

# The Effects of Differences in Language Systems on the Acquisition of Chinese and Japanese Languages

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## Abstract

The effect of different language systems on the acquisition of the Chinese and Japanese languages by Taiwanese children living in Japan was investigated. A grammatical test of the Chinese and Japanese languages was developed to examine the influence of the mother tongue on the knowledge of the two language systems. The differences between the acquisition of common and different grammatical components of the two languages by native speakers were investigated using this test. The results indicated that aspects common to the two languages were easy to acquire, whereas the different items (with the exception of word order) were difficult to acquire. Moreover, the results showed that children who migrated to Japan at an older age tended to have a better grammatical ability in both the languages. These findings suggest that older learners can maintain their ability to use the mother tongue while they learn a second language and that proficiency in their mother tongue has a positive effect on second language acquisition.

**Key words:** bilingualism, Chinese and Japanese language acquisition, grammatical rule, influence of mother tongue, second language acquisition

## 1. Introduction

The ultimate goal when learning a foreign language is to acquire language ability akin to that of native speakers. In other words, the ultimate target is the acquisition of the ability to speak like natives in terms of all the components of the linguistic system that constitute the language. However, in reality, this is not an easy task. Second language learners are often considered to be at an intermediate proficiency level, between those who cannot speak at all and those who can speak as fluently as native speakers. At this intermediate level, learners associate their first language with the second language, and they attempt to apply this association, together with their internal knowledge, to the language they are trying to learn. In other words, it is a transition from one language to the other. As a consequence, stimuli from the similarities of the two languages can be easily processed based on rules already learnt. In contrast, the differences in the two languages may very likely cause restrictions when processing stimuli due to knowledge from rules already acquired. According to Yokosawa and Umeda (1988), the difference between the Chinese and Japanese languages from the vocabulary aspect is considered to be small because 70% of a Japanese dictionary consists of two-Kanji compound words. However, the two

languages vary greatly in terms of word order, tones, verbs, compound words, and use of particles to indicate the subject or object, etc. Because bilingualism differs with the changes in linguistic systems, it is necessary to conduct a detailed evaluation of the common and different aspects of the Chinese and Japanese languages.

## 2. Review of the Literature

Japanese language students tend to make mistakes that vary depending on differences in their native languages. Most prior studies examined the Japanese learning of Japanese language students, but studies that address two languages at the same time are rare. However, when examining the influence of a native language, it is necessary to investigate the prevailing state of acquisition of the two languages and conduct evaluations starting from the structure of the native language.

Let us first review the findings on the influence of the native tongue on second language acquisition. The degree of interference may differ depending on the similarities between the native and second languages and on the learning environment (McLaughlin, 1984, 1985). Kaga (1963) compared the extent to which the understanding of the meanings of English nouns differed between Japanese junior high school students and American university students. Because the learned

English meanings and the Japanese meanings corresponding to the learned English were almost the same, the native language was shown to have no influence on the learned English meanings. Inoue (1971), too, examined the differences in the acquisition of the meanings of English nouns. The subjects were Japanese students, some of who were majoring in English and others who were not, and American university students. The results showed that the Japanese students who were majoring in English gave answers that came closer to the meaning of the nouns than those who were not majoring in English. This also suggests that there was a native language influence on the acquisition of the meanings of English nouns. Some examples of native language influence are as follows: a strong correlation between the Kanji writing test and the results of students from countries with languages that use Kanji; conclusions from the analyses of the Japanese language ability of students learning Japanese who use English, Chinese, or Korean and are thought to be on the same level, that the proper use of transitive and intransitive verbs is difficult for the Chinese group (Ishida, 1986). The Chinese group found it difficult to use transitive and intransitive verbs properly (Ishida, 1986). Considering the structure of the Chinese language, the appropriate usage of particles and transitive/intransitive verbs appears difficult for native Chinese speakers.

Furthermore, Feng (1993, 1994) examined the influence of the mother tongue on the passive and causative sentence learning processes of Chinese students studying Japanese, both at the beginner's and the advanced levels, and evaluated the naturalness of the sentences. The results showed that many more mistakes occurred in items that differed from the Chinese language than in those that were common to both the languages. In addition, a significant difference was not seen in the error rate of the naturalness evaluation, even with an increase in the number of years that the students had studied the language. Feng also suggested that the influence of the mother tongue on the acquisition of Japanese construction grammar in the case of Chinese students is strong and that this influence is not something that would easily decrease over time. Inaba (1991) examined the acquisition of Japanese conditional sentences by English native speakers who were studying Japanese. It was found that items that were the same in Japanese and English were easily learnt, while those that were different were difficult to learn. However, there was also a finding suggesting that grammar items that are different are actually easily acquired. Targeting people having Chinese or Korean as the mother tongue, Newport (1990) examined the rules relating to morphemes and syntaxes regarding second language acquisition and the degree of achievement finally reached. In people who migrated to America in

early adolescence or thereafter, there was a difference in scores depending on the grammar item. Even though the age at the time of migration strongly affected morphemes, the age did not matter when it came to word order, indicating that English word order is easily acquirable. Thus, when two language systems are different, the acquisition process also changes. The extent of the differences between the two languages, too, is related to the error patterns.

There are many analyses relating to the acquisition of grammatical structures by language learners during the process of learning their native tongues or a second language (e.g., Cummins & Nakajima, 1985; McLaughlin, 1985; Ishida, 1986; Johnson & Newport, 1989; Uchida, 1997). When supporting the language acquisition of a child, it is important to objectively understand the child's linguistic ability. Incorrect usage revealed by the evaluation and analysis of various phenomena observed during the learning process, can provide clues for determining the structural features of the target language and for understanding the learning process. These types of analyses are important. Furthermore, when it comes to Japanese, which is an agglutinative language that indicates grammatical relationships with particles and auxiliary verbs, rather than word order and word inflexions, it is necessary to examine the development of these particles and auxiliary verbs. Because there are similarities and differences in the grammatical structures of the Japanese and Chinese languages, the influence of these two languages on each other must also be evaluated. There are few studies on the dual language grammatical competence of Chinese native speakers with Japanese as a second language. Thus, conducting grammatical competence tests for each of the languages is necessary for examining the Japanese and Chinese grammatical competence in these types of students.

Therefore, this paper presents new indices of Chinese and Japanese grammar tests, referring to the Chinese Language Proficiency Test and the Japanese Language Proficiency Test. Using these two tests, the grammar acquisition by language learners and native speakers will be compared and the linguistic achievement analyzed. Then, the influence of the diversity in language systems on the acquisition of the Japanese and Chinese languages will be discussed.

### 3. Methods

#### 3.1 Subjects

Twelve second-year senior high school students attending school K in Japan, with Chinese as their native language and Japanese as their second language were chosen. These students were children of Taiwanese parents living in Japan. Depending on their ages when

they started learning the second language (age of migration to Japan), these students were divided into the pre-schooling age group (aged 7 or younger), schooling-age group (aged 7-10), or the sensitive age/post-sensitive age group (aged 11 or older). The three groups comprised five, three, and four students, respectively. One or both parents of the students were from Taiwan. The age of migration to Japan was diverse, ranging from age 1 to 14 years; however, they all had enrolled in the same school and were undergoing the same language education. The school uses the immersion method of language education, which aims to simultaneously develop both languages regardless of the language used at home by separating the language used in school by subject.

The control groups comprised native speakers-Taiwanese high school students and Japanese high school students. The controls that were used for comparison were the results obtained from conducting the formulated Japanese grammar test and the Chinese grammar test on native speakers of each of the two lan-

guages. The subjects for the Chinese grammar test were 100 Taiwanese high school second-year students attending a public school in north Taiwan, who had a school grade deviation value of 55. Subjects for the Japanese grammar test were 78 Japanese high school second-year students attending a Tokyo metropolitan government-run school in Japan, with a school grade deviation value of 55.

### 3.2 Time of the survey

The study was conducted in the period from October to November of 2001.

### 3.3 Materials

The materials used were a Chinese grammar test and a Japanese grammar test. These tests consisted of items selected from the Chinese Language Proficiency Test and the Japanese Language Proficiency Test, which are used as references for university entrance examinations and have well-established reputations<sup>1</sup>. Each of the tests had six categories, with six questions

**Table 1** Grammar items characteristic to either Chinese or Japanese (uncommon items)

	Chinese	Japanese
1. Tones	Chinese is a tonal language <sup>3</sup> , so the discrimination of the four tones is important. For example, in Chinese, kanji with a “ma” pronunciation stem are “ma” (mother), “ma” (hemp), “ma” (horse), and “ma” (swear).	Japanese is not a tonal language.
2. Verbs	Chinese has no conjugations. Verbs can become the subject and object as they are. Chinese does not clearly show the tense by the verb form. This is different from Japanese, where the past tense is distinctly shown using the letter “ta.” In Chinese and English, a single verb may have both, a transitive verb usage and an intransitive verb usage. Example: “kai shi” (commence).	Japanese has different verbs for transitive verb usage and intransitive verb usage. Example: “hajimaru” (hajimaru = commence) vs. “hajimeru” (hajimeru = to commence)
3. Compound words	Extensively used. Play a major role in everyday conversations. Example: “yi ru fan zhang” (as easy as turning over the palm of one’s hand).	Not extensively used. A component not even present in the Japanese Language Proficiency Test.
4. Particles	Case can be adequately shown by just the word order.	Case is shown by particles, and the word order can be freely changed. Helpful when making paragraphs, together with nouns and words, or showing the relationship between words and lending meaning to words.
5. Word order	SVO (subject-verb-object)-the word order is the only clue to the subject and object. Example: “wo chi fan” (I eat food), “wo” (I: subject), “chi” (eat: verb), “fan” (food: object).	SOV (subject-object-verb). Example: “watashi” (I: subject), ha “go han” (food: object), wo “taberu” (eat: verb).
6. Honorifics	Honorific expressions that are as complex as those in the Japanese language are not seen.	Japanese has three honorific styles: sonkeigo, kensongo, and teineigo.
7. Auxiliary verbs	An item not in the Chinese Language Proficiency Test.	Many auxiliary verbs clarify the sentence structure. In modern Japanese, passive expressions are gradually increasing.
8. Functional words	Chinese is an aptotic language, and functional words are also few in number.	Japanese has many functional words.

**Table 2** Grammar items common to Chinese and Japanese (common items)

	Chinese	Japanese
1. Adverbs	Modifies a verb Example: “ <u>yi bu yi bu di zo</u> ” (It walks to the step by step.)	Modifies a verb Example: “ <u>tekuteku aruku</u> ” (It walks ploddingly.)
2. Nouns	Nouns do not decline. No case category exists as grammatical form of inflexions. Example: inflected by number.	Nouns do not decline. No case category exists as grammatical form of inflexions. Example: inflected by number.

in each category, and six points for each category. Each multiple-choice question had four answer options. The composition of the Chinese grammar test and Japanese grammar test was further evaluated in detail; grammar items characteristic to either one of the two languages, “uncommon items,” are given in Table 1, and items common to both languages, “common items,” are given in Table<sup>2</sup>.

### 3.4 Procedure

First, the native high school students were given either the Chinese grammar test or the Japanese grammar test. Each test was conducted in a single session in a schoolroom. The allotted time was approximately 40 minutes. Next, the two grammar tests were distributed to Taiwanese high school students living in Japan, and were to be completed in about 40 minutes—the normal duration of one school period. Students who had already finished the tests were requested to cooperate by not disclosing the contents to students who were yet to take the tests.

## 4. Results

The average scores of each of the grammar tests were calculated and analyzed. The grammar tests had six grammar categories, each comprising six questions amounting to six points for each category, and amounting to thirty-six points in total. The group residing in Japan (hereafter, also referred to as the “resident group”) consisted of twelve Taiwanese students living in Japan and with Chinese as the native language and Japanese as the second language.

### 4.1 Grammar rule errors

Grammar sub-items of each language were divided into “uncommon items” (grammar items characteristic to only one language) and “common items” (grammar items common to both languages). The average scores were calculated and compared with those of the control group. The average scores and the standard deviation for each of the “uncommon items” and “common items” are shown in Table 3.

First, the uncommon items were examined. A correct answer for each of the six questions was given one point each. The score was taken as the total of the points

obtained. A t-test was conducted for the grammar scores of the two groups: the “resident group” comprising Taiwanese children living in Japan and the “control group” comprising native speakers of Chinese or Japanese. The results were as follows: a difference was seen at the level of 1% in the scores for “tones,” “verbs,” and “compound words” of the Chinese language (two-sided test:  $t(110) = 7.99$ ;  $t(110) = 5.60$ ; and  $t(110) = 14.26$ ). A difference was seen at the 1% level in the scores for “honorifics,” “particles,” “verbs,” “auxiliary verbs,” and “functional words” of the Japanese language (two-sided test:  $t(88) = 3.01$ ;  $t(88) = 8.72$ ;  $t(88) = 3.58$ ;  $t(88) = 7.68$ ; and  $t(88) = 4.44$ ). No difference was observed for the “word order” of the Chinese language (two-sided test:  $t(110) = 1.37$ , *n.s.*). Thus, it was observed that in the case of “uncommon items” characteristic to only one language, Taiwanese children living in Japan had a lower degree of acquisition for “tones,” “verbs,” and “compound words” of the Chinese language compared to native Chinese speakers. An exception was “word order.” The degree of acquisition was also lower in these resident children when it came to “particles,” “verbs,” “honorifics,” “auxiliary verbs,” and “functional words” of the Japanese language, compared to native Japanese speakers. Therefore, the degree of acquisition is lower in the resident group for all uncommon items except “word order.”

Next, the common items were evaluated. One point was assigned for each correct answer for each of the six questions, and again, the total points obtained were considered to be the score. A t-test was conducted for the grammar scores of the two groups: the “resident group” comprising Taiwanese children living in Japan and the “control group” comprising native speakers of Chinese or Japanese. The results were as follows. No difference was observed in the scores for “adverbs” and “nouns” of the Chinese language (two-sided test:  $t(110) = 1.95$ , *n.s.*;  $t(110) = 1.53$ , *n.s.*) and in the scores for “adverbs” of the Japanese language (two-sided test:  $t(88) = 2.03$ , *n.s.*); therefore, the degree of acquisition of “adverbs” and “nouns”-grammar items common to both languages—is considered to be the same in Taiwanese children living in Japan and native students of the same school grade. Thus, there was no difference between the resident group and the control group when it came to items common to both languages. The degree of

**Table 3** Average grammar item scores of resident group and control group and t-values (standard deviation shown within brackets)

	Grammar rules	Resident group	Control group	t-value	Significance probability <i>p</i>
		Average (standard deviation)			
Uncommon	Tones (Chinese)	4.0 (1.3)	5.8 (0.6)	-8.29	0.00**
	Verbs (Chinese)	4.0 (1.3)	5.3 (1.1)	-4.00	0.00**
	Compound words (Chinese)	3.0 (1.0)	5.7 (0.8)	-11.15	0.00**
	Word order (Chinese)	5.4 (0.7)	5.8 (0.6)	-1.84	0.07
	Honorifics (Japanese)	4.8 (0.8)	5.6 (0.7)	-3.28	0.00**
	Particles (Japanese)	4.0 (0.7)	5.9 (0.4)	-13.85	0.00**
	Verbs (Japanese)	4.6 (0.7)	5.5 (0.9)	-3.41	0.00**
	Auxiliary verbs (Japanese)	4.0 (0.7)	5.7 (0.7)	-8.06	0.00**
	Functional words (Japanese)	5.0 (0.6)	5.8 (0.6)	-4.74	0.00**
Common	Adverbs (Chinese)	5.7 (0.5)	5.9 (0.5)	-1.62	0.11
	Adverbs (Japanese)	5.8 (0.4)	6.0 (0.3)	-1.52	0.13
	Nouns (Chinese)	5.1 (0.8)	5.4 (1.0)	-0.91	0.36

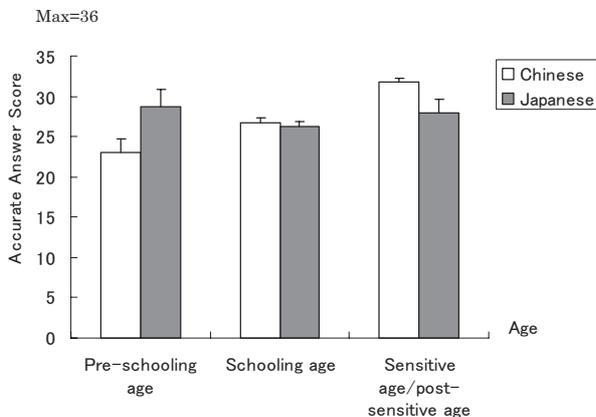
Notes: Parentheses in the grammar rule items indicate the grammar test type \*\* $p < .01$

acquisition was also the same.

#### 4.2 Relationship between the starting age of second-language learning and grammatical competence in the two languages

The students were divided into three groups based on the age at which they started learning the second language: the pre-schooling age group (those aged 7 years or younger; hereafter referred to as the PS group), schooling-age group (those aged 7-10; hereafter referred to as the SA group), and sensitive age/post-sensitive age group (those aged 11 years or older; hereafter referred to as the SAPS group). Then, the relationship between this age and the grammatical competence of the two languages was examined. An analysis of variance was conducted for the three starting age groups against the two (Chinese and Japanese) grammatical competences. The first factor was a between-subjects factor, and the second a within-subject factor. The average accurate answer scores are shown in Fig. 1.

The results showed a significant interaction between



**Figure 1** Accurate answer score for grammatical competence in the two languages in each age group

the starting age and the grammatical competence scores ( $F(2,9) = 85.36, p < .01$ ). The main effect of the starting age was significant ( $F(2, 9) = 14.61, p < .01$ ), and the SAPS group had better scores (at the 5% level) than the PS and SA groups. With regard to the grammatical competence level of the Chinese language relating to the starting age, Tukey's multiple comparison showed that the SAPS group had significantly higher scores than the PS group and the SA group (both  $p < .05$ ). A significant difference could not be observed in the grammatical competence levels of the Japanese language influenced by the starting age, between the SAPS group, the PS group, and the SA group. Therefore, acquiring and maintaining grammatical competence in the two languages was easier for the SAPS group. Further, it was found that the higher the starting age, the easier it was to maintain Chinese grammatical competence and that the starting age did not have any correlation when it came to acquiring Japanese language grammatical competence.

#### 4.3 Starting age of second-language learning and grammatical competence error patterns for the two languages

The students were divided into three groups based on the age at which they started learning the second language: the PS group (aged 7 or younger), SA group (aged 7-10), and the SAPS group (aged 11 or older). Then, the relationship between each age group and scores on the different grammar items of the two languages was examined. An analysis of variance was conducted for the three starting age groups against the six grammar items. The first factor was a between-subjects factor, and the second a within-subject factor.

First, a variance analysis of the starting ages (3) against the grammar items (6) for Chinese language grammatical competence showed a significant

interaction ( $F(10,45) = 3.24, p < .01$ ). The main effect of grammar items was significant ( $F(5,45) = 30.85, p < .01$ ), and so was the main effect of age ( $F(2,9) = 74.20, p < .01$ ). A low-order test showed significant differences in scores for “tones,” “verbs,” “nouns,” and “adverbs” ( $F(2,9) = 17.59, p < .01$ ;  $F(2,9) = 40.5, p < .01$ ;  $F(2,9) = 12.17, p < .01$ ; and  $F(2,9) = 10.50, p < .01$ , respectively). There were no significant differences in the scores for “compound words” and “word order” ( $F(2,9) = 3.06, n.s.$  and  $F(2,9) = 3.06, n.s.$ , respectively). Multiple comparisons showed that for “tones,” the SAPS group (aged 11 and older) had better scores (at a 5% standard) than the PS group (aged 7 or younger) and the SA group (aged 7-10). For “verbs,” the SAPS group (aged 11 and older) had better scores (at a 5% standard) than the PS group (aged 7 or younger) and the SA group (aged 7-10), and the SA group (aged 7-10) had better scores than the PS group (aged 7 or younger). For “nouns,” the SAPS group (aged 11 and older) had better scores (at a 5% standard) than the PS group (aged 7 or younger) and the SA group (aged 7-10). For “adverbs,” the SAPS group (aged 11 and older) had better scores (at a 5% standard) than the SA group (aged 7-10), and the SA group (aged 7-10) had better scores (at a 5% standard) than the PS group (aged 7 or younger). Therefore, it was found that for “tones,” “verbs,” “nouns,” and “adverbs,” the higher the starting age, the easier it was to maintain the ability, and for “compound words” and “word order,” the starting age did not have any correlation.

Next, a variance analysis was conducted for the starting ages for learning the second language (3) against the grammar items for evaluating the Japanese language grammatical competence (6). The results showed that the main effect of age was not significant ( $F(2,9) = 3.04, n.s.$ ). The interaction between accurate score points and age was also not significant ( $F(10,45) = 0.27, n.s.$ ). Therefore, the starting age was not found to have any correlation with the acquisition of grammatical competence in the Japanese language.

## 5. Discussion

The present study examined how diversity in language systems influences the acquisition of both the Japanese and Chinese languages. In addition to evaluating, from a grammatical perspective, how language systems affect the Chinese language maintenance and Japanese language acquisition by students of both languages, the aspect of their age when they begin second-language learning was also addressed.

The language system diversities affected the degree of acquisition of the Chinese and Japanese languages by students studying both languages. “Adverbs” and “nouns” were found to be easier to learn, while errors

easily occurred in the acquisition of grammatical competence regarding “tones,” “verbs,” and “compound words” of the Chinese language (except “word order”) and “particles,” “verbs,” “honorifics,” and “functional words” of the Japanese language. In the case of grammar rules, this seems to show that parts that are common to the two languages are easily acquired and that the acquisition of items that are uncommon (except “word order”) is difficult. This finding coincides with the study by Feng (1993, 1994), who found that many errors occurred in items that differed from the Chinese language as compared to items that were common. In contrast to the Japanese language, which has transitive and intransitive verbs, the Chinese language does not have verb conjugations and verbs can act as the subject or object in their original form. Therefore, the correct use of transitive and intransitive verbs may be difficult for Chinese people studying Japanese. In addition, Chinese is an isolated language and does not have particles that show case relations within sentences. Thus, the use of particles in the Japanese language is presumed to be difficult for Chinese native speakers learning Japanese. Similar to Ishida’s (1986) finding that particles and transitive and intransitive verbs were difficult for the Chinese group in his study, which evaluated the Japanese ability of subjects from English-, Chinese-, and Korean-speaking countries, the native language appears to have an influence. Another presumably difficult point for Japanese-learners is honorific expressions because the Chinese language does not have honorific expressions as complex as those found in the Japanese language.

The relationship between the age at which second-language learning was started and the acquisition of the grammar rules of the two languages was then examined. It was seen that for “tones,” “verbs,” “nouns,” and “adverbs” of the Chinese language, the higher the starting age, the easier it was to maintain the correct usage ability; further, the starting age made no difference for “compound words” and “word order.” Because Chinese is a tonal language in which each pronunciation has a rise or fall, memorizing the tones (four tones) is essential whenever one learns a new word. These tones are important elements in communication. When the age of migration to Japan was lower, the results suggested that even if the student had immersion education, the maintenance of “tones” was difficult. This is presumed to be so because such children are placed in a Japanese environment and exposed to abundant Japanese sounds, whereas sound inputs of Chinese accents are not as adequate as Japanese accents. Furthermore, for the students who came to Japan before the age of 7 (pre-schooling age group), the development of phonological tones may be difficult even if they memorize new words thereafter, because their native

vocabulary is limited.

In addition, regardless of the age of migration to Japan, it was found that the Chinese “word order” was maintained. This finding coincides with that of Newport (1990), who found that the English word order is easily acquirable, regardless of the age of migration to America. The Newport (1990) study on the fluency of the English language in people whose mother tongue was Chinese or Korean showed no difference between the two groups. Chinese and English have a similar word order, whereas Korean has an (subject-object-verb (SOV)) order that is different from the (subject-verb-object (SVO)) order of English. Thus, the word order of the language that one studies is presumed to be easily acquirable regardless of the word structure of one’s native language. Chinese and Japanese also have different word orders, but the present study showed that it was easier for the students to learn the “word order” than learn the other grammar rules. This is considered to be so because when one learns a new language, one uses “word order” as a clue to learning the target language before using other grammar rules. Thus, word order is one of the rules learned at the onset.

In addition, it was also found that regardless of the age of migration to Japan, “compound words” (similar to proverbs and four-letter idioms) had the lowest scores. Compound words have vivid meanings derived from within the cultural context and in which culture specific story-like and metaphoric aspects have all been condensed. Therefore, understanding the meaning of the compound words and using them must be difficult for students who migrated to Japan in their early growing years. Furthermore, even the knowledge of compound words one has heard, often in the native language, may very likely become attenuated because opportunities to come into contact with and use them have decreased.

Fluctuations in the degree of acquisition of grammatical aspects can be seen in students learning both languages depending on the age when they started to learn the second language. As an overall tendency, it was easiest for the sensitive age/post-sensitive age group (aged 11 and older) to acquire and maintain the second language. There seems to be little doubt that this is because those students who migrated to Japan at a later age have maintained their Chinese grammatical competence because they had been living in their native country for a greater number of years. However, the acquisition of Japanese grammatical competence did not show a correlation with the starting age. Even though the students in the sensitive age/post-sensitive age group (aged 11 and older) had been living in Japan for the least number of years compared to the students in the other two groups, they showed a degree of acquisition similar to that of the other groups. From this, it

can be postulated that because older students can easily maintain their native language capabilities, the native language plays a positive role in the acquisition of the second language. These results revealed that the differences in the Japanese and Chinese language systems do indeed influence the acquisition of the second language. It was also found that the level of acquisition of the second language was higher in older students. However, apart from language system factors, the influence of environmental factors on the acquisition of the second language remains to be determined.

## Notes

- 1 The test items were chosen as follows: The sources of questions in the Japanese grammar test were the question items selected from the first and second levels of the Japanese Language Proficiency Tests conducted from 1996 to 2000, and the sources of questions in the Chinese grammar test were the question items selected from the first and second levels of the Chinese Language Proficiency Tests conducted from 1996 to 2000.
- 2 The classification of the common and uncommon items of the Chinese language and the Japanese language was based on “Chukugo to Nihongo” (Chinese and Japanese), 1974, Mochitsuki Yasokichi, Tokyo Koseikan; and “Nihongo no Katachi-Taishougengogaku kara no Approachi (Forms of the Japanese Language - From a Comparative Linguistic Approach), 1998, Yamanaka Keiichi, Tokyo University Press, pp. 45-95.
- 3 Chinese is a tonal language. In other words, because there is a high or low accent for each syllable, each pronunciation has a rise or fall depending on pitch movement within the syllables. Therefore, one cannot become proficient in Chinese without properly learning and practicing the four tones.
- 4 Chinese is generally considered to be a typical isolated language. There is nothing that indicates the relationship between words, which is only expressed by the word order within the sentence and not by the words themselves. Each of the words in a sentence is in isolation.

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