

A Longitudinal Research of the Environmental Factors Affecting Chinese and Japanese Language Acquisition

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Abstract

This paper charts the results of a five-year longitudinal study of the environmental factors affecting bilingualism. Our study focuses on the language acquisition process of Taiwanese students who were raised in bilingual Chinese and Japanese environments; in it, a language vocabulary proficiency test and a questionnaire on language environment were administered, in order to examine the correlation between environmental consciousness and language proficiency. Changes in bilingual proficiency were found to bear a relation to factors such as “learning motivation,” “life course,” and “frequency of contact with the two languages in daily life and with peers.” The results show that that factors of environmental consciousness such as motivation, or the contact frequency of learners who made progress in both languages, changes positively when their language proficiency progresses, and when their grades go up. The results also suggest that long-term goals, such as “motivation,” “attitude,” and “the country where one gets higher education” significant influence on language proficiency.

Key words: Bilingualism, longitudinal research, Chinese and Japanese languages acquisition, vocabulary proficiency, investigation of environment.

Introduction

As globalization gains momentum and the world becomes more closely connected, bilingualism has become a prominent part of our daily lives. A growing body of research has already been dedicated to the issue of second language acquisition; a 1997 survey by the Ministry of Culture, Science, and Education on the necessity of Japanese language education for the children and students of foreigners found that the majority (70%) of non-Japanese students spoke Chinese as their mother tongue. However, since many Japanese learn English and other European languages (Yoshioka, 1999), the existing research on Chinese and Japanese bilingualism is limited, even though the number of native Chinese speakers learning Japanese as a second language is on the rise (Lee, 2003).

The environmental factors that influence language acquisition in children include the guidance of teachers and parents, issues regarding children’s personal development, and the language environment of one’s home and school. Understanding precisely how these factors affect the language learning process is critical to the question of whether limited exposure during childhood is sufficient to foster bilingualism, as well as questions regarding the main influences on language acquisition. The raising of a bilingual child involves

several complex and interrelated factors, including the social, family, and school environment. Setting aside individual factors, Landry and Allard (1992) have offered a “macroscopic model” for theoretically understanding the influence of environmental factors on second language development. Their model describes the mutual effects of sociological and socio-psychological environmental factors, as well as individual factors at the psychological level. They argue that the dominance of the mother tongue (L1) or the second language (L2) is determined by the relationships between individual and society. For the children of Taiwanese parents living in Japan, Japanese society seems to be homogeneous, as socially it is largely monolingual, and in terms of cultural background, is monolithic. One might speculate that in addition to the country, governmental, and societal “macro” policies discussed by Landry and Allard, family and living environment also affect second language acquisition. Thus, this paper focuses on the children of Taiwanese living in Japan who participate in Chinese and Japanese immersion education, and examines how family and environmental factors affect second language learning. At the same time, our study holds constant those factors that are related to the educational environment.

Landry and Allard’s study (1992) used a language environment questionnaire based on macro social-psychological level influences and individual psychological level influences to explain the distinctive second language

acquisition characteristics of the children of Taiwanese parents in Japan, as well as the features of their surrounding environment. They take into detailed consideration the background social factors and conditions that are important for children when becoming Japanese-Chinese bilinguals.

Previous Research

Previous research on the factors influencing bilingualism has largely been limited and has considered only the cases of children at the age when they enter school (Johnson & Newport, 1989; Uchida, 1997, 1999; Cummins & Nakajima, 1985; McLaurghlin, 1984, 1985; Lee, 2001), their attitude towards learning (Hermann, 1980), motives (Strong, 1984), learning environment (Brown, 1983), parents (Feenstra, 1969), friends (Elias-Olivares, 1976), and racial minority consciousness (Genesee, 1983). There is very little in-depth research considering these diverse factors in combination. A study by Harly and Wang (1997) revealed that pronunciation-learning ability does not necessarily decay in adults. They showed that environmental differences influence the ease of learning and that it cannot be said simply that youth is always advantageous. Learning environment, rather than age, is the decisive factor (Singleton & Lengyel, 1995; Romaine, 1995). The process of second-language learning is connected in a complex way to factors relating to the individual learner and the surrounding socio-cultural environment, including the goal of learning, motives, attitude, and personality (Yorio, 1976; Brown, 1994). However, not enough attention has been paid to what these types of factors entail, or to the possible relationships or interactions among them. What's more, few studies consider both the Chinese and Japanese language.

For these reasons, it is necessary to investigate the role of the language environment in second language acquisition in greater detail. Examining lessons, motives, frequency of language use, everyday life, personality, identity, and parents' educational attainment and economic circumstances can deepen our understanding of the particulars of second language acquisition. As second language acquisition is fluid and dynamic, and language experiences are variable, it is essential that we consider a variety of theories regarding different processes of acquisition to account for changes in the process observed over long periods of time. Longitudinal research includes studies of degrees of language acquisition for French speakers learning Japanese over one year (Ishida, 1991), the acquisition process of Japanese particles (o, ni, de, e) of two native English speakers learning Japanese at the beginner level for over 22 months (Kubota, 1994), and a longitudinal survey carried out over six months on the developmental sequence of

forms of negation in Japanese (Lemura, 2001). Furthermore, Hakuta (1976) has traced the English language acquisition process for five year-old children over the course of a year, and Uchida (1997; 1999) followed the same process in infants and children, making repeated observations over a ten-month period. Cummins and Nakajima (1985)'s long-term investigation of the Japanese and English abilities of Japanese children attending after-school classes in Toronto revealed a connection between language ability and environment by taking into account the parent's role and language environment. Although research does exist that examines the process of Japanese and English acquisition and the relationship between childhood language acquisition and the language environment, little work has been done on the adolescent years, during which when the language environment can easily change and choices about the future and higher education are made. Moreover, there is little research on the language environment of Chinese and Japanese bilinguals or research examining such cases over a long period of time. It is therefore necessary to carry out a detailed, long-term investigation of the bilingual Japanese-Chinese language abilities of adolescents, and how they are affected by changes in the language environment.

In order to study Chinese and Japanese bilingualism, it is first necessary to establish a framework that measures ability. Bilingual speakers can be broadly classified into three categories, based on their degree of dual language attainment (Cummins, 1978): (1) a positive outcome, as when the intellectual development of both languages has kept in pace with aging, (2) a neutral outcome, as when the development of one language has proceeded at pace with aging while the other has faltered, and (3) a negative outcome, as when the development of neither language has kept pace with aging. To apply this typology to children, it is necessary to assess their skills in both languages and investigate their developmental conditions, including their environment and its relationship to second language and intellectual development.

In this paper, vocabulary ability will be taken as representative of general language ability (Ono & Hayashibe, 1989). Using Lee's (2000) investigation of Chinese vocabulary ability, we will investigate the Chinese and Japanese language ability of Taiwanese girls brought up in a Chinese-Japanese bilingual environment. The relation between language ability and age was measured by calculating the standard deviation and average scores of each question, and constructing a standard measure from Chinese and Japanese vocabulary tests. Using this design, our work clarifies the process of achieving Chinese-Japanese bilingualism by examining second language acquisition in Taiwanese girls in a Chinese-Japanese bilingual environment.

Methods

Participants

This study focused on 12 students at K high school who were children of Taiwanese parents living in Japan. All were seniors with an average age of 19, and all were Chinese native speakers who spoke Japanese as a second language. Either one or both parents were born in Taiwan, and the students came to Japan between the ages of 1 and 14. All entered the same school and were exposed to the same immersive language classes. In this particular immersion program, some classroom teaching material was performed in Japanese, and some in Chinese, in order to best foster academic development alongside linguistic skill. Thus, the second language functioned not as a goal but as a means of learning. This is one form of bilingual education in which teaching materials are used to convey a second language to a monolingual student. Subjects of the immersion program were organized based on amount of class time. In this study, social science, math, history, and science were taught in Japanese and based on Japanese texts. Geography, art, literature, and home economics were taught in Chinese. Both teachers and students used the respective language of each class; half of the program's teachers were Japanese and half were Chinese. Classes were held 35 hours per week. Table 1 divides participants according to age when the participants first entered Japan, and according to the number of years they spent in Japan.

Table 1. Age at Arrival in Japan, Length of Stay, and Number of Participants

Age at arrival (years)	1	3	5	6	7	10	12	13	14
Length of stay (years)	18	16	14	13	12	8	7	6	5
Number of participants	2	1	1	1	2	1	1	1	2

Teaching materials

A questionnaire with three sections was used to assess language ability. Chinese language ability was measured by testing Chinese vocabulary (Lee, 2000), Japanese

language ability was measured by testing Japanese vocabulary (Ono & Hayashibe, 1989), and a series of questions was asked regarding the language environment (Lee, 2003). The interview consisted of 58 items on environmental factors and 18 items that asked students to evaluate their own second language ability.

Procedure

The survey was carried out four times. The grade level of students at the time of the survey is indicated in Table 2. Chinese and Japanese vocabulary tests were each limited to 40 minutes. After the second round, the survey of language environment was introduced, and was not timed. During this one-on-one interview, the investigator examined the students' degree of language comprehension and competence in conversational Chinese and Japanese. The entire process took slightly less than 3 hours. An interview was also conducted after the fourth round in order to assess changes. In addition, competence in the Japanese language before coming to Japan, the frequency of use of both languages, and the attitude (positive or negative) regarding each language group (Chinese-dominant or Japanese-dominant) was assessed.

Results and Discussion

Changes in Chinese and Japanese language ability and consciousness of the language-learning environment were investigated in order to assess the influence of the language environment on language ability.

First, focusing on the circumstances surrounding the language acquisition process, changes in language ability and environmental consciousness were investigated over a five-year period. The participants were divided into three groups based on their levels of second-language development (Cummins, 1978). Table 3 shows the characteristics of changes in language ability according to these three groups.

The trends of shifts in second language ability and the consciousness of language environment for Type I, Type II, and Type III are displayed on Tables 4, 5, and 6. The transition diagrams indicate the direction of change of

Table 2. Round, School Grade, and Content of Survey

Round	School grade at the time of survey	Content of survey
1	7 th grade	① Chinese vocabulary test ② Japanese vocabulary test ③ Family questionnaire (10 items)
2	10 th grade	① Chinese vocabulary test ② Japanese vocabulary test ③ Language environment questionnaire (76 items)
3	11 th grade	① Chinese vocabulary test ② Japanese vocabulary test ③ Language environment questionnaire (76 items)
4	12 th grade	① Chinese vocabulary test ② Japanese vocabulary test ③ Language environment questionnaire (76 items), interview

Table 3. Type of Change in Bilingual Ability

Type	Characteristics of change	Raw numbers (percentage total)	Age at Arrival
I	Progress in both languages: both Chinese and Japanese language ability increased with age	5 (42%)	5,7,12,14, 14
II	Progress in only one language: Japanese language ability increased while Chinese language ability decreased or remained constant	4 (33%)	1,3,6,10
III	Decrease in both languages: Both Chinese and Japanese language ability decreased with age	3(25%)	1,7,13

each case at each round of the investigation. A suitable vocabulary score for each school level was used in each survey. The control group was based on standardized scores of bilingual ability measured by vocabulary use.

Type I “Progress in Both Languages”

Table 4 presents the changes in items concerning bilingual ability and consciousness of language environment for Type I Cases.

Table 4. Type I (Progress in Both Languages) Change in Bilingual Ability and Consciousness of Language Environment

Change in bilingual ability	Changed items on language environment questionnaire over time
Explanation	Language environment category: (answer in 10 th grade → answer in 11 th grade → answer in 12 th grade)
Case 1 Age at arrival: 5 years Identity: Taiwanese	1. Motivation: “I want to become good at Chinese” (strongly agree → somewhat agree → strongly agree) 2. Life course: “I will attend a Japanese college” (can’t say → somewhat agree → don’t agree) 3. Life course: “I will attend a Taiwanese college” (somewhat agree → somewhat agree → strongly agree)
Case 2 Age at arrival in Japan: 7 years Identity: Taiwanese	1. Motivation: “I want to become good at Chinese” (can’t say → somewhat agree → somewhat agree) 2. Motivation: “I want to become good at Japanese” (can’t say → strongly agree → strongly agree) 3. Life course: “I will attend a Japanese college” (can’t say → strongly agree → strongly agree) 4. Frequency of bilingual contact and use: “I read books in Chinese” (regularly → not really → not really)
Case 3 Age at arrival: 12 years Identity: Taiwanese	1. Life course: “I want to attend a Japanese college” (somewhat agree → strongly agree → strongly agree) 2. Frequency of bilingual contact and use: “I play with Japanese friends” (sometimes → sometimes → often)
Case 4 Age at arrival: 14 years Identity: Taiwanese	1. Frequency of bilingual contact and use: “I play with Japanese friends” (not really → often → often)
Case 5 Age at arrival: 14 years Identity: Taiwanese	1. Frequency of bilingual contact and use: “I play with Japanese friends” (sometimes → sometimes → often) 2. Frequency of bilingual contact and use: “I play with Chinese friends” (often → regularly → regularly)

In the five examples above, an overall increase in second language ability was seen in accordance with the number of years lived in Japan. Those who came to Japan at the age of 12 or above (Cases 3 to 5) show a higher level of bilingual development than Cases 1 and 2, who came to Japan at age 5 and 7. Thus, the consciousness of language environment for older participants is characterized not by the age of arrival, but rather by the opportunity to come into contact with

Japanese people and actively make Japanese friends, as well as by the strong desire to attend a Japanese college. In general, change in bilingual ability is related to “motivation to learn”, “life course”, and “frequency of bilingual contact and friendships in everyday life”. Furthermore, when language ability increases, changes in environmental factors tend to move in a positive direction. For example, in Case 1, although Japanese language ability corresponds to school age, Chinese ability

has, overall, not developed in accordance with increased age; the student's Chinese vocabulary level dropped from the tenth to eleventh grade. However, there was an increase in Chinese ability from the eleventh to twelfth grade. What might such a rapid increase in scores indicate about changes in the student's consciousness of his or her language environment?

The student in Case 1 did not take part in extracurricular lessons. However, when she decided to attend a Taiwanese college in the tenth grade, she began studying Chinese independently. She had previously used Chinese and Japanese at school and at home relatively equally; however, from the eleventh grade on, she played more often with Chinese friends and participated more actively in Chinese groups. Her Chinese language development is connected to her goal of attending a Taiwanese college, and her hopes of eventually living in Taiwan. Although her ability in Chinese has not yet matched her age level, she is an example of a case in which language ability has developed based on a strong will to improve. Regarding the desire to study at a Taiwanese college, she said in her interview, "Because I am Taiwanese, I came to think that sooner or later I would return to Taiwan. And, when I faced the turning point of entering college, I decided to go to a Taiwanese college and to live in Taiwan." The above example shows that for Case 1, environmental factors (family, school, society) are related to Japanese language acquisition, and that individual factors exert the most significant influence over Chinese language acquisition. What's more, there is some difficulty in depending solely on schools for the preservation of the first language (Chinese). Individual

factors are especially important in this area. For cases like this one, namely ones in which students began second language education at a younger age, the rate of second language acquisition is greater than the preservation of the first language (Chinese). However, if one's motivation is strong, it is possible to continue to make progress in the first language as well.

The student in Case 2 decided to attend a Japanese college, after which the desire "I want to become good at Japanese" became stronger than "I want to become good at Chinese". As a result, she stopped reading Chinese books and while her ability in Japanese improved, her Chinese language development slowed. Case 3 came to Japan at age 12 with her parents. As her Chinese language skills developed rapidly, she scored at a tenth grade level while only in the seventh grade. When her consciousness of her language environment was tested, the results revealed that she had a strong desire to improve her bilingual ability and maintained bilingual contacts. She said in her interview that she had a strong desire to master two languages and cultures. Her case reveals that when a firm foundation in the mother tongue exists, the strong desire to acquire a second language and a high frequency of contact can positively influence the course of Japanese language acquisition.

Type II "Progress in Japanese"

Table 5 presents the changes in items concerning bilingual ability and consciousness of language environment for Type II Cases.

Table 5. Type II (Japanese Language Development) Changes in Bilingual Ability and Consciousness of Language Environment

Case 6 Age at arrival: 1 year Identity: Japanese	1. Personality: "I like to read" (really into it → indifferent → indifferent) 2. Personal evaluation: "I understand classes in Chinese at school" (mostly → mostly → about half) 3. Personal evaluation: "I understand the content of teaching materials in Chinese" (mostly → mostly → about half)
Case 7 Age at arrival: 3 years Identity: Taiwanese	1. Attitude: "I like Taiwan" (very much → somewhat → somewhat) 2. Frequency of bilingual contact and use: "I play with Chinese friends" (often → often → regularly) 3. Frequency of bilingual contact and use: "I watch Chinese TV and videos" (sometimes → sometimes → not really) 4. Frequency of bilingual contact and use: "I read manga in Chinese" (regularly → regularly → not really)
Case 8 Age at arrival: 6 years Identity: Taiwanese → don't know → don't know	1. Motivation: "I want to become good at Chinese" (somewhat agree → strongly agree → strongly agree) 2. Life course: "I will attend a Taiwanese college" (can't say → don't know at all → don't know at all) 3. Frequency of bilingual contact and use: "I play with Japanese friends" (not really → sometimes → sometimes)
Case 9 Age at arrival: 10 Identity: don't know	1. Motivation: "I want to become good at Chinese" (somewhat agree → strongly agree → strongly agree) 2. Life course: "I will attend a Taiwanese college" (can't say → don't know → don't know) 3. Frequency of bilingual contact and use: "I play with Japanese friends" (not really → sometimes → sometimes)

The students in the above 4 cases came to Japan before the age of 11. The general trend across all four cases is for Japanese ability to increase, and Chinese ability to decrease or remain unchanged, as students grow older. Consciousness of language environment is marked by a greater importance placed on Japanese than Chinese, and a higher degree of contact with Japanese than with Chinese. Furthermore, the cases reveal an active or positive association with Japanese friends, and a reluctance to form Chinese friendships. According to the self-evaluations, the amount of time using Chinese was small and there was a low frequency of contact with the Chinese language in everyday life. Individual difference regarding identity is significant. For example, Case 6 said that she was Japanese although her parents are Taiwanese and hold Taiwanese citizenship. Furthermore, she stated that her desire to learn Japanese was stronger

than that to learn Chinese, that she had little sense of a critical need to study Chinese, and that personal effort in this area was lacking. These four cases of progress in only one language indicate that all were progressing in line with their age, except for the Japanese level of Case 9. Case 9's identity as Taiwanese was incomplete, but as she was not Japanese, she thus did not know who she was. In her interview, although she expressed a desire to improve her bilingual ability, she said that language was a mere tool, and that simply being able to converse was good enough.

Type III “Decrease in Both Languages”

Table 6 shows the change in items indicating bilingual ability and consciousness of language environment in Type III cases.

Table 6. Type III (Decrease in Both Languages) Changes in Bilingual Ability and Consciousness of Language Environment

<p>Case 10 Age at arrival: 1 year Identity: Japanese</p>	<ol style="list-style-type: none"> 1. Life course: “I want to live in Taiwan in the future” (somewhat agree → don’t know → don’t know at all) 2. Frequency of bilingual contact and use: “I play with Japanese friends” (sometimes → often → often) 3. Frequency of bilingual contact and use: “I watch Chinese TV and videos” (sometimes → not really → not at all) 4. Frequency of bilingual contact and use: “I read books in Chinese” (regularly → not at all → not at all)
<p>Case 11 Age at arrival: 7 years Identity: Japanese</p>	<ol style="list-style-type: none"> 1. Motivation: “I want to become good at Japanese” (strongly agree → somewhat agree → somewhat agree) 2. Life course: “I will attend a Japanese university” (strongly agree → can’t say → somewhat agree) 3. Self-evaluation: “I understand classes in Chinese at school” (not really → not at all → not at all)
<p>Case 12 Age at arrival: 13 years Identity: Taiwanese</p>	<ol style="list-style-type: none"> 1. Motivation: “I want to become good at Japanese” (strongly agree → somewhat agree → somewhat agree) 2. Motivation: “I want to become good at Chinese” (strongly agree → can’t say → can’t say) 3. Life course: “I want to attend college in Taiwan” (can’t say → don’t know at all → don’t know at all) 4. Frequency of bilingual contact and use: “I play with Japanese friends” (not really → regularly → sometimes) 5. Frequency of bilingual contact and use: “I play with Chinese friends” (often → often → regularly) 6. Frequency of bilingual contact and use: “I watch Chinese TV and videos” (often → regularly → regularly) 7. Frequency of bilingual contact and use: “I read books in Chinese” (often → often → sometimes)

The above three cases show a decrease in both Chinese and Japanese ability with increasing age. A decrease was found in “motivation to learn”, “frequency of language use”, and “frequency of bilingual contact in everyday life”, all of which are factors in language environment consciousness. In Case 12, a temporary increase in bilingual ability was found in the tenth grade, but was followed by a decrease. Her interview revealed a change in language attitude towards feeling that studying wasn’t important, as long as she could carry on everyday conversations smoothly. The above results indicate that students with a change in language ability also demonstrate a change in consciousness of language

environment. Type I cases included a large number of students who came to Japan by age 11. Many of the Type II cases had come to Japan before the age of 7. Among the students who came to Japan between 7 and 10 years of age, there was a great deal of individual variation in changes of environmental consciousness and the type of growth in bilingual ability. Moreover, a connection was revealed on the whole between changes in bilingual ability and one’s “motivation to learn”, “life course”, and “frequency of bilingual contact and friendships in everyday life”. Therefore, changes in environmental consciousness during times of strong or weak language ability in Chinese and/or Japanese are

connected to problems with friendships and one's course in life.

In Type I cases, when language ability improves, positive changes in environmental factors occur. However, for those showing a decrease in bilingualism, negative changes in environmental factors occur. Students improving only in Japanese show a decrease in their frequency of contact with and desire to maintain ability in the Chinese language. According to schools using immersion education methods, for bilingualism to develop in correspondence with to school age, the students themselves must have a strong desire to learn and have a high frequency of contact with and use of both languages. Japanese language learning is dependent on and influenced by frequent contact with the surrounding Japanese environment. Relying only on the school environment for preserving Chinese may present difficulties.

Discussion

In this study, a longitudinal investigation of bilingual language acquisition was performed with a group of students over four points in time, between the seventh and twelfth grades. The relationship between changes in environmental consciousness and fluctuations in Chinese and Japanese language ability was also investigated. The results indicate that the degree of language development differs based on changes in one's consciousness of her language environment. Changes in bilingual ability were connected to one's "motivation to learn", "life course", and "frequency of bilingual contact and friendships in everyday life". Students with increasing bilingual ability displayed positive changes in their environmental consciousness (particularly with respect to their desire to learn and frequency of contact with the language) when their language ability increased. However, students whose bilingual ability decreased displayed negative changes in environmental factors. Students whose Japanese abilities increased revealed a trend towards a lower frequency of contact with and reduced desire to preserve the Chinese language. However, some instances of improvement were noted, such as Case 1, whose ability in Chinese did not develop with age, but increased as a result of her decision to attend college in Taiwan. Thus, when a goal has been set, an increase in motivation may be accompanied by an increase in the study of and frequency of contact with the Chinese language. This suggests that language ability is strongly influenced by factors related to long-term goals such as "motivation", "attitude", and "life course". Given this fact, language education guidance that takes long-term goals into account may prove effective.

Furthermore, among those who showed an increase in bilingual ability, a large number of students came to

Japan at 11 years of age or after. Most who displayed an increase only in Japanese ability came to Japan before the age of 7. Among those who came to Japan between the ages of 7 and 10, we found a great deal of individual difference regarding changes in environmental consciousness and bilingual development. Thus, for bilingual acquisition, there may be benefits from starting school at an older age. Students who came to Japan before age 7 exhibited problems in maintaining their first language. They showed progress that increased with age only in their second language. All participants attended the same immersion classes, and shared the same goal of simultaneous bilingual development. Chinese language reading materials were available in the school libraries, and instruction policies took into account individual circumstances (such as the possibility of returning to Taiwan). For example, supplemental Chinese classes, such as an additional two hours of history and geography, were offered to students planning to attend Taiwanese colleges. Efforts were also made to promote Chinese at the school. These included several days each week dedicated to conversing only in Chinese. On the other hand, the importance of Japanese for students living in Japan was also recognized, and Japanese language instruction was also made available to students. Long term life plans were decided during guidance counseling for eleventh graders. During the twelfth grade, college entrance plans were completed, and supplementary classes were provided after school hours on an individual basis for weak students.

Making the shift to the Japanese language was easier for students who had come to Japan at an older age, and who had learned more Chinese in Taiwan. This was likely due to the fact they had learned a large number of written Chinese characters in Taiwanese. Almost 70 percent of Japanese vocabulary found in the dictionary is written with two Chinese characters (Yokosawa & Umeda 1988). There is thus little difference between Chinese and Japanese from the standpoint of vocabulary, and learning Japanese as a second language can go more smoothly for native Chinese speakers who have a firm grounding in their mother tongue. As mentioned above, in younger students who show development only in Japanese, it was found that that if one disregards the maintenance of his or her Chinese language abilities, language ability will strongly depend on extracurricular environmental factors. For this reason, since there are limited opportunities to use the Chinese language in broader Japanese society, it is critically important to establish individualized lessons, goals, efforts, and motivations in order to maintain and improve one's Chinese. Changes in vocabulary depend on age; however, this is not absolutely decisive. There are remarkable differences in the bilingual abilities of two students who entered Japanese school at older ages. Although students

in Case 4 and Case 12 are the same age, the circumstances of their language development are quite different, with one showing development in both languages and the other a decrease in both languages. If age is a necessary condition, one can expect that bilingualism will proceed identically. But if the bilingual development in the two cases is absolutely different, opposing trends will be apparent. For those showing development in both languages, as age increases, there is an increase in use and frequency of contact with the two languages, as indicated by the “frequency of media contact” and “using (the relevant) language in the community”. Furthermore, the categories of desire and motives (such as motivation, attitude, and life course) exhibited a similar trend. Thus, different reasons exist for the changes in the bilingual development of those who progress in both languages, versus those who regress in both languages. For those who have shown development, when the desire to learn is strong, frequency of bilingual contact may be sufficient. However, for those whose ability in both languages is on the decline, there is often insufficient bilingual contact, and the desire to learn is weak. In addition, there was an instance of a clear difference between Case 2 and Case 11, both of who came to Japan at age 7, and were in the same grade. Thus, beyond age, consciousness of the language environment is an important factor determining bilingual language acquisition.

Everyday language ability and language learning ability were also investigated. The student in Case 12, whose ability in both languages decreased, said in her interview, “Now, just communicating in everyday conversation is good enough. I have not put in particular effort, since everyday conversations aren’t a problem”. Furthermore, a difference was found in the scores between the self-evaluations and language ability tests. One student gave an optimistic self-evaluation that was higher than the results of the objective language evaluation examination. As Cummins (1980) claims, “Everyday language ability precedes the ability to study languages”. Thus, student judgments of language ability using superficial fluency as a guide must be avoided. Strong motivation and sufficient contact with the language are necessary in order to acquire advanced language competency. Furthermore, an important factor influencing the desire to learn is whether or not students believe it to be sufficient merely to have the ability to meet daily needs.

This study has examined the factors influencing Chinese and Japanese bilingual language acquisition, particularly dual language usage and their connections. As a study of adaptation to a foreign culture and its connection to language learning, our findings are of practical educational use in the international context and for the development of a global understanding on bilingual language acquisition. Further research is

needed that goes beyond the study of the language environment to include gender and cultural differences in order to better understand the influence of political and social policies on individuals.

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