have been reported (e.g., Cummins, 2000; a

2) With key members physically being no longer present at UCLA since the early 2000s, the language assessment has lately been operated by the leadership of the central office of the KETWIP program in LAUSD and partly by the autonomy of the individual schools. KETWIP, also called the Korean/English Dual Language Program, has been expanded to include middle and high schools in the same school district as the students progress to higher school grades.

collection of reports in *Studies on Immersion Education*, 1984). At the same time, an extensive number of reports of studies on two-way immersion programs are available as can be seen in the database of bibliographies by CAL (e.g., Gort, 2002; Howard, Christian, & Genesee, 2003; Pérez, 2004; Potowski, 2002; see others at <http://www.cal.org/twi/bib.htm>). Most of these reports involve Spanish/English immersion because about 94% of the two-way immersion programs operating in the United States are Spanish/English immersion programs as of 2005 (databases above). 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 area is English speaking children's acquisition of a foreign language. KETWIP is one of the few two-way immersion programs that implement a dual language combination other than Spanish/English. In addition, KETWIP is the pioneer of future Korean/English immersion programs. Thus, this study provides useful information about the development of Korean literacy as primary and foreign language skills in immersion programs.

1.3 Purpose of Study

The purpose of this study is twofold: (a) to make inferences about Korean writing developed by the two groups of KETWIP students during the early stage (Grades K to 2) in the immersion program, and (b) to document the progress toward KETWIP's goal of Korean language development to provide useful information for KETWIP and future immersion programs.

1.4 Research Questions

This study examines the following research questions:

- To what degree do the Korean-American (KA) students and Non-Korean-American (NKA) students develop Korean writing skills during the early stage of immersion (K to Grade 2)?
- How do KETWIP KAs' writing skills 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?

1.5 Assessment Approach

In the KETWIP testing, we implement criterion-referenced testing while incorporating norm-referenced interpretations. Criterion is used to signify a well defined assessment domain or domain of ability content. A criterion also has to do with level or levels of ability. For example, a teacher might say, "It took one semester to get my students up to criterion." In this example, we conceive the criterion as a level of performance, or as a desired level, in terms of set educational objectives (Popham, 1990:27-28). The often used 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, content, coherence) that describes the scale points. Addressing both meanings of criteria, criterion referenced measurement (CRM) is characterized by the following 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 with reference to

such criteria delimited (e.g., Bachman, 1990; 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 examinees. Thus an individual's test performance is interpreted relative to the performance of other students who have completed the test (Gronlund & Linn, 2000).

The purpose of the KETWIP testing, as stated earlier, is to determine whether, and to what degree, KETWIP students, on the average, have met the expected goals. To make appropriate inferences about students' ability from test data, it is thus important to be clear about what abilities we are dealing with and what levels are involved. Thus, in this study, we give primary emphasis to 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 assessment purpose. While stressing these approaches, 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, 1990:146-147). We thus incorporate norm-referenced score interpretations to better make sense of KETWIP students' test performances by comparing them with those of students from monolingual classes as well as within KETWIP.

2. Method

2.1 Variables

The dependent variable is the writing score. The independent variable is the group. The group variable has two levels within KETWIP (KA and non-KA) and two other levels outside KETWIP (comparison groups in LA and Seoul). The groups are described below.

2.2 Participants

All students in KETWIP and the comparison groups in monolingual classes in Los Angeles and Seoul were given the tests (a total of 288 students). Students' age ranged from five to nine years.

2.2.1 KETWIP Groups

KETWIP consisted of 115 Korean-American (KA) students and 60 non-Korean-American (NKA) students. Most of the KA students were born in the U.S. The NKA students are of Spanish, Tagalog, and Anglo ancestry. In this paper, NKA students are defined as those students who 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

Comparison groups were from English-only classes in Los Angeles (LA) and 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 participating in an English Language Development Program offered in the two schools. They received instruction exclusively in English, that is, they had no immersion in Korean. Their Korean language ability was due to their parents and weekend or Sunday 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 employs a modern educational model on an experimental basis but preserves the general ethos of traditional Korean elementary school education. The percentage of instruction in the Korean language is 100%.

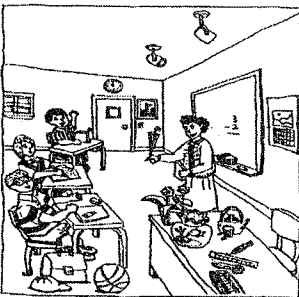

The main difference between the KETWIP and comparison groups in LA and Seoul was the percentage of curricular instruction in Korean. Within KETWIP, the two groups were distinguished by their home language, Korean or non-Korean. Although the initial level of Korean oral proficiency differed among the groups according to their home language, the initial Korean literacy proficiency was nil, or very little, for all groups.


2.3 Domain of Ability

The assessment domain is broadly Korean writing ability. The specific domains are the five components of writing ability in Korean (single words, grammar, content, cohesion, and register) and the four writing test tasks.

2.4 Writing Test Tasks

Figure 1 and Table 3 together show the writing test tasks intended to engage the five components of writing ability specified above.

Task 1: Writing Single Words	Task 2: Describing Single Pictures
 <p>책상 _____ _____ _____ _____</p>	 <p>_____ _____</p>

<p style="text-align: center;">Task 3: Writing a Story</p>  <p style="text-align: center;">_____ Several lines here _____</p> <p style="text-align: center;">_____</p>	<p style="text-align: center;">Task 4: Writing Letters</p> <p style="text-align: center;">_____ Several lines here _____</p> <p style="text-align: center;">_____</p>
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© KETWIP Language Assessment. Sample items reprinted with permission from KETWIP Language Assessment. Illustrations by Minjin Park (Task 1), Jungok Bae (Task 2), and Hyesug Lee (Task 3).

<Figure 1. Sample Writing Tasks (For Kindergarten to Grade 2)>

<Table 3. Writing Tasks and Components of Writing Ability>

Task Components	Task 1: Writing Single words	Task 2: Describing Single pictures	Task 3: Writing a story	Task 4: Writing letters
single words	×			
Grammar		×	×	
Content		×	×	
Cohesion			×	
Register				×

Task 1 (Writing single words): The first task assessed the ability to write single words. Students were given two pictures. One was of a common classroom activity, and the second depicted a family eating in their kitchen. Students were asked to write as many Korean words pertaining to the pictures as they could.

Task 2 (Describing single pictures): Students were presented with four independent pictures, which they were asked to describe in a few Korean sentences. This task measured grammatical competence and content in writing.

Task 3 (Writing a story): Students were given a series of pictures, about which they made up a story. This task measured content and the use of grammar and cohesion.

Task 4 (Writing letters): This task consisted of short letter-writing. This was intended to elicit register use, particularly honorific styles (polite vs. ordinary styles). The situation and the audience were specified. One letter was to be written to a friend, and the other to a teacher or elder. Compared to stories, letters are less common and introduced later than stories in the teaching sequence. Thus due to the task demand, the letter task was given to only second-grade groups.

While an identical writing test was given to all test-takers, Tasks 3 and 4 (story-and letter-writing) were not given to kindergartners and all non-Korean-American students, because from trial-outs these tasks had been determined too difficult for their current level and hence to provide no information.

2.5 Scoring

2.5.1 Levels of Ability

This section addresses the second issue of criterion: levels. The following 0 to 4 scale of ability was used across all components of writing (See Appendix B for detailed scoring criteria with scale descriptions):

0 _____ 1 _____ 2 _____ 3 _____ 4
 Zero Limited Moderate Extensive Complete

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

According to Bachman (1989, p. 25), in addition to the content domain specification, 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, an additional requirement is that the scores must be referenced to an absolute scale of ability, and that the end points of ability should be defined so as to provide an absolute scale. The two ends of the ratings scale in this assessment were thus defined to provide an absolute scale (Bachman, 1989:251-258; Bachman, 1990:340-348) as follows: The one end point (0) represented zero or very little ability; the other end point (4) represented a complete level of the written Korean language ability 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.

For example, for the writing test, the descriptions for the scale point 4, the highest, were determined by the characteristics of the writing features observed in the ideal writing samples of the second-grade

examinees. Expectations relevant to these student levels were also considered in forming the scale descriptions (e.g., colloquial expressions, childlike expressions, and errors in spelling were considered acceptable at this level). These characteristics thus form the criteria. The criterion levels of ability for the scale points in between 0 to perfect were defined as above. A half point was allowed between the scale points (i.e., 0.5, 1.5, 2.5, 3.5).

It is noted that the sources for characterizing the highest level of ability transcended the program and the non-programs, and were not restricted or biased to traditional use of native speaker as a standard. These criterion-referenced scales are intended as a 'common metric scale' for students from K through 2 who are learning Korean in the early immersion setting, independent of different schools. The advantage of these criterion-referenced scales (Bachman & Palmer, 1996:212) is that they allow us to make inferences about students' writing proficiency (e.g., 40% mastery of the writing domain skills out of the complete state for second-grade level, 100%), and not merely how well students perform relative to their peers. This advantage applies even when we are comparing students.

2.5.2 Scoring

Two native speakers of Korean who were experts in applied linguistics rated the writing samples independently. The writing samples were shuffled together to prevent possible bias on the part of the raters concerning the groups. Each component (single words, grammar, content, cohesion, and register) was rated on the scale of 0-4. The scores were assigned for each picture (i.e., item by item) for a component (e.g., grammar) by the two

raters independently. The averages of the two ratings for each item within a component were again averaged to form an individual score for the particular component. The scores for the components were then averaged to form an individual score for average writing skills.

2.6 Administrative Procedures

In Los Angeles the two tests were administered in June, 1995, toward the end of the academic year. They were allowed 50 minutes to complete the test. The same writing test was given to all grades, while the story writing and letter writing tasks were omitted for all Non-Korean-American students and all kindergartners (see above). To ensure uniform administration across the groups, identical instructions in detailed test administration guides were presented at all test administrations. For both tests, KA students and NKA students were separated. KA students were given instructions orally in Korean by a native Korean speaker. In a separate room, NKA students 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. In both Los Angeles and Seoul testing, the students' teachers were present.

2.7 Analysis

Descriptive statistics, rank-order interrater correlations, alpha reliability coefficients, and analysis of variance (ANOVA) were calculated on SPSS release 11.0. Graphs were generated on Microsoft EXCEL.

3. Results

3.1 Reliability

Reliability coefficients were estimated for the entire data and are given in Table 4. Interrater correlations (Spearman coefficients) were computed for the two ratings for each item. Cronbach's alpha was estimated for the items that measured each of the components of abilities in writing. These estimates ranged from .812 to .993. Thus, all the measures of the components demonstrated a very high degree of rater agreement and the test items' reliability.

<Table 4. Reliability Coefficients>

		Rater Reliability (Inter-rater correlation)	Item Reliability Alpha
Single words			.961
	Item 1	.926	
	Item 2	.929	
Grammar	Item 3	.943	.979
	Item 4	.955	
	Item 5	.868	
	Item 1	.924	
	Item 2	.912	
Content	Item 3	.948	.975
	Item 4	.913	
	Item 5	.927	
Cohesion		.812	
Register		.967	.993
All items			.991

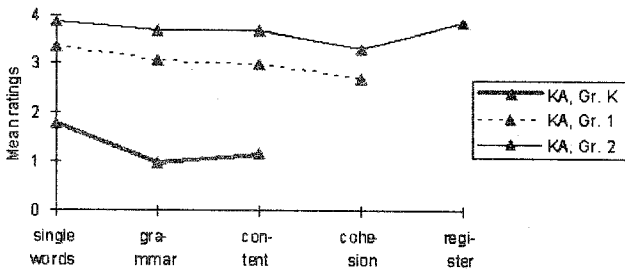
Note. N: single words: 287, grammar: 287, content: 287, cohesion: 178, register: 74. Pairwise deletion was used for the different N sizes for the components of ability.

3.2 Performance of KA students

This section will answer the following research question: To what extent do the Korean-American (KA) students develop Korean writing 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 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 grade groups' mastery of the components of the ability in Korean writing as demonstrated on the test. As demonstrated in Figure 3, as the grades increased, KAs showed a constant progress consistently for all components (single words, grammar, content, cohesion).



<Figure 3. Mean Ratings for the Components of Korean Writing:
KA Grade Groups in KETWIP>

Constant (vocabulary, grammar, content): The three components constantly examined for all groups and grades (i.e., single words,

grammar, and content) were averaged. The KA groups' degrees of mastery of the three averaged components reached 1.1 (for K), 3.1 (for first graders), and 3.7 (for second graders) on the scale of 0 - 4, with 4 being complete mastery for the second-grade level (i.e., the degrees of mastery were 27%, 78%, and 94% for K through Grade 2 respectively).

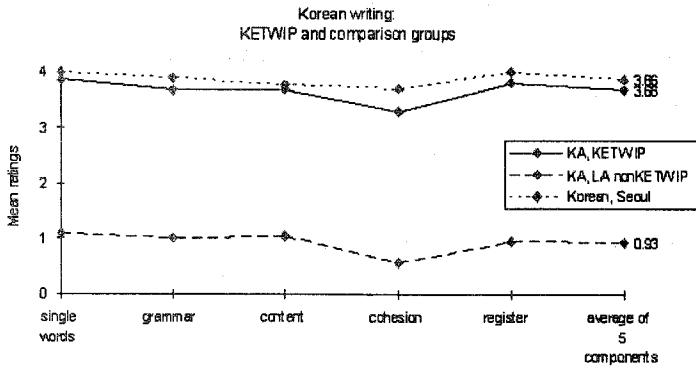
Cohesion: The story-writing task designed to measure cohesion was given only to first and second graders, excluding NKAs. KAs' cohesion proficiency reached 2.7 (Grade 1) and 3.3 (Grade 2) on the 0-4 scale (i.e., the degrees of mastery were 67% and 82% for each grade).

Register: The letter-writing task intended to measure the use of register was given to the second graders only, excluding NKAs. The second-grade KAs' use of register marked 3.8 on the 0-4 scale (i.e., 95% mastery).

Overall, the KA grade groups' literacy skills demonstrated consistent and excellent development toward mastery as they progressed to higher grades.

This section answers the research question stated earlier: How do the KETWIP KAs' writing skills compare to those in English-only classes in Los Angeles and native Koreans in Korean-only classes in Seoul at the same grade level? To answer this question, the means for these groups are compared.

First, the performances of second-grade groups are compared visually.



<Figure 4. Mean Ratings for Writing Components:
2nd Grade Groups in KETWIP and Comparison Groups>

As visualized in Figure 4, the KETWIP second-grade KAs' competency was very close to that of Korean peers in Seoul for all areas of the components of Korean writing ability. At the same time, the KETWIP second-grade KAs demonstrated remarkably higher competency in all these areas than that of the KA peers in English-classes in LA.

These differences in means were tested for statistical significance. For simplicity, one dependent variable, which is the average of writing components, was used instead of the individual multiple components. The independent variable is 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 writing average are provided for these groups (see Table 5). The F statistic (197.803, 93.679, second and first-grade groups, each) for the dependent variable was significant at the 0.05 level (see Table 6). Thus, for each grade level, the results indicate that there is a significant overall group

effect, signifying that not all of the groups are equal in the writing skills.

Subsequently, Turkey post-hoc pairwise comparisons were conducted with the individual alpha levels adjusted for the multiple comparisons of pairs. The results are given in 7.

<Table 5. Descriptive Statistics for the Dependent Variable Writing Average>

	<i>N</i>	<i>Mean</i>	<i>Std. Deviation</i>
First grade			
KA	46	3.00	1.05
KA (non-KETWIP)	22	.59	.92
Seoul	35	3.65	.33
Total	103	2.70	1.41
Second grade			
KA	35	3.87	.14
KA (non-KETWIP)	18	3.64	.48
Seoul	21	.91	.95
Total	74	2.97	1.43

<Table 6. Results of Analysis of Variance of Writing Average>

Source of variation	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>
First-grade groups				
Between Groups	132.891	2	66.445	93.679***
Within Groups	70.928	100	.709	
Total	203.819	102		
Second-grade groups				
Between Groups	125.693	2	62.846	197.803***
Within Groups	22.558	71	.318	
Total	148.251	73		

*** $p < .05$

<Table 7. Results of Post-Hoc Analysis>

	Mean difference for Writing Average (on a 0 - 4 scale)	
	First-Grade Groups (N=103)	Second-Grade Groups (N=74)
KA (KETWIP) - KA (non-KETWIP)	2.400 ***	
KA (KETWIP) - Seoul	0.652 ***	
KA (non-KETWIP) - Seoul	3.052 ***	
KA (KETWIP) - KA (non-KETWIP)		2.736 ***
KA (KETWIP) - Seoul		0.224
KA (non-KETWIP) - Seoul		2.960 ***

Note. "-" in the first column stands for minus (subtraction of means).

Alpha = .05; Significant mean differences are indicated by '****'

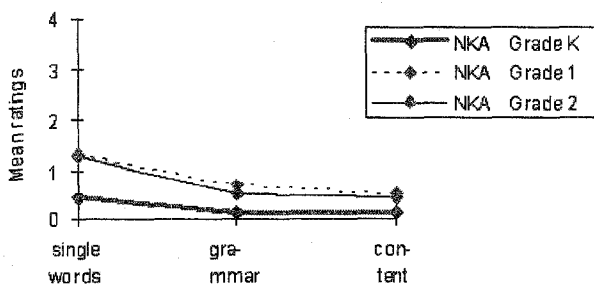
As indicated in Table 7, the post-hoc results show the following:

KA (KETWIP) - KA (English-only, LA): Both KA first graders and KA second graders in KETWIP performed significantly better than did their KA counterparts in English-only classes in LA on the writing test. The KETWIP KA students performed about five times as well as KAs in English-only classes. These mean differences were significant.

KA (KETWIP) - 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

This section answers the following research question pertaining to NKAs: To what extent do the Non-Korean-American (NKA) students in KETWIP develop Korean literacy skills? We will report the NKA students' scores in terms of degrees of mastery of the literacy domain using percentage correct scores and descriptive terms. The NKA students' performance is given in Figure 5.



<Figure 5. Mean Ratings for Korean Writing: NKA Grade Groups>

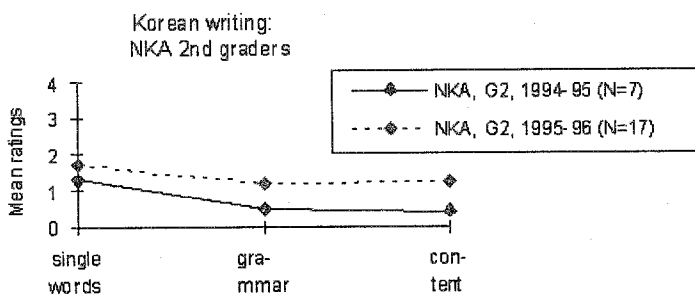
As shown in Figure 5, for the average of the three components (single words, grammar, and content), the NKAs' degrees of competency were, on average, 0.2 (K), 0.9 (Grade 1), and 0.7 (for Grade 2) on the 0-4 scale.

Unlike KAs, NKAs did not exhibit a steady increase in means as the grade progressed from 1 to 2. The first-grade NKAs showed remarkably 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. Three explanations are possible:

One possible factor can be the group characteristics of the second-

grade NKAs. According to the teaching staff, several upper-level NKAs from this group (one class only) had transferred to other schools when their families moved, 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. That is, 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 (1995-1996) exhibited noticeably better performances in all areas on the common test of writing than did NKAs (N=7) being documented in the present paper (1994-1995). The mean scores of these second-grade groups in the two consecutive years are compared in Figure 6.



<Figure 6. Korean Writing: NKA 2nd-Grade Groups
(First and Second Cohort Groups)>

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

Given that the identical tests were given to them, this comparative data support the possibility that the instruction might have improved for the NKAs in the subsequent year as the program improved from experience and knowledge about how to teach NKA children (L. Bachman & R. Campbell, 1996, personal communications). Further follow-up results from these and other NKA groups in the future years are expected to illuminate these factors.

The final factor may be the relatively more drastic linguistic distance, or typological difference, between Korean and English. For instance, the Defence Language Institute Foreign Language Center conducted an empirical study on comparative EFL learning difficulties for native speakers of other language. 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 (1990:224 above). Besides, upon entering kindergarten, while KAs have already internalized the Korean linguistic system as in their native-like oral proficiency in Korean as a home language, the NKA children entered the program with no Korean linguistic background. The NKA students would thus require a substantial period of time to reach a desired Korean literacy level. An appropriate expectation and criterion may well 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 U.S. context.

4. Conclusion

This study reported the achievements of Korean writing skills by two groups in the Korean/English Two-Way Immersion Program during its early phase of elementary immersion education (K to Grade 2) in the United States.

4.1 Korean-American (KA) students

Mastery of content domain: KAs' mastery of the total domain for the three common components (single words, content, and grammar) ranged from 27% (for K) to 94% (for 2) toward the total mastery of 100%, the complete second-grade level. KAs' mastery of cohesion reached 67% (for 1) and 82% (for 2). The second-grade KAs' mastery of register use reached 95% of the perfect second grade state. All in all, KAs' writing skills demonstrated a consistent, remarkable progress toward the complete second-grade level as the grade increased.

Performance compared with single-language classes: Both KA first graders and KA second graders in KETWIP performed remarkably better than did their KA counterparts in English-only classes in LA on the writing test (five times). Secondly, the KETWIP KA first graders' writing skills were significantly lower than those of first graders in the Korean-only class in Seoul. However, there were no significant differences

in means for writing 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 regarding immersion KA students' development of writing skills in Korean as a first language in the early immersion phase in the U.S.

4.2 Non-Korean-American (NKA) Students

NKAs' mastery of the writing domain, examined for the average of single words, grammar, and content were 0.2 (K), 0.9 (grade 1), and 0.7 (grade 2) on the 0-4 scale. This development reached approximately 19% (for K) to 29% (first graders) of the average performance of their KA classmates.

Overall, while the first-grade NKA group showed noticeably better performances than did the kindergartner NKAs, the second-grade NKAs did not show an increase in means compared with that for the first-grade NKAs. In addition, there were significant discrepancies in Korean writing skills between the KA groups (for which Korean is their first language) and the NKA groups (for which Korean is their second/foreign language). Possible explanations for this and related areas were given in the main body of this paper.

Meanwhile, positive aspects of the NKAs' writing development included the potentials shown in the writing samples of some of the NKA students, who formed grammatically correct sentence structures when asked to describe picture content in writing. In addition, these advanced NKA students' ability to write in single words was as good as that of typical Korean-Americans. Further, the NKA groups' mean

scores for single-word writing were better than those for KA students not in the program in Los Angeles.

Finally, the present paper has reported the results from the early phase of elementary immersion using the 1994-1995 results, and the paper is expected to be a useful addition to the entire body of published documentations for this immersion program. Research about the KETWIP students since the results reported in this paper would be of interest. Several of them formally reported through publications include the following. First, the qualitative features observed in the NKA students' written Korean over time during the early phase is available in Kwon's (1999) study. The English writing skills in the areas of cohesion, coherence, content, grammar, and text length during the early phase are available in Bae (2001). 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) investigated KETWIP students' English and Korean performance in writing using students in grades 2 through 4. Rolstad (1998, 1999, 2002) studied the effect of KETWIP immersion education on the ethnic identification, enrichment, and attitude of third language students, i. e., those speaking another language besides Korean and English. Ha (2001) analyzed writing samples from non-Korean-American students' portfolios with respect to MLU, T-unit, and morpheme numbers.

4.3 Limitations of the study

The groups in this study serve as convenient samples: they are not based on random selection. In the present study it was not possible to use a statistical covariate to control for the individual and group differences that might have existed besides the instructional factor. ³⁾ Thus, best efforts were made within our reach 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 randomly select schools and classes, however, the number of schools and classes are often so small that we cannot say that the random sampling gives a representative group (Bentler, 1997; Hatch & Lazaraton, 1991). Thus the sampling limitation of a study is to some extent unavoidable. We note that in addition to the main effect of instructional treatment, possible variables 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; (c) teacher variation; and (d) peer effect. Research into these factors will further guide us into a more complete understanding of group performance.

3) 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 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 presumably different between the two countries

4.4 Implications for future Korean immersion programs

KETWIP is the pioneer of future Korean/English immersion programs. We hope the results of this study will serve as a useful reference for those wanting to implement a Korean/English immersion program in America, Korea, and other parts of the world.

In addition, KETWIP is one of the few two-way immersion programs that implement a language combination other than more popular Spanish/English and French/English groupings. It is hoped that this study will add unique information to the profile of literacy skills in the following topics: first language conservation for immigrants' second generation children; and foreign language acquisition for English-dominant students in immersion programs.

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Appendix A

Examples of Korean Writing Composed by NKA and KA

Task 1: pictures used: a classroom scene and a kitchen scene

NKA	<p style="text-align: center;">채</p> <hr/> <p>책 신문 분필 책</p>
NKA	<p style="text-align: center;">책상</p> <hr/> <p>책 의자 나무</p>
KA	<p style="text-align: center;">바 사과 꽃 의자 컵</p> <hr/> <p>포크 수저 칼 식탁 냉장고</p> <hr/> <p>저서관</p>

Task 2: example of a single picture describing
a boy and a girl planting a tree

NKA	<p style="text-align: center;">나무아</p>
KA	<p>철수와 영희가 꽃에 물을 주워서 꽃이 무럭무럭 자라서 나무가 됩니다.</p>

Appendix B

The Criteria for Scoring Korean Writing Samples (Kindergarten through Grade 2)

- The criteria below, adapted from Bachman (1989), were developed by Jungok Bae and Seungho Nam at the University of California at Los Angeles.
- Ignore handwriting, spelling, and punctuation for all components of writing ability.
- See main body of the paper for scoring procedures and the scale of ability.

GRAMMAR

Grammar refers to morphology and syntax. Errors in grammar are defined as critical errors and minor errors as follows:

Critical errors are those that seriously impede communication, e.g.: word order incomprehensible or major syntactic chunk missing, causing incomprehensibility;

absence or misuse of verb forms (tense, mood...) and particles (을/를, 가, 이/는/은, 야...)

Minor errors are:

errors in particles that are comprehensible

e.g., 학교를 간다. 내 친구에 강아지

errors in a word order among minor constituents

e.g., 네가 읽은 어제 책이 뭐니? 어제 한 권 책을 읽었다.

errors in using incorrect collocations that still carry an appropriate and clear meaning.

e.g., 안경을 입었어요. 축구를 놀아요. 산수를 해요. 피아노를 놀아요.

0 (No or very No evidence of grammatical knowledge/use. little ability):

Not a sentence, only single words.

Too short to judge.

1 (Limited): Frequent critical errors. Extensive minor errors.

Few sentences; only phrases.

A sample with length <N lines is considered Limited unless the writing uses a complex feature such as a complex sentence.

2 (Moderate): Some critical errors. Frequent minor errors.

3 (Extensive): Few limitations. Occasional minor errors with no use of complex sentences.

4 (Complete): Unlimited range. A complex sentence(s).

A variety of grammatical uses. Complete control of grammar (Native level).

Few errors. (Length > N words).

SINGLE WORDS

Single words refer to the appropriate words that are in the picture set (see the Task description in the main body of the paper). Considerations will be given to students' proficiency to write as many single words as they can. A word that is misspelled but comprehensible will be counted as correct. A word that is incomprehensible due to serious misspelling will be regarded as wrong.

Score = (# of words that are in the picture and are semantically appropriate) / 5
e.g., 20 words / 5 = a score of 4 (Complete)

If a student wrote more than 20 words that are appropriate, the score will still be 4.

CONTENT

Considerations will be given to relevance, thoroughness, persuasiveness, and creativity.

- 0 (Zero): Too short to judge.
- 1 (Limited): Not thorough at all (Only 15% to 30% of the content was expressed). Serious distortion of the picture content Large segments of the content missing.
- 2 (Moderate): Somewhat relevant, but not thorough.
Some minor irrelevance/inaccuracy.
- 3 (Extensive): The story is complete and thorough in general.
Accurate/relevant in general.
In general, FINE, but elaboration and sophistication not observed.

- 4 (Complete): Descriptions of the situations/events just wonderful.
Very thorough.
No irrelevant whatsoever. CREATIVE. Persuasive. Convincing.

COHESION

Cohesion refers to the range of language abilities that exist for linking a language item to what has been said or written before in a text. This linking is achieved through relations in meaning that exist within and across the sentences (Halliday & Hasan, 1976). Cohesive markers tie utterances and ideas across sentences. These markers include reference, conjunction, ellipsis, substitutions, and lexical items: see separate sheet for examples or refer to Table #1 in Bae 2001. In addition, consistency of tense and register use is also considered to be an area of cohesion. More cohesive markers do not necessarily make the writing better (e.g., an essay can be fine with few conjunctions).

- 0 (Zero): Too short to judge. Only single words/phrases or only one sentence.
- 1 (Limited): Limited use of cohesive markers.
Relationship between parts frequently unclear.
Local or global parts often seriously disjointed.
Extensive errors in cohesive markers.
- 2 (Moderate): Moderate use of cohesive markers.
Relationships (ties) between/within sentences are generally clear but could often have been more explicitly marked.
Local connections somewhat confusing or disjointed.
In general, connected but with frequent inappropriate use of cohesive markers.

- 3 (Extensive): Good use of cohesive markers.
Appropriate use of markers in general but errors in cohesion that do not cause a difficulty in reader comprehension.
- 4 (Complete): Evidence of complete use of cohesive markers.
No limitations. Connections between parts absolutely clear.
No errors in any areas of cohesion.

REGISTER

The register of interest is honorifics. Considerations will be given to the use of the honorifics described below. The essential criteria to decide the appropriate use of register/honorifics will be the student's appropriate selection of a polite or a plain style for the two different situations specified below:

Addressing to adults, seniors, and a group:

Polite style (formal): 했습니다, 합니다, 먹습니다.

Polite style (informal): 했어요, 가요, 먹어요.

Addressing to peers and younger people:

Plain style (informal): 했다, 했어, 갔다, 먹었어.

In case of the polite style above, polite verb ending “-습니다” or “-요” must be used. The verb infix “-(으)시” must be used if subject honorification is needed.

Other considerations will include the following:

vocative (e.g., 철수야), particles (e.g., 할머니께(서))

Other polite lexical selections besides the verb ending and verb infixes that are illustrated above:

e.g., appropriate use of “honorific/humble” words (e.g., 제가, 진다, 생신, 돌아가셨다 (vs. 죽었다)).

Although the two registers used are appropriately distinguished, if the writing is too short to judge (e.g., only one line for both situations), a score of one point will be subtracted.)

- 0 (Zero): No evidence of honorifics. Too short to judge.
- 1 (Limited): Limited use of honorifics. Regardless of accuracy, only one register (either polite or plain) is used across the situations.
- 2 (Moderate): Moderate use of honorifics.
Two registers (both polite and plain style) are used; however, they are confusedly used. The writing is in a description style rather than actually addressed to the audience, for example:
Grandma sent me a gift: descriptive Grandma, thank you for sending me the gift: addressed to the audience.
- 3 (Extensive): Extensive use of honorifics.
The two different registers are appropriately used.
However, errors in lexical choices or a few minor errors in either register are observed.
- 4 (Extensive): Evidence of complete use of honorifics.
The two different registers are appropriately used.
In addition, appropriate lexical use such as humble verbs and polite nouns is demonstrated. No errors in any areas are found.

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