

# **Bilingualism as a Future Investment: The Case of Japanese High School Students at an International School in Japan**

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## **Abstract**

The present study explores the outcomes of early bilingualism for speakers of the society's majority language in a Japanese context. English and Japanese proficiency of 48 Japanese high school students attending an English medium international school in Japan were assessed. Cummins' common underlying proficiency (CUP) theory was supported in both basic interpersonal communicative skills (BICS) and cognitive academic language proficiency (CALP). In addition, initial schooling in Japanese seemed to help students develop the highest level of balanced bilingualism found in the school. As a whole, for Japanese majority students attending an international school in Japan, systematic teaching of Japanese academic and technical skills in students' earlier years of schooling may enhance cognitive academic proficiency in their two languages.

## **Introduction**

There are multiple paths that children can take to become bilingual. Some of these paths are natural and inevitable. A child may be born in a multilingual home setting or speak a home language different from the society. Other paths, however, are consciously and deliberately chosen. For example, a child who speaks the society's majority language may be sent to a school that teaches in a second language.

Among those who deliberately choose to promote bilingualism in their children, international schools have become increasingly popular. These schools often teach in a language other than the society's majority language, catering to students from all over the world as well as many host country nationals. While there are many international schools within the United States, there are over 250 such schools worldwide that have U.S. accreditation, teach in English, and follow a curriculum similar to that of U.S. schools (ISS, 1990).

Behind many of these parents' decisions to promote a second language through schooling is the widely held belief that bilingualism is good, and that promoting it at an early age is especially advantageous for their children. Research in bilingual education and second language schooling, however, has not necessarily supported this belief in an academic context for all children.

Is bilingualism good? How early should parents invest in children's bilingualism? How can we best promote proficient bilingualism for our children? The present study examines these questions by exploring the case of Japanese high school students attending an English-medium international school in Japan.

## **Background**

One often hears parents talk impressively about their children's amazing "sponge-like" capacity to acquire a second language. Are young children really better at learning a second language? Is earlier truly "better"?

### **Critical Period in Second Language Acquisition**

Lenneberg (1967) talks about the critical period for learning a first language, which starts around the first year of life and ends at puberty when the brain maturation reaches the adult level. According to this hypothesis, acquiring a language becomes arduous and even impossible once the critical period has passed. Research that supports a similar critical period in a second language, however, has been subject to controversial interpretations. Some researchers claim to have confirmed the existence of a critical period—that the earlier you start, the more native-like you become—thus confirming the above parents' belief (e.g., Johnson & Newport, 1989). Others (e.g., Snow & Hoefnagel-Hohle, 1978; Bialystok & Hakuta, 1999; Flege, 1999) have argued against the critical period in a second language by providing alternative interpretations to children's advantage over adults in learning a second language—that the factors involved are inevitably confounded, that adults can also acquire native-like fluency if the optimum context (one similar to that for children) is provided, and that older children actually are better language learners because of their advanced cognitive abilities, which enable them to learn a second language faster and more completely.

### **Educating Minority-Language Children**

Studies conducted with children who speak the minority language of a society often contradict the popular belief that "earlier is better" in an academic context. Researchers of immersion and bilingual education have consistently argued, across a diverse national context, that younger children, whose first language is still not secure, are often at a disadvantage when acquiring academic/cognitive language skills (e.g., Collier, 1987; Cummins, 1979; Ramirez, 1992; see also Skutnabb-Kangas & Toukoma, 1976; Engle, 1975).

Cummins (1979, 1999) distinguishes between basic interpersonal communicative skills (BICS) and cognitive academic language proficiency (CALP) and theorizes that while children may acquire native-like BICS within about 2 years, it takes them considerably longer (5–10 years) to catch up academically in English (Collier, 1987; Cummins, 1999). His linguistic interdependence hypothesis states that the skills developed in the first language will transfer to the second language. The transfer of skills, however, occurs only after a certain linguistic competence in the second language is attained (threshold hypothesis). In addition, if the child whose first language skill is not well developed is intensively exposed to the second language, not only may the development of the first language be impeded, but that of the second language may also be constrained. This latter result, called “semilingualism,” can lead to a cognitive deficit for the child.

Cummins’ linguistic interdependence hypothesis has been supported by studies with immigrant and low socioeconomic status (SES) families as well as middle-class children (Collier, 1987; Cummins, Swain, Nakajima, Handscombe, Green, & Tran, 1984; Oketani, 1997; Ramirez, 1992). Regardless of the SES background, children who lacked initial schooling in their home language performed worse in academic second language tasks, and took considerably longer to catch up.

### Educating Majority-Language Children

Canadian immersion programs for majority-language children, on the other hand, show a result counter to U.S. bilingual education studies that concern minority-language children (McLaughlin, 1985). A series of longitudinal studies of Anglo-Canadian children’s French immersion programs have consistently found that children in early total immersion programs become more proficiently balanced in French and English than children in delayed or late immersion programs in which children are introduced to a second language after literacy in the first language is established. In early total immersion, English-speaking children are immersed in French, their second language, and English is gradually introduced into the curriculum (Bruck, Lambert, & Tucker, 1974). In fact, immersion programs (including two-way bilingual or dual language programs) in the United States that introduce the society’s minority language to majority language children at an early age all claim similar success (Barfield & Rhodes 1992; Genessee & Cloud, 1998; Lindholm-Leary, 2000; Wu, De Temple, Herman, & Snow, 1994).

There are some crucial sociocultural differences surrounding immersion programs for majority-language children and bilingual education for minority-language children. For example, the former is intended for majority-language children, and the students and their families value their home language and culture as much as that introduced in school. Despite being schooled in a minority language, these children get ample linguistic and cultural support for their first language from home and the larger society outside of school. In

addition, children's acquisition of the second language is a conscious choice. These parents see their children's bilingualism as a future investment and a desired outcome unforced by their environment. Giving their children an early start, in addition, is believed to benefit their children (for example, see parents' comments in Barfield & Rhodes, 1992).

### Research Setting

The present study further investigates this early bilingualism issue in a specified context of an international school in Japan. Just like the French immersion program, these Japanese children are majority-language speakers whose parents chose second language schooling as an avenue for their children's bilingualism. Yet, unlike the French immersion program where all children start out with similar level of French, there are various linguistic backgrounds represented at an international school. Especially at the high school level, some students have entered the school after spending a considerable amount of time in an English-speaking country, acquiring English as minority-language speakers.

In the Japanese context, English is a status language. The country has the largest number of international schools in the world, 16 (International School Guide, 1999; Kondo & Willis, 1995), and they provide education to children from families of relatively high income, educational background, and level of interest in the children's education and future goals. Many schools are accredited by American and European associations. However, they are not accredited by the Japanese Ministry of Education, and are classified as "vocational" or "training" schools. As a result, parents who send their children to such schools are technically violating the mandatory education law, which states that parents must send their children to nine years of schooling starting from Grade 1 (Nishi, 1990; Willis, 1992). In addition, due to the lack of appropriate Japanese accreditation of the school, these students are often not given the same privilege as their mainstream Japanese peers to compete for Japanese college entrance. The majority of the parents and children at international schools thus place their primary interest and emphasis on preparing for colleges in the United States. Despite the shortcomings, Japanese families who send their children to an international school choose to do so mainly because they view English acquisition, and consequently bilingualism, as an advantage for their children, and their conscious effort to promote it, a future investment.

The present research took place at a Catholic international school in Yokohama, Japan. The school, which will be called St. Catherine, has students from Montessori (2 1/2 year old) to senior high school. The school was chosen as the research site because it has a large number of Japanese students and is one of the few schools of its kind that promote high levels of Japanese proficiency, thus encouraging full bilingualism, not just mastery of English, for their students.

## Language Proficiency

While terms such as “full bilingualism” or “proficient bilingualism” are popularly used, the challenge lies in defining and assessing bilingual students’ language proficiency. Language proficiency is difficult to measure not only because of test biases, but also because different kinds of proficiency are required in different contexts. Cummins (1981, Cummins et al., 1984) distinguishes “academic” or “context-reduced” language proficiency and “context-embedded” proficiency. The former refers to a situation in which communication is supported only by linguistic cues, thus one that is more cognitive-demanding and likely to elicit children’s CALP or the cognitive/academic language proficiency. The latter, on the other end of the continuum, refers to a situation in which communication is supported by a wide range of paralinguistic as well as linguistic cues, thus leading to the use of BICS (i.e., more likely to influence one’s communicative/interpersonal skills). Snow (1987) similarly suggests that context-embedded or contextualized language is prototypically oral, informal, and unplanned, while context-reduced or decontextualized language is prototypically written, formal, and planned. In reality, some oral languages (such as lecture or newscast) have properties that resemble written languages, and some written languages (such as grocery lists or informal memos) are close to oral languages. Thus, there is an interaction between the contextualized-decontextualized continuum and the oral-written mode of language use (Wu et al., 1994).

In addition to context there is a production-comprehension dimension. While both writing and speaking are primarily production, reading is primarily comprehension. In French immersion programs, for example, students were found to easily reach the level of native speakers in comprehension, but took longer to catch up with production, especially speaking (Bruck, Lambert, & Tucker, 1974). All linguistic domains may require experience, practice, and the right context (such as availability of native speakers with whom to converse at peer level) in order to attain full proficiency in all domains and dimensions—contextualized-decontextualized, oral-written, and production-comprehension.

In the present study, students’ reading comprehension, writing, and oral/conversational skills (i.e., the production-comprehension dimension) were tested with the two other continua in mind. The reading comprehension tasks assessed students’ comprehension, written, and decontextualized language skills. The writing tasks evaluated production, written skills (but closer to oral than reading comprehension), and less decontextualized language skills. Lastly, oral/conversational tasks assessed production, oral skills (but slightly planned and formal), and more contextualized language skills.

In an academic context, language assessments need to consider the positive transfers between languages, which are social, cultural, and cognitive in nature (Saville-Troike, 1991). The measures used in this study, therefore, attempted to take into consideration, as much as possible, the transferable

skills that are crucial for these students' successes in English-medium high school as well as future post-secondary education.

## Methods

### Participants

Forty-eight Japanese high school students in grades 9 to 12 (ages 15–19), whose parents are both native Japanese speakers, were analyzed in this study. All 48 students spoke Japanese as a home language. High school students were chosen because they would be further along in acquiring the level of bilingualism achievable at an international school. Based on educational background, the students were grouped into (a) those who had been schooled primarily in English since preschool (26), and (b) those who had been schooled initially in Japanese (22).

The former 26 students were further divided into (a) those who had attended international schools in Japan for all or most of their lives and had acquired English primarily through schooling (19), and (b) those who had lived abroad and had acquired English as minority-language speakers (7).

The latter 22 students were further subject to analysis based on number of years of Japanese schooling (two to eight years, not including preschool). These students acquired English either by transferring to an international school from Japanese schools or by moving to an English-speaking country and attending local English language schools. Transferring directly from Japanese schools to international schools was very rare; only two students (4%) did this.

### Procedures

The students' language proficiency levels were assessed using Japanese and English oral and literacy tests as described below.

### *Reading*

The researcher used the reading comprehension section of the Metropolitan Achievement Test—short form (1992) for English—and the reading and language skills sections of the Japanese language proficiency test (1991) administered to Japanese as a Second Language Speakers preparing to enter Japanese universities. Though the Metropolitan Achievement Test is not normed for students learning English as a foreign language, it was considered appropriate for international school students who receive full academic instruction (except for language classes) in English, use U.S. textbooks, follow U.S.-based curriculum, and for juniors and seniors who take advanced placement (AP) and international baccalaureate (IB) classes to prepare to enter U.S. and British universities and colleges. Though educated in Japan, these students are in a rigorous academic situation very similar to U.S. college preparatory schools. Also, the assessment likely measured students' success in mainstream English-medium high school as well as future college education.

The Japanese proficiency test tapped a variety of reading skills, including vocabulary knowledge (words and idiomatic expressions), recognition of *kanji* (Chinese characters), and reading comprehension. Though the standardized Japanese proficiency test used in this study is aimed at non-native Japanese speakers, the material covered was advanced, and the Japanese teacher at St. Catherine judged that it was complex enough for the students. Standardized tests designed for native speakers could not be used to assess the students' Japanese reading skills because these tests are inappropriate for students not educated in Japanese junior high schools and high schools, as they include sections on classical Japanese and Japanese grammatical terms (such as noun, verb, participle, and gerund), with which students at an international school are not familiar.

### *Writing*

Students were given 15 minutes to write an essay about a person they respect. The essays written were assessed holistically by two evaluators into four levels. The holistic rating was performed based on the Educational Testing Service (ETS) guidelines (ETS, 1989). The technical aspects of the writings were considered only if they interfered with interpreting the essays. In order to expose the raters to the high as well as the low end of Japanese and English proficiency existing at St. Catherine, a total of 77 students' English essays, including those of native English speakers, were used for English. Since international school students do most or all of their academic writing in English, it was anticipated that some students may perform at a comparable level or even better than their peers whose native language is English.

For Japanese, 66 Japanese-English proficient students' essays in Japanese, which included those written by students whose primary home language is not Japanese, were included in the rating. The 18 students who were not part of the 48 participants had lived all or most of their lives in Japan, spoke Japanese like native speakers, and had studied Japanese reading and writing in the same classrooms as their peers who were included in this study. Some were expected to perform better than the Japanese participants in this study.

Prior to the task, the evaluators were given 7 to 10 essays to read and assess. The criteria for the rating were then discussed separately for each language. Anchor papers for each of the four ratings were chosen so that the evaluators could refer to them as they assessed the rest of the essays.

In order to test the reliability of the ratings, Spearman's rank correlation was performed between the rankings given by the two readers. Significant correlation was found for English ( $r(77) = .68, p < .001$ ) as well as for Japanese ( $r(66) = .75, p > .001$ ). The average of the two scores was used as the overall rating of each essay. If the discrepancy between the two scores was more than 1, then a third rater's score was included to calculate a new average; this occurred only once for English and three times for Japanese.

For the purpose of this study, only scores for the 48 Japanese students were used. Results comparing writing scores of students from other linguistic background can be found in Wakabayashi (1998).

### *Oral*

Students were asked to perform the conversational task using the talk show format adapted from Schley and Snow (1992) in Japanese and English. The students were assessed in their native language oral proficiency as well as in English for two reasons. First, conversational skills were thought to consist of language specific strategies as well as global, transferable skills. By assessing each student in both languages, these skills were explored. Second, because of the widespread usage of *chanpon* or codeswitching among international school students, many students consistently mix their languages, and are less comfortable sticking to one or the other language in a single conversation. Being able to speak fluently in Japanese only or English only, thus, could be challenging for some Japanese students attending an international school, leading to deficient fluency, idiomatic errors, and other possible interference.

The students interviewed the English-Japanese bilingual experimenter for five minutes on any topic of their choice. Sample topics were given to assist students who are less proficient in coming up with topics. The suggested topics were those that would inquire about the experimenter's past experience as well as future perspectives. The interviews were transcribed using the Codes for the Human Analysis of Transcripts (CHAT) format (MacWhinney & Snow, 1990), and were rated holistically as in the written task. The evaluators were given transcripts and listened to audiotapes of the students' interviews as they rated the students. As in the written task, the raters were explicitly told not to consider the technical aspects of the students' speech (such as pronunciation, accent, fluency, and grammatical errors) unless they interfered with the interpretations of what the students were saying. Two evaluators rated the English interviews and three evaluators rated the Japanese interviews.

As in the case of the writing task, the evaluators were presented with a wide range of English and Japanese proficiency available at St. Catherine. Thus, they listened to a total of 70 English and 68 Japanese oral/conversational tasks. The reliability of the ratings was tested in the same way as the written task using Spearman's rank correlation. Significant correlation was found for English ( $r(70) = .68, p < .001$ ). For Japanese, three sets of agreements were calculated, one between raters 1 and 2 (students numbered 1–28), one between raters 2 and 3 (students numbered 29–60), and one between raters 1 and 3 (students numbered 61–88). The Spearman correlation coefficients were  $r(21) = .63, p = .002$ ,  $r(22) = .76, p < .001$ , and  $r(19) = .63, p = .004$ , respectively. The average of the two given scores was used as the overall rating of the essays. If the two given scores



were off by more than 1 (discrepancy), then another rater's score was added and the average recalculated; this occurred only once for English and three times for Japanese.

Lastly, as in the case of writing, only scores of the 48 Japanese students were used in this study. Results comparing oral/conversational scores of students from other linguistic background can be found in Wakabayashi (1998).

### *Technical skills*

The following measures were also obtained: (a) essay length (word count for English, letter count for Japanese); (b) proportion of errors (total, grammar, spelling, *kanji*, awkward expressions, incomprehensible expressions, other); (c) word types for English; (d) *kanji* types for Japanese; (e) word type-token ratio for English; (f) *kanji* type-token ratio for Japanese; (g) pronunciation; and (h) oral fluency.

The technical writing measures (1–6) were counted by the experimenter, who is bilingual in Japanese and English, and were checked by experienced ESL and Japanese teachers. The technical oral measures (7 and 8) were assessed based on Young and Gardner (1990) on a scale from 1 to 7 using the oral/conversational data. The experimenter, an experienced ESL teacher, and a Japanese teacher independently performed the assessment for 20 of the interviews in the language(s) of their expertise. Pearson's correlation showed high significant correlation between the author's measures and the second coder's measures for English pronunciation ( $r(20) = .91, p < .001$ ) and English fluency ( $r(20) = .92, p < .001$ ) as well as for Japanese pronunciation ( $r(20) = .91, p < .001$ ) and Japanese fluency ( $r(20) = .78, p < .001$ ). One-way analysis of variance (scores by raters) was also performed to check any discrepancy in the scores given by the raters. No difference was found. Since the reliability was high, the experimenter's scores were used.

### *Analytic strategies*

Students were divided into upper grades (grades 11 and 12) and lower grades (grades 9 and 10), and were classified as (a) educated primarily in English beginning in preschool, or (b) educated initially in Japanese. The reading, writing, and oral scores were then analyzed using 2 x 2 (grades x educational background) Analysis of Variance (ANOVA). Fisher's Protected Least Significant Difference (PLSD) was used for post-hoc tests. Subsequent analysis examined differences in students' performance according to (a) whether students were initially educated in English in Japan or in an English-speaking country (i.e., as a majority or minority), and by (b) length of exposure to formal Japanese schooling. The reading, writing, and oral scores, together with writing and oral technical measures were then subject to stepwise multiple regression to examine what variables best predict these scores.

## Results

### Correlation Analysis

#### *Reading comprehension*

*English.* A significant difference in reading scores was found by grade but not by educational background (Table 1). Students in higher grades scored better than students in lower grades (Table 2). Thus, no long-term benefit of early start was evident.

Table 1

#### *Analysis of Variance for English Reading*

Source	SS	df	F
Grade (G)	20589.29	1	23.30***
Education (E)	65.14	1	0.07
G x E	8.20	1	0.01

\*\*\* $p < .001$

Table 2

#### *Mean English Reading Scores by Grade*

Grade	M	SD	n
Younger (9 & 10)	654.48	25.53	21
Older (11 & 12)	697.33	31.58	27

Further analysis shows that the number of years of schooling in Japanese (2 to 8 years) was negatively correlated to the reading comprehension scores ( $r(22) = -.42, p = .05$ ). When students' grade levels were controlled using partial correlation, the correlation strengthened ( $r(19) = -.54, p = .006$ ). Thus, the earlier the students transitioned to English medium education, the better they performed on English reading comprehension. No difference was found between students initially educated in an English-speaking country and students primarily educated at an international school in Japan. The result suggests that though students who were initially educated in Japanese schools seemed to have caught up with students educated in English from an earlier age, an earlier transition was advantageous.

In general, international school students did not score as high on reading comprehension tests when compared to the U.S. norm. This may be because these students are not native speakers of American English or do not reside in the United States. Of the 48 students, only 18 (37.5%) scored at or above their grade levels. Nevertheless, the scores can be used for comparison.

*Japanese.* Unlike English, significant difference was found by educational background but not by grade (Table 3). Students initially schooled in Japanese scored better than students primarily educated in English from an early age (Table 4).

Table 3

*Analysis of Variance for Japanese Reading*

Source	SS	df	F
Grade (G)	22.62	1	2.54
Education (E)	111.28	1	12.49**
G x E	4.42	1	0.50

\*\* $p < .01$

Table 4

*Mean Japanese Reading Scores by Educational Background*

Educational Background	M	SD	n
Primarily English	43.92	3.83	25
Initially Japanese	47.41	1.71	22

Further analysis shows that while students initially schooled in Japanese scored the best, students initially educated in an English-speaking country performed the worst (Table 5). The difference between those primarily educated in an English-speaking country and those primarily educated at an international school in Japan was significant ( $F(2,41) = 6.31, p = .004$ ). In other words, those who had been educated abroad initially and had returned to Japan may not have caught up with the level of Japanese reading of their other Japanese peers at the school.

Table 5

*Mean Japanese Reading Scores by Educational Background*

Educational Background	M	SD	n
1	44.63	3.80	19
2	41.67	3.20	6
3	47.42	1.71	22

*Note.* Score indicates the number of correct answers out of a total of 50. 1 = Educated in English primarily in Japan; 2 = Educated in English initially in an English-speaking country; 3 = Educated initially in Japanese schools

Lastly, there was no correlation between the number of years of initial schooling in Japanese (2–8 years) and the scores achieved ( $r(22) = .12, n.s.$ ). Thus, being educated for a longer amount of time in Japanese did not relate to higher Japanese performance. Just a couple of years of initial schooling in the native language may be sufficient for students' Japanese language development, at least at the level of Japanese found at an international school.

*Written task*

*English.* As in English reading, significant difference was found for grade only (Table 6). Older students scored higher than younger students on the task (Table 7).

Table 6  
*Analysis of Variance for English Holistic Writing Scores*

Source	SS	df	F
Grade (G)	5.38	1	20.41***
Education (E)	0.99	1	3.75
G x E	0.44	1	1.67

\*\*\* $p < .001$

Table 7  
*Mean English Holistic Writing Scores by Grade*

Grade	M	SD	n
Younger (9 & 10)	1.83	0.6	21
Older (11 & 12)	2.44	0.47	27

A significant negative correlation between the number of years of initial schooling in Japanese and writing performance was found ( $r(22) = -.43, p < .05$ ). The correlation strengthened once grade was controlled ( $r(19) = -.72, p < .001$ ). Though students initially schooled in Japanese seemed to have caught up with the level of English writing found at school, the longer the students were schooled in English, the better their performance. No difference was found between students initially educated in an English-speaking country and those primarily educated at an international school in Japan.

*Japanese.* As in Japanese reading, a significant main effect was found only by educational background (Table 8). Students educated primarily in English scored significantly lower than those initially schooled in Japanese (Table 9).

Table 8

*Analysis of Variance for Japanese Holistic Writing Scores*

Source	SS	df	F
Grade (G)	1.70	1	2.60
Education (E)	4.55	1	6.98*
G x E	0.19	2	0.14

\* $p < .05$ 

Table 9

*Mean Japanese Holistic Writing Scores by Educational Background*

Educational Background	M	SD	n
Primarily English	2.02	0.77	25
Initially Japanese	2.75	0.87	22

For the group of students initially schooled in Japanese, longer schooling in their native language did not necessarily correlate with better performance in overall Japanese writing assessments ( $r(22) = .36$ , n.s.). The result again suggests that a couple years of schooling in Japanese may be sufficient to maintain and develop the level of Japanese writing found at an international school. Further analysis shows that students educated primarily in English in Japan scored significantly higher than students educated initially in an English-speaking country ( $F(2,41) = 4.129$ ,  $p = .02$ ) (see Table 10). Fisher's PLSD indicated that the difference between students educated in English in Japan and those educated initially in Japanese schools approached significance ( $p = .08$ ).

Table 10

*Mean Japanese Holistic Writing Scores by Educational Background*

Educational Background	M	SD	n
1	2.18	0.75	19
2	1.5	0.63	7
3	2.75	0.87	22

Note. 1 = Educated in English primarily in Japan; 2 = Educated in English initially in an English-speaking country; 3 = Educated initially in Japanese schools

### Oral/Conversation

*English.* A significant main effect by grades and an interaction between grades and educational background were found (Table 11). Older children received higher global ratings than younger children. However, while students educated primarily in English performed better than students educated initially in Japanese schools in the lower grades, the latter group slightly outperformed the former in the upper grades (Figure 1).

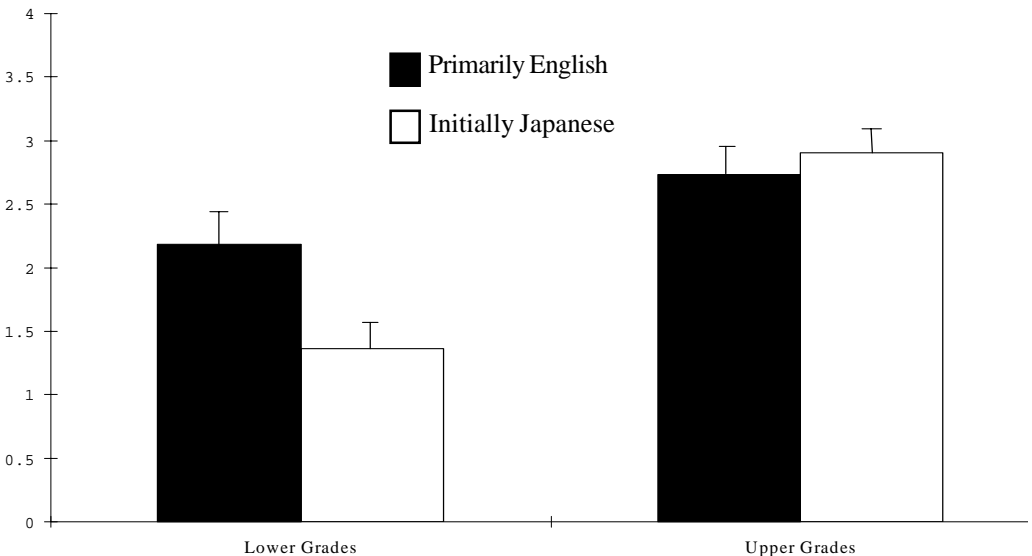
Table 11

*Analysis of Variance for English Holistic Oral Scores*

Source	SS	df	F
Grade (G)	12.27	1	19.66***
Education (E)	1.19	1	1.91
G x E	2.74	1	4.40*

\*\*\* $p < .001$ , \* $p < .05$

Figure 1. English oral holistic ratings by grade and educational background.



The results suggest that students schooled in Japanese have caught up with, and have attained a high level of English oral/conversational proficiency. In addition, the older the student gets, the better a conversationalist he or she seems to become. This latter outcome contradicts Schley and Snow's (1992) findings regarding grade school students attending an international school in New York. In their study, they found that grade was never a significant predictor of holistic ratings.

The contradicting results may relate to the difference in the age of participants. Possibly, older high school students are more accustomed to, and at ease in talking to adults than younger high school students. The older high school students not only seemed to understand what is shared and non-shared information with their conversational partners, but also were less shy to take up the role of an interviewer. Younger students were more likely to ask simple questions concerning the experimenter's background or general opinions and impressions on a given topic. They were also more likely to become preoccupied with asking questions or avoiding long pauses (the latter type starting up a monologue as a result) rather than conversing (i.e., talking in response to the experimenter's comments). Similar to younger high school students, elementary school children in Schley and Snow's (1992) study may have been uncomfortable talking to adults with whom they had little in common. Thus, some students who were rated as poor conversationalists in the given task may actually be good conversationalists when talking with their peers.

No correlation was found between the scores of 22 students who had initially been schooled in Japanese and their years of schooling in Japanese ( $r(22) = -.21$ , n.s.). When grades were controlled, however, the correlation became significant ( $r(19) = -.45$ ,  $p = .04$ ). The results indicate that the longer the schooling in Japanese, the lower their English conversational scores; thus, again, the earlier the transition, the better.

*Japanese.* As in the case of English, the ratings differed significantly across grades but not by educational background (Table 12). Thus, older students received significantly higher ratings than younger students learning in Japanese (Table 13). Again, the result that older students were better conversationalists than younger students contradicts Schley and Snow (1992).

Table 12

*Analysis of Variance for Japanese Holistic Oral Scores*

Source	SS	df	F
Grade (G)	10.24	1	21.744***
Education (E)	1.52	1	3.24
G x E	0.31	1	0.66

\*\*\* $p < .001$

Table 13

*Mean Japanese Holistic Oral Scores by Grade*

Grade	<i>M</i>	<i>SD</i>	<i>n</i>
Younger (9 & 10)	2.05	0.89	21
Older (11 & 12)	2.61	0.82	26

*Note.* Ratio of number of types of *kanji* divided by number of *kanji*.

When data of 22 Japanese-schooled students were analyzed further, Japanese oral scores negatively correlated with years of schooling received in Japanese ( $r(22) = -.5073, p = .016$ ). The correlation strengthened when grade was partialled out ( $r(19) = -.6486, p = .001$ ). Surprisingly, longer Japanese schooling correlated with lower performance on Japanese oral tasks. While international school students are consistently encouraged to speak up in class, present materials in class, and participate in school-wide and inter-scholastic speech contests, this is not the case in Japanese schools. Perhaps longer years of Japanese schooling may relate to less exposure to such extemporaneous speaking skills required in the given task.

*Language proficiency across languages*

How balanced is the students' language proficiency over the two languages? Which students performed well in both languages? Which students performed poorly in both languages? To examine these questions, Pearson's correlation and partial correlation controlling for grade was performed on the language data (Tables 14 and 15).

Table 14

*Correlations Among English and Japanese Task Scores*

Tasks	1	2	3	4	5	6
1. English Reading	--	.46**	.43**	.29*	.25 <sup>A</sup>	.62***
2. English Writing	--	--	.59***	.24 <sup>A</sup>	.02	.52***
3. English Oral	--	--	--	.12	-.03	.42**
4. Japan Reading					.35*	.30*
5. Japan Writing						.35*
6. Japan Oral						

<sup>A</sup> $p < .1$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$



Table 15

*Correlations Among English and Japanese Task Scores Controlled for Grade*

Tasks	1	2	3	4	5	6
1. English Reading	--	.24 <sup>A</sup>	.26 <sup>A</sup>	.12	.07	.42**
2. English Writing	--	--	.47**	.07	-.19	.31*
3. English Oral	--	--	--	-.06	-.24	.20
4. Japan Reading				--	.24	.11
5. Japan Writing				--	--	-.01
6. Japan Oral				--	--	--

<sup>A</sup> $p < .1$ , \* $p < .05$ , \*\* $pp < .01$

*Reading.* There was a mild but significant correlation between English reading scores and Japanese reading scores (Table 14). When grade was controlled using partial correlation, however, the correlation disappeared (Table 15). Thus, students who scored well in English did relatively well in Japanese, but age proved a crucial factor.

Eighteen students (37.5%) scored at or above grade level in English. Of the eighteen, 14 (78%) also scored above the mean in Japanese. Six (43%) were educated in English in Japan, none were educated initially abroad, and 8 (57%) were schooled initially in Japanese. The majority of them (11 out of 14, or 79%) were upper classmen.

Fourteen (29%) scored in the bottom quarter percentile in English. Of the fourteen, 8 (57%) scored above the overall mean on the Japanese test (i.e., low in English but high in Japanese). Six of the 8 were educated in Japanese schools for 6–7 years, and two had attended an international school all their lives. The remaining 6 (43%) performed below the overall mean, and thus low in both languages. Five (83%) were educated primarily in English (3 were international school students and 2 were students initially schooled overseas). The remaining student initially spent 3 years at a Japanese school. The majority (5 out of 6, or 83%) were underclassmen.

As a whole, students who were most likely to become proficient in both languages were older students (i.e., 11th or 12th graders) schooled in English in Japan, or schooled less extensively at a Japanese school. Those who were most likely to be least proficient in both languages were younger students who had been educated primarily in English. The results suggest a developmental trend toward higher bilingual proficiency in reading.

*Writing.* Good English writers were not necessarily good Japanese writers. English did not correlate with Japanese (Table 14).

Eight (17%) were rated as good English writers (i.e., scores of 4, 3.5, or 3), 29 (60%) as poor English writers (i.e., 2, 1.5, or 1), 15 (31%) as good Japanese writers, and 22 (46%) as poor Japanese writers.

Two students (4%) were rated as good in both English and Japanese. Thirteen students (27%) were rated as poor in both English and Japanese. The two students who were good English and Japanese writers were both 12th graders. One girl initially attended a Japanese school for 3 years and then transferred into an English medium education in the United States, where she lived for 2 years. The other girl had attended St. Catherine only.

Many more students were rated as poor writers than good writers. Older as much as younger students were rated poorly on their essays. The result suggests negative linguistic interferences as well as challenges involved in learning to write well in two languages.

*Oral/conversation.* The English oral/conversational holistic ratings scores were found to correlate significantly with those of Japanese (Table 14). However, the correlation lost significance once grade level was controlled using partial correlation (Table 15).

Twenty (42%) were rated as good English conversationalists (i.e., scores of 4, 3.5, or 3), 23 (48%) as poor English conversationalists (i.e., scores of 2, 1.5, or 1), 16 (33%) as good Japanese conversationalists, and 24 (50%) as poor Japanese conversationalists. Of the 20 good English conversationalists, 11 (55%) were rated as good in Japanese as well. Similarly, of the 23 poor English conversationalists, 15 (65%) were rated as poor in Japanese as well.

Of the 11 students who were rated as good conversationalists in both languages, none were in the lower grades. Five were in eleventh grade and 6 were in twelfth grade. In addition, 6 students initially received Japanese schooling and 5 students received primarily English education since preschool. Of the five, 3 had attended an international school in Japan throughout their years in school while 2 had acquired English in an English-speaking country.

Of the 15 students rated as poor conversationalists in both languages, 7 were ninth graders, 4 were tenth graders, 3 were eleventh graders, and 1 was a twelfth grader. Six students were initially schooled in Japanese, and 9 were primarily schooled in English. Of the latter nine, 7 had attended an international school in Japan throughout, while 2 initially received English schooling abroad. The results suggest that those who are most likely to become proficient in both languages are, again, older students. Those who are less likely to have attained this level are younger students, which implies developmental progression toward better oral, conversational proficiency.

## Regression Analysis

In order to test the best subset of variables that predict the language measures explored in this study, forward stepwise multiple regression was performed. Following variables were used: (a) grade (9–12); (b) age English

was acquired; (c) year(s) of residence in an English-speaking country; (d) reading scores; (e) holistic written scores; (f) holistic oral scores; (g) essay length; (h) proportion of errors (total, grammar, spelling, *kanji*, awkward expressions, incomprehensible expressions, other); (i) word types for English; (j) *kanji* types for Japanese; (k) word type-token ratio for English; (l) *kanji* type-token ratio for Japanese; (m) pronunciation scores; and (n) fluency scores.

The results are summarized in Table 16. Using Cohen's (1977) criteria, the adjusted R<sup>2</sup> scores shown are all in the large range (i.e., above .26).

Table 16

*Stepwise Regression Analysis for Variables Predicting English and Japanese Task Scores*

Dependent Variables	Adjusted Independent Variables		Standardized Regression Coefficient
English Reading	.52	Japanese oral holistic scores	.44**
		Proportion of total technical errors in English essays	-.34**
		Number of types of <i>kanji</i> used in Japanese essays	.33**
Japanese Reading	.50	Japanese oral fluency scores	.40***
		Number of types of <i>kanji</i> used in Japanese essays	.48***
English Writing	.70	Length of English essays	.70***
		English oral fluency scores	.35***
		Proportion of grammatical errors in English essays	-.21*
Japanese Writing	.42	Proportion of total technical errors in Japanese essays	-.30*
		Number of types of <i>kanji</i> used in Japanese essays	.50***
English Oral	.50	English oral fluency score	.58***
		Grade	.34**
Japanese Oral	.46	English reading scores	.42**
		Grade	.37**

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

First, the number of types of *kanji* used in Japanese essays predicts (a) English reading, (b) Japanese reading, and (c) Japanese writing. Thus, the more sophisticated and specialized the students' technical skills in Japanese, the better their language proficiency not only in academic Japanese, but also English reading.

Second, English oral fluency scores predict (a) English writing and (b) English holistic oral skills. Both similarly tested students' impromptu skills to produce. It is possible that being fluent in English enabled students to write and speak better in the limited amount of time given on the task. In the essay writing tasks, it was expected that students would write as if speaking (i.e., quickly and without much time for recast and editing). Being a fluent Japanese speaker, however, did not predict good Japanese writers.

Lastly, students' grade levels predict (a) English oral skills and (b) Japanese oral skills. In other words, mature, experienced conversationalists scored better across both languages.

## Discussions

Several of the findings from this study are especially noteworthy for thinking about the bilingualism issue. First, students initially schooled in Japanese performed as well as students educated primarily in English on all English tasks. Students who had transitioned into English medium education at an earlier age, however, performed better on these tasks.

Despite the similarity in their English skills, students who were initially educated in Japanese schools performed consistently better on academic Japanese proficiency (reading and writing) tasks than students schooled in English since preschool. There was no difference in the students' Japanese academic proficiency based on length of Japanese schooling.

The results, taken together, suggest that students initially schooled in Japanese had caught up in their academic English skills by high school. Earlier transition to English medium education may be recommended for students to attain higher level of English proficiency in all areas measured. However, a couple years of schooling in Japanese seemed to help students maintain and develop the highest level of Japanese proficiency found in the school, leading to proficient bilingualism.

Further analysis shows that students who were initially schooled in an English-speaking country scored the lowest in most Japanese tasks. The result suggests that beginning English schooling as a minority-language speaker may have long-term impact for the students, even into high school, and even after returning to their home country. However, the sample size of such students was small, and thus, further research is needed.

Third, older students performed better on all English tasks. However, age was not a significant factor for Japanese reading and writing, but only for Japanese oral, conversational tasks. Perhaps for Japanese students at an

international school, English may be a language that requires development primarily in school. Such students are educated in English in a non-English speaking environment, and English is not their home language. Thus, grade levels not only relate to the amount of schooling, but also to their extent of exposure to English. Learning Japanese at school on the other hand, is just one of many ways in which students develop competence in this language (and it is just one school subject, in contrast to English, which is the language of instruction for most other subjects). In other words, Japanese may be a natural language that accumulates in an individual, not necessarily by age, but rather learned through various avenues of exposure at home and in everyday life.

Fourth, oral/conversational skill was the only measure that revealed a similar main effect of age in both Japanese and English. Japanese and English oral/conversational outcomes also correlated significantly. The result suggests that there may be a common underlying proficiency (CUP) in conversational skills that may be transferred across languages. For example, one 12th grade girl was given the highest rating of 4 by all four evaluators. The conversational techniques that she used were similar across the two languages. She was able to transition smoothly between related topics and gave responses and feedback to her conversational partner in both languages. Cummins et al. (1984) theorizes that while “cognition” underlies the common proficiency across the CALP in the two languages, “personality” underlies the common proficiency across the two languages for BICS. An individual’s stable character or personality may certainly be an important factor that enables him or her to rapidly adjust to the foreign situation and strike up an interesting conversation. However, the present result also suggests that what underlies the oral/conversational proficiency may also involve more technical conversational skills that develop and mature with age and experience.

That English oral/conversational scores did not correlate highly with Japanese oral/conversational scores once age was partialled out may partly be explained by Cummins’ threshold hypothesis. There may be a threshold of competence in the second language that is required for the conversational skills in the first language to transfer, as found in the case of a 9th grade girl. Though an excellent conversationalist in Japanese, her English did not demonstrate fluency and was full of pauses. Her low oral proficiency in English seemed to interfere with the task assigned her, leading her to receive the lowest rating in English.

The regression analysis also has some important implications. First, oral domain predicted English writing proficiency as much as English technical writing skills. For Japanese writing, only Japanese technical writing skills best predicted Japanese writing proficiency. Given the nature of the assigned tasks, why did Japanese oral proficiency not predict Japanese writing proficiency and vice versa?

One explanation may be the bias in the testing procedure. The students were asked to write the English essays first, and thus, some kind of translation interference may have occurred when Japanese essays were written. Translation interference has been found with advanced college Japanese learners of English (Kobayashi & Rinnert, 1992). Although this possibility cannot be ruled out, another plausible explanation is that students' cognitive writing processes differed across languages. Learning to read and write *kanji* is frequently mentioned by Japanese parents and high school students residing in the United States as the most challenging part of Japanese language development and maintenance (Wakabayashi, 1995). Thus, being able to successfully implement *kanji* in their essays in the short amount of time given may have cognitively interfered with the transfer from oral to written forms of language, unlike in the case of English. Children schooled in English may have ample opportunity to practice English writing but not Japanese writing. To be able to use *kanji* automatically and smoothly may be an accomplishment requiring much more time and effort for these children, and may be a crucial skill for fluent Japanese writing.

Next, Japanese technical writing measures not only predicted Japanese writing, but also English reading and Japanese reading. English technical writing measures, on the other hand, only predicted English reading and writing. This result is similar to Oketani (1997), who found a unidirectional relationship—from Japanese reading to English reading abilities—in her regression analysis. She argues that her finding supports Cummins' Common Underlying Proficiency hypothesis, which actually maintains that transfer often happens unidirectionally. That the oral scores are the only ones not predicted by technical measures also supports the BICS and CALP distinction to some extent.

Of most interest is the strong relationship between Japanese oral skills and English reading skills. That Japanese oral holistic scores negatively correlated with years in Japanese school is also noteworthy. What proficiency besides "speaking" was evaluated in the task? What skills were necessary to perform well in the task? The oral/conversational task required more planning and was more formal than a naturally occurring conversation. Perhaps this kind of oral/conversational task in one's native language may be an excellent window for examining students' skills to reason, analyze, plan, comprehend, and organize thoughts. In other words, being a quick and clear communicator (i.e., high and complex proficiency in BICS) may require much more "cognitive ability" (i.e., CALP), at least for the given task, in the present context of an international school in Japan.

Some notes on limitation are required. First, the study pertains to a foreign language situation as opposed to second language situation. Though the students were educated exclusively in English, in a rigorous academic situation, English is a foreign language rarely heard outside of school. Neither Canadian immersion literature nor U.S. bilingual education literature may necessarily apply to, or explain this specific situation.

Next, the sample of students who come to an international school, obviously, have parents who are much more enthusiastic about bilingualism and internationalization than majority of Japanese parents. Furthermore, families returning to Japan from abroad who choose an international school for their children may reveal yet another layer of bias. There are several reasons why this may be the case. First, many families who go abroad anticipate returning to Japan. Thus, they put great effort into preparing their children's transition back to Japanese schools. As a result, many maintain native-like use of Japanese at the time of return to Japan. Second, even if native-like Japanese is not maintained, there are special programs for returning children that help to prepare them for mainstream Japanese schooling. Third, international schools are expensive, and many of the returning families cannot afford the tuition. Given these factors, some of these students may not have been able to adjust to Japanese schools, either culturally or linguistically. This applies to students initially educated in English abroad as well as many of the initially schooled Japanese children who went abroad, returned to Japan, and entered an international school.

Another limitation is that besides the English reading task, the children were basically evaluated within their groups. The best students were best in English or Japanese within their school. Though there were English native-speakers in the school who had only recently arrived in the country, their English writing or speaking did not necessarily represent "average" age-appropriate English. Similarly, the best Japanese writing or speaking may not necessarily be comparable to that of native Japanese counterparts. Though there were students educated in the Japanese system until ages 12–15, their Japanese may not necessarily represent "average" age-appropriate Japanese. Again, the fact that these students did not choose to pursue Japanese education, and were "unique" in deciding to transfer to an English-medium education suggests subject bias. It is noteworthy, though, that the oral/conversational and writing outcomes of children of American sojourners and of students schooled in the Japanese system until ages 12–15 were not necessarily the best, especially in cases of writing.

Fourth, in foreign and second language schooling, one cannot ignore the culture that students, with the introduction of the new language, encounter in school. The cultural environment in which this study took place may need special attention. Japanese culture is often held to be "exclusive," one in which any "foreign-ness" is not fully accepted. Given this characteristic, being at an international school and knowing a language other than Japanese may encourage students to take on an identity different from the majority of Japanese, thus acquiring a feeling of being a "minority" within their own culture. This minority-like identity may be reacted to positively or negatively. For those who pride themselves in their English skills, for example, their loyalty may shift from Japanese to a more prestigious language, English. Perhaps the reason those students who were initially educated abroad performed lower in Japanese proficiency

tasks is due to this language loyalty factor. For other students, being a minority in their own culture may be a negative experience. This seemed to be the case especially for those who felt their English was not good enough, and yet could not totally identify with the mainstream Japanese (Wakabayashi, 1998). Whatever the situation, the outcomes for these majority language speakers, such as low English reading comprehension scores in comparison to the U.S. national norm, may also need to be observed in light of their sociocultural experiences as a “quasi-minority.” Consequently, the results from this study cannot be generalized across other cultural and linguistic contexts.

Lastly, the sample was cross-sectional. Though many developmental trends are suggested by the results, the students in the lower grades and those in the upper grades were of different generations, and, basically, different people. It cannot be concluded that students in lower grades will perform as well as those in the upper grades in a couple of years using the present data.

## **Conclusion**

So, is it worth the special attention and investment to put your child through a second language schooling? Are conscious attempts for bilingualism really advantageous for the child?

The findings from this research would suggest this is so, but with a cautionary note that not all children attain age appropriate proficiency in one or both languages. There are costs as well as benefits even for majority-language students, at least in the context of Japanese-English bilingualism at an international school in Japan. While there were students who acquired English through schooling at St. Catherine, and who performed superbly in both English and Japanese tasks, there were others whose performance caused concern.

The results suggest, overall, that students’ success may relate to how much support children get with their native academic language skills, especially in their early elementary school years. For international school students in Japan, a more systematic teaching of Japanese academic skills may be necessary in students’ earlier years in order to attain a more proficient bilingualism by high school. Many two-way bilingual programs in the United States adopt this strategy to jointly educate majority and minority language children in the elementary school level. The present study also suggests that much of children’s second language development continues after their elementary school years, well into high school, and most likely throughout their lives.

As parents and educators, we need to be fully aware of the advantages as well as the limits of bilingualism, in order to make timely and informed judgements about appropriate programs and curricula for our children. Bilingualism, then, can be an even more valuable investment for our children’s future.



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