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## **The effects of the sociocultural context on heritage language literacy: Japanese–English bilingual children in Sydney**

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What factors support linguistic minority children in developing and maintaining literacy in their heritage languages (HLs)? Very few quantitative studies have explored the role of sociocultural factors, especially in the development and maintenance of HL literacy. This paper addresses this gap by examining how the sociocultural context affects general and specific aspects of Japanese literacy among school-age children of Japanese heritage living in Sydney. Specifically, it investigates the effects of society, community, and school on literacy development through three contrasting analyses: (1) Bilinguals vs. Monolinguals to examine the effects of the wider society; (2) Community bilinguals vs. Individual bilinguals to investigate the effects of community contact; and (3) Contact monolinguals (attending a full-time Japanese school in Sydney) vs. Non-contact monolinguals (in Japan) to study the effects of school. Free-style writing and a written test were used as data for the statistical analyses which highlight the characteristics of Japanese HL learners' literacy, and the need for mainstream support and appropriate teaching materials/methods. The results indicate that while the wider sociocultural context contributes significantly to HL literacy maintenance, community also plays an important role, and formal schooling in Japanese has the potential to override negative influences from the wider sociocultural context.

**Keywords:** heritage language; literacy; language maintenance; sociocultural context; Japanese; bilingual children

### **Introduction**

In a 'multicultural' nation such as Australia, where 3.15 million (15.8% of the population) speak languages other than English at home (DIC 2008), the issue of their children's heritage language (HL) maintenance has been a major concern for many linguistic minority parents, whether they stay in the country permanently or temporarily. This concern reflects the fact that language is closely related to culture, and that children's home language maintenance is essential not only for their linguistic development in the dominant societal language (Cohen 1975; Cummins 2000; Gale et al. 1981; Hamers and Blanc 2000; Juarez 1983; Skutnabb-Kangas 1990; Skutnabb-Kangas and Toukomaa 1976), but also for their emotional well-being and intellectual growth (Butcher 1995; Dodson 1983; Döpke 1992; Döpke, McNamara, and Quinn 1991; Harding and Riley 1986; Saunders 1991). Moreover, advanced HL

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proficiency is recognized as a valuable resource to the nation and its development an educational priority (e.g. Krashen 1998). However, numerous studies in Australia (e.g. Clyne and Kipp 1996) and elsewhere (e.g. Allen, Crago, and Pesco 2006; Kondo 1998; Okita 2002; Skutnabb-Kangas 1990; Yamamoto 2001) have documented the difficulty of developing and maintaining a minority language within the social realm of majority language dominance. Of special concern is the linguistic minority child's accelerated language shift to a majority language upon entering a majority language school (Pauwels 2005; Takeuchi 2006). Yet, few studies have investigated the process and extent of HL development during school years, and even fewer have focused on literacy (e.g. Butcher 1995; Caldas 2006; Cummins 1996; Nagaoka 1998).

The number of Japanese heritage children growing up in Australia has increased rapidly in recent years, and many Japanese parents are seriously concerned about their children's Japanese language maintenance. In spite of the high social prestige of Japanese as an important trade language, it is very susceptible to social pressure from the majority language, English. As a result, many children reach the stage where only passive comprehension and minimum production skills in Japanese are retained. Despite growing concern, this issue has received little attention. Few sociolinguistic, quantitative studies have been conducted on development and maintenance, or loss of accuracy in school-age Japanese-English bilinguals' Japanese as an HL in contact settings, and even fewer have focused on the written form of the language. Only in the last decade has the literacy of bilinguals begun to receive more attention (Gibbons and Ramirez 2004), and few systematic studies have been carried out on the long-term development or attrition of HL literacy amongst bilingual children.

It is now generally accepted that *literacy* should be defined 'not just as the multifaceted act of reading, writing, and thinking, but as constructing meaning from printed text within a sociocultural context' (Pérez 2004, 4). Many also agree that '[l]anguage and literacy development are social phenomena' (Howard 2004, 236). Thus, the acquisition of literacy requires acquisition of the social and cultural norms and practices that surround literacy. Studies of literacy must consider sociocultural contexts of literacy; the approach adopted in this study takes this into account.

Studies of linguistic minorities generally point out that of all language skills, writing seems to suffer most in the process of language loss, since it is one of the least required skills in their daily lives, and it would need constant use or training for its maintenance (Butcher 1995; Clyne et al. 1997; Nagaoka 1998; Noguchi 1998; Smolicz and Secombe 1985). In other words, writing is more likely to show signs of language deterioration due to the lack or inaccessibility of register caused by the complete or long-term absence in use. This may be especially true of Japanese writing, which involves two types of syllabic alphabets (*kana*) and a large number of complex ideographic characters (*kanji*). Japanese literacy, however, is an important asset for a person 'to be regarded as an educated member of Japanese society' (Hatano 1995, 255), and the Japanese script is an essential part of Japanese culture whose aesthetic nature is appreciated by widely practiced calligraphy. Thus, Japanese literacy is highly valued even in Japanese communities outside Japan, and its development and maintenance for the second generation has been a major concern for these communities. Importantly, literacy has been identified as important in safeguarding long-lasting lexical retention (Cohen 1989; Olshtain 1989), and in providing a strong base for general language development and maintenance (Butcher 1995; Rado 1991; Smolicz 1983; Spolsky 2004). This is particularly relevant to Japanese, as a higher level of language proficiency is achieved along with the mastery

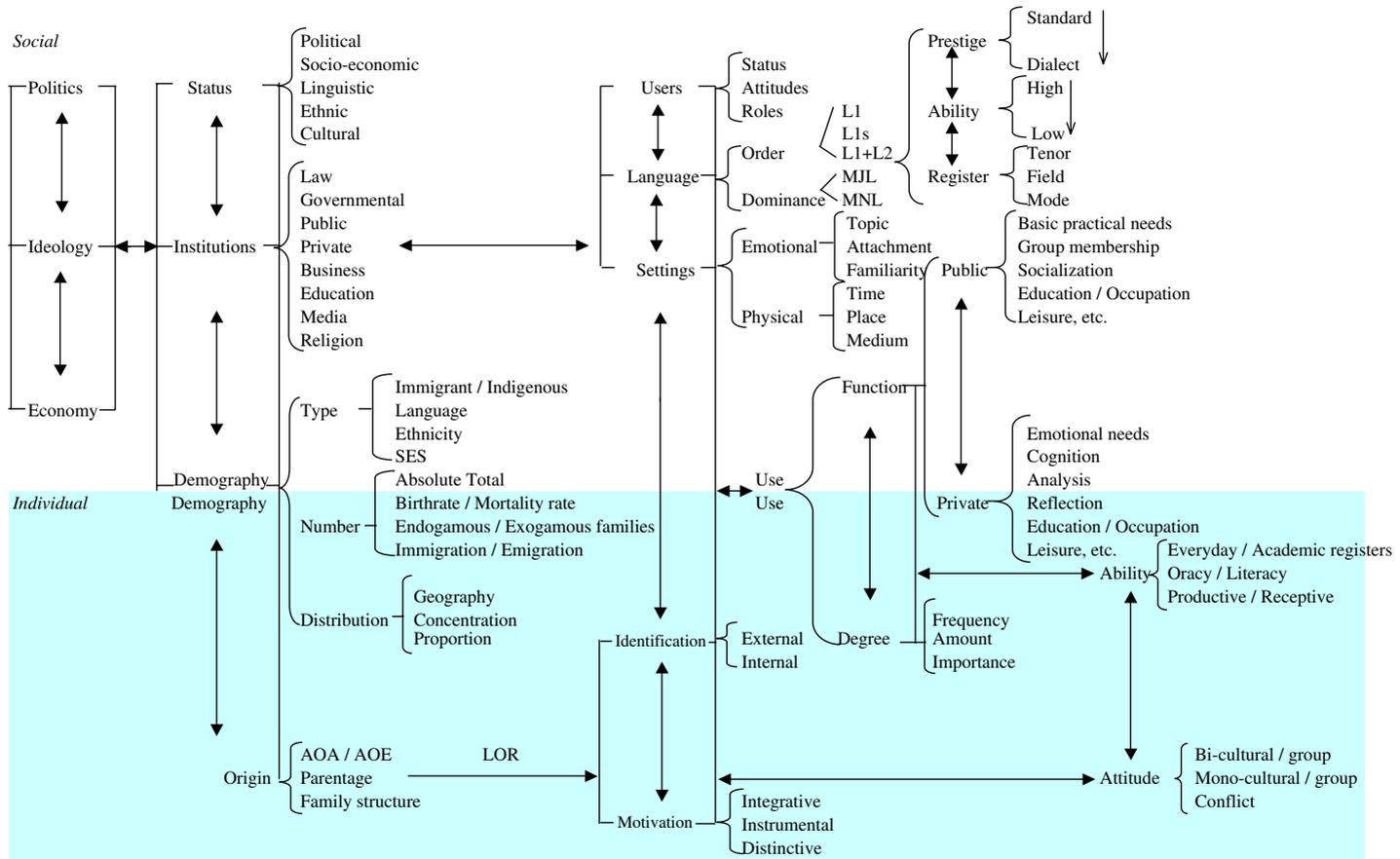
of literacy, especially in *kanji*, which augments visual and aural comprehension of new words and meaning (Hatano 1995).

In the light of the increasing recognition given to the vital role of literacy in bi-linguistic, cognitive, and academic development, the issue of literacy development and maintenance in a minority language needs to be investigated in terms of its nature and socio-psychological relationships. Therefore, as one component of longitudinal research on the development and maintenance of HL literacy in Japanese–English bilingual children in Sydney, the present study examines how the sociocultural context affects Japanese literacy, exploring the influence of society, community, and school in order to find a way to promote and achieve higher levels of HL literacy. Specifically, this paper focuses on the effects of support (or lack of it) from the wider society, the local Japanese community, and formal education in Japanese on the development and maintenance of Japanese literacy. The theoretical framework adopted in this study is presented in the next section.

### **Network of bilingualism**

As Spolsky (1999) maintains, language is a social product and a basis of self-identity. The role of language for an individual in society is also clear in the following statement by Liebkind (1999, 144): ‘Language use influences the formation of group identity, and group identity influences patterns of language attitudes and usage.’ Social identity is acquired through socialization, which is experienced in the language of the family and the wider community (Padilla 1999). There is also pressure in the society to ‘shape our identity to the context we are in’ (Corson 1998, 6) through the channeling of language in such context. Thus, language and the context in which it is acquired are the foundation of the individual as a social being. In Vigotsky’s (1962) terms, language represents not only speaking, but also social and cultural knowledge gained through experience. The close link of language with thought, knowledge, and sociocultural experience means that one cannot use language to a maximum effect, without grasping these underlying components that construct the language. Bilingualism, therefore, needs to be analyzed from various perspectives, both in social and individual contexts.

Hamers and Blanc (2000) adopted this approach in order to distinguish bilingualism at the individual and the societal levels. According to their definitions, bilingualism represents both the individual and societal state in which two languages operate as a means of communal interaction, due to the contact between the two. Bilinguals’ individual differences such as linguistic abilities, cognitive skills, and cultural understanding are considered to be a consequence of the influence of both individual and societal variables. Accordingly, use of several measures for different dimensions is recommended, in order to accurately assess individual bilingualism. The current study takes such an interdisciplinary approach to the issues of bilingualism and languages in contact. As language is closely related to an individual’s cognitive development, formation and display of social identity, and interpersonal relationships within and between social groups, a comprehensive study of bilingual development needs to take into account theories and research results from various disciplines. These include the fields of linguistics, applied linguistics, psychology, social psychology, and sociology. The model, ‘variable networks of bilingualism’ (see Figure 1) was thus developed (Oriyama 2000) in an attempt to integrate this complexity, adapting a variety of theories and findings into its



AOA: Age of Arrival, AOE: Age of Exposure, LOR: Length of Residence, MJL: Majority Language, MNL: Minority Language, SES: Socio-Economic Status

Figure 1. Variable networks of bilingualism.

framework. Specifically, the current study was conducted based on this model, and the framework has been modified to incorporate the results of the study.

In this framework, bilingualism is seen as both a product and an agent of complex social networks surrounding an individual, with social and individual factors combined. Social networks refer to the range of relationship one establishes with various agents of the society, directly or indirectly, mentally or physically. In terms of linguistic development, social networks supply language models including behaviors and scripts (Hamers and Blanc 2000). Social networks also convey values, attitudes, and perceptions in relation to the language (Hamers and Blanc 2000). Importantly, these are transmitted through language, which is a commodity of agents, or variables in a network. The model in Figure 1 illustrates how these network variables are linked and interact with each other in promoting or undermining bilingual ability. In this model, individual factors are shown in the shaded area and are placed in the lower half of Figure 1. The individual factors involve the six dimensions of 'origin,' 'identification' (Skutnabb-Kangas 1990), 'motivation' (Gardner 1979; Gardner and Lambert 1972; Liebkind 1999), 'use,' 'ability,' (Baker 1993; Baker and Prys Jones 1998) and 'attitude' (Grosjean 1982; Harding and Riley 1986; Skutnabb-Kangas 1981, 1990). The social factors comprise sets of variables: 'politics,' 'economy,' and 'ideology' (Corson 1998; Phillipson 1999; Tollefson 1991) as both a cause and a consequence of all the network variables; 'status,' 'institutions,' and 'demography' (Giles and Johnson 1987) including the distribution of power and privilege (Gee 1996) as collective socio-demographic variables; 'users,' 'language,' and 'settings' as social psychological variants. Note that demography and use belong to both individual and social dimensions. Similarly, the variables are networked in a dynamic way, reflecting their mutual influences.

Based on this model, both the wider and the narrower sociocultural contexts were investigated for their effects on heritage language literacy. In other words, the relationship between the sociocultural contexts and Japanese literacy are examined in this study. Note that literacy is also related to general language 'ability.' In the next section, I provide some background information about the Japanese population in Australia.

### **Japanese in Australia**

With Japan as Australia's largest trading partner, and Australia as the most popular destination for Japanese Working Holiday<sup>1</sup> makers, the number of Japanese in Australia has steadily increased in the last 15 years. In 2008, there were 66,371 Japanese residents in Australia, more than half of whom were permanent residents (MOFA 2009). Australia has the third largest Japanese population in the world, and the population more than tripled between 1993 and 2008, with a significant increase (4.3 times) in the number of permanent residents. In New South Wales (NSW), where the concentration of Japanese is the greatest (28,974 in 2008, 40% of the Japanese residents in Australia), around half are permanent residents (MOFA 2009).

The 2006 Census indicates that approximately 4694 Australian-born and 1515 Japan-born persons are from a Japanese-Australian mixed marriage home. On the other hand, 3936 Australian-born and 28,393 Japan-born are from Japanese homes (DIC 2008). In addition, people of Japanese ancestry amount to 40,968, of whom 10,323 were born in Australia. There are thus increasing numbers of children of Japanese heritage in Australia. This trend is reflected in the opening of weekend

Japanese schools that focus on developing and maintaining Japanese literacy, and the marked increase in their numbers and student enrolments (e.g. from 56 in 1993 to 755 in 2007 in NSW). This also manifests serious parental concerns regarding their children's Japanese maintenance, and especially literacy. Yet, little attention has been paid to the issue of maintaining Japanese language and literacy in the Australian context.

Shifting focus to language use in the community, the 2006 Census reports that 35,110 Australian residents use Japanese at home (DIC 2008). Of these, 30% were born in Australia or other countries, whereas 70% were Japan-born, a drop from 90% in 1996 (ABS 1996). This seems to reflect a proportional increase in the numbers of Australian-born children of Japanese heritage compared to those born in Japan. However, the Japanese maintenance rate of the Japan-born is lower than that of the Australian-born. The use of English at home has clearly increased among the Japan-born, most likely reflecting a high intermarriage rate. These facts indicate a declining trend of inter-generational Japanese transmission in Australia.

Among the Australian-born second generation, the proportion of speakers of English at home is very high; 98% for females and 80% for males (ABS 1996).<sup>2</sup> In NSW, for instance, no second-generation females were reported to speak Japanese at home, despite having the highest concentration of first- and second-generation Japanese residents. Moreover, a rather unexpected picture emerged from the 1996 census: NSW has the lowest Japanese maintenance rate (7.5%) of the non-Japan born population among all the States and Territories. This is contrary to the patterns of some language groups, where numerical strength of the community promotes language maintenance (Kipp, Clyne, and Pauwels 1995). However, the census does not provide any information on whether numerical strength translates into community size, such as the number of people affiliated with a community. The Japanese maintenance rates for the other States and Territories are as follows: Other Territories (100%), Tasmania (17.5%), South Australia (15.6%), Queensland (13.8%), the Australian Capital Territory (11.3%), Western Australia (10.4%), Northern Territory (9.4%), and Victoria (9%).

One of the reasons that account for this variance could be the difference in the percentage of schools that offer Japanese as a Language Other Than English (LOTE).<sup>3</sup> Excepting the case of South Australia, the states with higher maintenance rates such as Tasmania and Queensland had many more schools teaching Japanese both at primary and secondary levels, compared to other States (Moshi-Moshi Pages Australia 1996). Thus, mainstream school support for LOTEs and the related positive social environment could be a factor in language maintenance.

Another possible contributing factor is the type of settlement: urban or rural. Kipp, Clyne, and Pauwels (1995) suggest that rural settlement may have a facilitative effect on language maintenance, whereas minority languages in urban settlement may be more susceptible to mainstream pressure, due to the extensive contact with the majority language group. There seems to be some correlation between the degree of urbanization in each state and the rate of language maintenance among the Japanese-background second generation. While NSW and Victoria have the highest urban and Japanese population, the Japanese maintenance rates are the lowest. On the contrary, highest rates were found amongst rural areas such as Tasmania, South Australia, and Queensland.

It is thus apparent that relevant factors are not straightforward to identify since there are many intervening variables. Equally noteworthy is the possibility of certain sub-group or individual differences within the same state. Therefore, it is important

to identify what factors may cause such variance, whether they are individual or social in character, in order to find better ways of maintaining Japanese in Australia beyond the first generation. The possibility of undermining factors that are stronger than individual and community efforts to maintain minority languages is especially worthy of attention. The current study examines such sociocultural factors affecting Japanese maintenance among the second generation in Sydney, NSW, where the largest Japanese community in Australia resides. The next section describes the methodology used in this study.

**Methodology**

*Subjects*

Four groups of subjects in Grade 2–4 at their respective schools participated in the study; two groups of Japanese–English bilinguals in weekend Japanese community language schools<sup>4</sup> and two groups of Japanese monolinguals in full-time Japanese schools (see Table 1). The community schools were established by parental volunteers in the early 1990s. Japanese is taught and used as the medium of communication in three 45-minute-sessions once a week, and students use the same textbooks as those used by monolinguals in Japan in each grade. The students are placed in grades based on their Japanese proficiency levels, regardless of their ages.

*Individual bilinguals*

‘Individual bilinguals’ (aged 6–12 years) live outside the Japanese community and attend a weekend community school A in the southern suburbs of Sydney, where residents of Japanese background are widely dispersed in this predominantly English-speaking, multicultural community. The school has approximately 60 students and class sizes are relatively small (average of 10 students per class). The literacy development of this population (all students in each grade) was studied longitudinally from Grades 2–4 for cross-sectional comparisons (see Table 1); that is, free-style writings data were collected once a week for three years.

*Community bilinguals*

The majority of ‘Community bilinguals’ (age 7–14 years) live on the North Shore of Sydney, where a fairly large concentration of the Japanese-speaking community

Table 1. The number of subjects by Grade and data in each group.

	Individual B			Community B		Contact M		Non-contact M		
	TRLA	WT		TRLA	WT	TRLA	WT	TRLA	WT	
Year	1	2	3	3	3	3	3	3	3	
Grade 2	9			7	5	6	4	10	31	
Grade 3		7		11	4	5	4	10	34	
Grade 4			6	7	8	4	10	4	10	31
Total	9	7	6	7	26	13	21	12	30	96

Note: B, Bilinguals; M, Monolinguals; TRLA, The Translanguage Analysis; WT, The Written Test.

resides. The community is active in many institutional activities, such as businesses, community clubs, and public services. The weekend community school B that Community bilinguals attend has 280 students and receives governmental funding. In addition to Japanese language, Japanese social studies and history classes are taught in Japanese for Grade 5 and 6 students. Community bilinguals socialize more frequently with each other than Individual bilinguals; their Japanese mothers tend to form a close-knit circle of friends whose children also become friends with each other. Semi-longitudinal data (one entry per week for 11 months) on free-style writings were collected only from fourth graders. For the written test, classroom teachers for each grade selected the participants to represent the proficiency levels of their classes.

Both groups of bilinguals were either born in Australia (80%) or immigrated there at a young age (three years old on average) and attend Australian schools on weekdays. The parentage of the two groups is very similar: about half are from intermarried couples.

Japanese parents' home language use varies from 'always in Japanese' to 'almost always in English' in both groups. Families from both groups have good socio-economic circumstances, but housing prices are generally much higher where the majority of the Community bilinguals live.

#### *Non-contact monolinguals*

In order to obtain a clearer picture of age/grade appropriate levels (Grade 2–4/age 7–10 years) in monolingual Japanese proficiency, a large sample of monolinguals (one class in each grade) was taken from a local elementary school in Japan as a primary control group, 'Non-contact monolinguals.' Non-contact monolinguals live in a small city in the Southern part of Nagano where they have very limited contact with English in their environment. There was no 'kikokushijo,' or 'returnees' who have lived overseas among the sample.

#### *Contact monolinguals*

A monolingual sample (Grade 2–4/age 7–10 years) was also collected in Sydney to investigate the effects of contact and school on Japanese literacy. Contact monolinguals are defined as the children of recently arrived Japanese expatriates who attend the Japanese section of a full-time Japanese School in the outer Northern Sydney. They have a limited length of residence and limited contact with the wider Australian society. Their maximum length of residence is 12 months (except three cases whose period of stay ranged from 13 to 16 months). Different participants were selected for each data collection from one class in each grade by their Japanese language teachers to adequately reflect the proficiency level of each class. The Japanese School is divided into 'Japanese' and 'international' sections, and taught in Japanese for the Japanese section and in English for the international section. The Japanese section is authorized by the Japanese Ministry of Education to conduct a compulsory Japanese education curriculum. English is taught every day for an hour in the Japanese section, and both sections are integrated for music, arts, and physical education classes, where both Japanese and English are used.

### **Data**

The data on subjects' Japanese literacy were collected using two measurements: Translanguage (TRL) Analysis and a Written Test. The term 'Translanguage' was devised to describe bilinguals' developing minority first language (Oriyama 2000, 2002) to differentiate it from the second language learners' 'interlanguage' (Selinker 1972). The TRL Analysis examined non-standard TRL forms in diary composition and creative writing. These non-standard forms were classified into 28 categories related to grammar or acquisition (see Table 2). Note that in the Japanese writing system, three types of scripts are used: the two kinds of graphically distinctive but phonetically identical *kana* syllabaries (*hiragana* and *katakana*) and the characters derived from Chinese (*kanji*). For a comprehensive reference to Japanese grammar, see Martin (1988), Makino and Tsutsui (1989), Shibatani (1990), and Tsujimura (1996).

The Written Test was designed specifically to assess non-standard features of particular interest that had emerged from the TRL Analysis (see Table 2). In particular, the test aimed to discover whether these features were characteristic of a certain individual, the bilingual population under consideration, or common to a certain age group (see Oriyama 2002). The writing test was administered to the entire sample, based on a picture description task (see Appendix 1).

### **Data analyses**

Two types of analysis were undertaken with the TRL Analysis and the Written Test data. In both analyses, three types of contrasts were made as shown in Table 3 at the same age/grade level using multiple regression (cf. Cohen et al. 2002). The first contrast between the bilinguals and monolinguals examines the influences of the wider sociocultural context on literacy development. The second contrast between Community bilinguals and Individual bilinguals analyzes how the Japanese community networks affect their Japanese literacy. The third contrast, Contact monolinguals vs. Non-contact monolinguals, investigates the effects of contact and school on Contact monolinguals' Japanese literacy.

For the TRL Analysis, the TRL rate (the occurrence of non-standard features per 100 words) was calculated for each category in order to make the data comparable across the sample. These TRL rates were then combined to make eight sub-categories (see Table 2) as the dependent variables for the statistical analysis. Since bilinguals' ages vary within the same grade unlike monolinguals, analyses of the three contrasts were performed successively within each grade, with and without Age as a covariate. The Age control was used to assess the effects of Age on literacy as well as the age-norm literacy in each group.

The analysis of the Written Test employed the 'Written Test Score' and the 'TRL type occurrence count' as the separate dependent variables, and the three contrasts as the independent variables. Together with the TRL Analysis, this made it possible to investigate the effects of the sociocultural context on both the specific and the general aspects of literacy. The TRL types were compounded in the seven sub-categories unlike the TRL Analysis, as *Kanji Orthography* was not tested in the Written Test. Since the Written Test data for Individual bilinguals was collected at Grade 4, analyses were made only at Grade 4 level for group comparisons.

Table 2. TRL sub-categories for data analysis.

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Phonology (PHONO)
1. 01. Lack/non-standard use of a voiced sound marker
1. 02. Lack/non-standard use of the small <i>っ</i> <i>tsu</i> for a geminate obstruent consonant
Phonology and Orthography (PHONORTH)
1. 03. <i>Kana</i> non-standard spelling
1. 04. Lack of one <i>kana</i> syllable (non-standard spelling)
<i>Kana</i> Orthography (ORTHHRKT)
1. 05. カタカナ <i>Katakana</i> and ひらがな <i>hiragana</i> mixing
1. 07. Use of large letters instead of small letters
<i>Kanji</i> Orthography (ORTHKANJ)
1. 03a. 漢字 <i>Kanji</i> non-standard spelling
1. 06. <i>Hiragana</i> non-standard spelling after <i>kanji</i>
Grammatical and Morphological Development (GRMRPDV)
1. 08. Conjunctions
1. 09. Lack/non-standard use of the topic marker <i>ha</i> /the subject marker <i>ga</i>
1. 14. Adjective/ <i>na</i> – adjective confusion, adjective inflection
1. 15. Counters
1. 17. Verbal inflection
1. 18. Tense confusion (present/past tense verb, present/present progressive tense verb)
1. 21. Other non-standard features
Homophone (HOMPHON)
1. 20 Homophonic confusion
A. わ <i>wa</i> /は <i>ha</i> (pronounced as <i>wa</i> /as topic marker) confusion
B. う <i>u</i> /お <i>o</i> confusion
C. へ <i>he</i> (pronounced as <i>le</i> as direction marker)/え <i>e</i> , い <i>i</i> /え <i>e</i> , ゆ <i>yu</i> /ゝ <i>i</i> confusion
D. お <i>o</i> を <i>O</i> (direct object marker), ほ <i>ho</i> を <i>O</i> , よ <i>yo</i> を <i>o</i> confusion
E. Voiced sound for <i>chilshi</i> (ぢ/じ), <i>sultsu</i> (ず/づ) confusion
Grammatical and Morphological Acquisition (GRMRPAC)
1. 10. <i>de</i> (location of action, means)/ <i>ni</i> (location of existence, indirect object) and <i>O</i> (direct object) confusion: treatment of an indirect object as a direct object, or vice versa; treatment of an intransitive verb as a transitive verb
1. 11. Use of the possessive marker <i>no</i> instead of the direct object marker <i>O</i>
1. 12. <i>de</i> (means: with, <i>te</i> -form of the copula)/ <i>O</i> (direct object) and <i>to</i> (together with)/ <i>kara</i> (from) confusion
1. 13. Subject marker <i>ga</i> /sentence topic marker <i>ha</i> (pronounced as <i>wa</i> ) confusion
1. 16. <i>ni</i> (1. location or target toward which the action or motion progresses to; 2. Location in/at which something exists, resides, etc.; 3. time: at, on, in, etc.) and <i>de</i> (1. location in/at which the action occurs or is done; 2. means) confusion
1. 19. Lack of directional verbs as auxiliaries
English Transference (ENGTRF)
2. 1. Transference from English
2. 2. Direct translation from English

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Note: TRL aspects not specifically tested in the Written Test are shaded.

In both analyses, each of the three contrasts (see Table 3) was made in relation to the different dependent variables. At the same time, the analyses aimed to clarify the relative explanatory power of each contrast for the variance of the dependent variable.

## Results

The results of the three contrasts<sup>5</sup> suggest how society, community, and school affect the development of Japanese literacy both in specific aspects and in general. In other

Table 3. The three contrasts of literacy among four groups for multiple regression.

Sample types				Types of contrasts
Individual bilinguals	Community bilinguals	Contact monolinguals	Non-contact monolinguals	
0.5	0.5	-0.5	-0.5	1. Bilinguals vs. Monolinguals (BILING)
1	-1	0	0	2. Individual bilinguals vs. Community bilinguals (COMBIL)
0	0	1	-1	3. Contact monolinguals vs. Non-contact monolinguals (CONTAC)

words, the analysis reveals differences between the groups in the levels and the characteristics of literacy proficiency. The results of the TRL Analysis are discussed first, followed by those of the Written Test.

***Bilinguals vs. Monolinguals (BILING)***

The comparisons of the bilingual and the monolingual populations in this sample (see Table 4) investigate the effects of the sociocultural context on their Japanese literacy at the macro-level. The first analyses at each Grade (BILING) compare grade-norm age monolinguals with bilinguals of different ages. The second analyses with the Age control (BILING + Age) examine how the bilinguals of the grade-norm age compare with their monolingual age peers. The third (Age) analyzes the effects of Age.

*Translanguage (TRL) Analysis*

The results for the Grade 2 comparison show that apart from the significant differences in *Kana Orthography*, *English Transference*, and the transference related aspect of *Grammatical and Morphological Acquisition*, there are no significant disparities between the two populations. When bilinguals older than the grade-norm age (age 6–7 years) were excluded, the differences were less, and the significance remained only in *English Transference*. These indicate that the bilinguals are not too far behind the monolinguals in their literacy development.

At Grade 3, however, the group differences became significant in all but *Kana Orthography* and *Homophone*, even among the bilinguals who are of the grade-norm age (age 8–9 years). This suggests that while these aspects are still hard to master even for monolinguals, bilinguals are having increasing difficulty in keeping up with monolingual peers in general with just once-a-week Japanese classes at a community school.

At Grade 4, the disparity became highly significant ( $p \leq 0.01$ ) in all categories not only at the same grade, but also at the same age. This suggests that the development in many aspects of literacy examined is mostly complete in monolinguals at Grade 4 (age 9–10 years). This is supported by Hatano’s (1995) claim that Japanese monolingual children’s literacy in orthography without the use of *kanji* is generally

Table 4. Regression of TRL categories on Bilinguals vs. Monolinguals (BILING) with/without the Age control for Grade 2 and Grade 4.

		TRL categories							
Grade 2 N = 32 (B16, M16)		PHONO	PHONORTH	ORTHHRKT	ORTHKANJ	GRMRPDV	HOMPHON	GRMRPAC	ENGTRF
BILING	<i>B</i>	0.524	1.653	0.801	0.171	0.542	0.089	0.227	0.597
	<i>p</i> -Value	0.3603	0.0527	0.0238*	0.0984	0.3946	0.5335	0.0364*	0.0017*
BILING + Age	<i>B</i>	0.595	1.620	0.720	0.157	0.670	0.091	0.196	0.497
	<i>p</i> -Value	0.3524	0.0871	0.0635	0.1702	0.3452	0.5727	0.0978	0.0124*
Age	<i>B</i>	-0.084	0.039	0.094	0.016	-0.149	-0.001	0.036	0.116
	<i>p</i> -Value	0.7860	0.9287	0.5984	0.7632	0.6568	0.9872	0.5146	0.1986
		TRL categories							
Grade 4 N = 34 (B14, M20)		PHONO	PHONORTH	ORTHHRKT	ORTHKANJ	GRMRPDV	HOMPHON	GRMRPAC	ENGTRF
BILING	<i>B</i>	0.384	2.293	0.446	0.611	2.104	0.241	0.566	0.502
	<i>p</i> -Value	0.0042*	0.0044*	0.0054*	0.0035*	0.0001*	0.0018*	0.0001*	0.0001*
BILING + Age	<i>B</i>	0.372	1.784	0.497	0.633	1.910	0.188	0.471	0.431
	<i>p</i> -Value	0.0096*	0.0265*	0.0039*	0.0051*	0.0004*	0.0127*	0.0008*	0.0010*
Age	<i>B</i>	0.017	0.718	-0.072	-0.032	0.275	0.075	0.133	0.100
	<i>p</i> -Value	0.7960	0.0648	0.3609	0.7566	0.2421	0.0380*	0.0374*	0.0903

Note: PHONO, *Phonology*; PHONORTH, *Phonology and Orthography*; ORTHHRKT, *Kana Orthography*; ORTHKANJ, *Kanji Orthography*; GRMRPDV, *Grammatical and Morphological Development*; HOMPHON, *Homophone*; GRMRPAC, *Grammatical and Morphological Acquisition*; ENGTRF, *English Transference*; B, Bilinguals = 1; M, Monolinguals = -1.

\**p* is significant at the 0.05 level.

acquired by the Grade 4 of elementary school. Bilinguals, on the other hand, need more time and experience to master basic grammar and literacy.

In addition, the significant positive effects of Age in *Phonology and Orthography*, *Kana Orthography* at Grade 3, and in *Homophone* and *Grammatical and Morphological Acquisition* at Grade 4 indicate the aspects of literacy where the bilinguals who are older than grade-norm age have difficulty in mastery at each stage. The analysis suggests that these bilinguals require more instruction and practice focused on these specific aspects of language in order to achieve an age-appropriate level of literacy. They also raise questions about the appropriateness of using monolinguals' textbooks for bilingual student and about the speed at which they are expected to cover the same content as the monolinguals at each grade. Especially problematic is a rapid increase in the amount of *kanji* and formal registers that they need to master from Grade 3, which coincides with further acquisition of vocabulary and formal registers in English, an increase in the amount of homework from mainstream schools, and commitments to extra-curricular activities and interests.

Overall, the trend for all grades clearly illustrates that the gap between the two populations widens in a relatively short period of time when basic literacy is being developed in the monolingual population.

### *Written Test*

A comparison of the Written Test Score at Grade 4 (see Table 5) revealed a highly significant difference ( $p=0.000$ ) between bilinguals and monolinguals, and it remained unchanged even after the effect of Age was controlled. That is, the monolinguals outperformed even the grade-norm age bilinguals.

There were also significant between-group differences in the occurrence of the non-standard features analyzed (see Table 6) in all but two TRL categories: *Phonology* and *Homophone*. An analysis of the original data found that the lack of difference in these categories could stem from bilinguals' avoidance or underuse of the related forms in the test. Overall, the Written Test results show the difficulties faced by bilinguals in keeping up with their monolingual grade peers in terms of Japanese literacy, despite weekly attendance at the community schools for several years.

To summarize, the comparison of the bilinguals and the monolinguals in both analyses identified a significant difference between the two groups. Importantly, grade-norm age peers are not exceptionally different at an early stage of literacy development, but the difference grows relatively fast in various aspects of literacy. In addition to the increasing complexity of literacy skills to be acquired, the growing

Table 5. Regression of the Written Test Score (WT Score) on Bilinguals vs. Monolinguals (BILING) with/without the Age control for Grade 4.

Grade 4 N=46 (B11, M35)	WT Score		
	B	Beta	p-Value
BILING	-22.35	-0.956	0.0000*
BILING + Age	-21.58	-0.924	0.0000*
Age	-1.30	-0.089	0.0924

Note: B, Bilinguals = 1; M, Monolinguals = -1.

\*p is significant at the 0.05 level.

Table 6. Regression of the Written Test TRL categories on Bilinguals vs. Monolinguals (BILING) with/without the Age control for Grade 4.

Grade 4 N = 46 (B11, M35)		TRL categories						
		PHONO	PHONORTH	ORTHHRKT	GRMRPDV	HOMPHON	GRMRPAC	ENGTRF
BILING	<i>B</i>	0.383	3.976	1.651	8.301	-0.041	0.714	6.089
	<i>p</i> -Value	0.3229	0.0007*	0.0010*	0.0000*	0.8990	0.0000*	0.0000*
BILING + Age	<i>B</i>	0.159	2.759	1.200	8.163	-0.026	0.939	5.518
	<i>p</i> -Value	0.6906	0.0096*	0.0117*	0.0000*	0.9406	0.0000*	0.0000*
Age	<i>B</i>	0.380	2.065	0.766	0.234	-0.026	-0.382	0.970
	<i>p</i> -Value	0.0989	0.0009*	0.0049*	0.4738	0.8957	0.0000*	0.0000*

Note: PHONO, *Phonology*; PHONORTH, *Phonology and Orthography*; ORTHHRKT, *Kana Orthography*; GRMRPDV, *Grammatical and Morphological Development*; HOMPHON, *Homophone*; GRMRPAC, *Grammatical and Morphological Acquisition*; ENGTRF, *English Transference*; B, Bilinguals = 1; M: Monolinguals = -1.

\**p* is significant at the 0.05 level.

disparity with age seems to be related to the bilinguals' ever more dominant use of English over Japanese. Since language develops in the context in which an individual is placed (Hamers and Blanc 2000), the difference between the two populations is most likely to reflect the difference of the wider sociocultural context to which the two groups belong; one is dominant in Japanese and the other dominant in English. While knowledge and use of the type and amount of register in English greatly increases, Japanese language skills may not develop to the same degree, due to the lack of opportunities to learn the equivalent type and amount of register. Thus, the lack of social and cultural support for the bilinguals' development of Japanese literacy appears to be the fundamental cause of its underdevelopment.

Indeed, the effects of the wider sociocultural context are apparent in that despite the inclusion of two separate sub-groups within each population (bilinguals and monolinguals), the difference was significant. If a within-population difference was large, this would further confirm the stronger influence of the macro-level socio-cultural context, compared with the micro-level one. The analyses in the next section examine this point.

### ***Individual bilinguals vs. Community bilinguals (COMBIL)***

This section examines the influence of community on HL development by comparing the two contrasting bilingual groups in the study. As both groups include individuals of different ages in the same grade, analyses are made with and without the Age control, to examine whether the effect of community exceeds any influence associated with Age. It is important to note that differences in Age on Arrival, Length of Residence, and Parentage (endogamous or exogamous families) are not significant between the two groups.

### ***Translanguage (TRL) Analysis***

At Grade 2, a significant difference was found in *Grammatical and Morphological Acquisition* and *English Transference*, due to the significantly higher production of these non-standard forms among Individual bilinguals even when Age was controlled (see Table 7). Since these features are related to transference, it suggests that a marked group difference exists only in the degree of transference and that Individual bilinguals are more English dominant.

However, significant differences appeared in *Kana Orthography* ( $p < 0.005$ ) and *Grammatical and Morphological Development* ( $p < 0.05$ ) at Grade 3, while the significance of difference in *Grammatical and Morphological Acquisition* increased to a maximum ( $p = 0.0000$ ), again showing a much higher production of non-standard TRL forms in Individual bilinguals. Yet, the difference was no longer significant after Age was controlled, except for *Grammatical and Morphological Acquisition* ( $p < 0.0005$ ), suggesting that literacy among Individual bilinguals older than grade-norm age is particularly underdeveloped. In contrast, the significant difference in *English Transference* disappeared in all contrasts, indicating that by Grade 3 it was as common among Community bilinguals as Individual bilinguals.

The difference in the occurrence of *Grammatical and Morphological Acquisition* and *English Transference* can be understood in terms of differences in their transference features. Whereas *English Transference* is direct translation from English and transference at lexical and structural levels, *Grammatical and Morphological*

Table 7. Regression of TRL categories on Individual bilinguals vs. Community bilinguals (COMBIL) with/without the Age control for Grade 2 and Grade 4.

		TRL categories							
Grade 2 N = 16 <sup>a</sup> (IndB 9, ComB 7)		PHONO	PHONORTH	ORTHHRKT	ORTHKANJ	GRMRPDV	HOMPHON	GRMRPAC	ENGTRF
COMBIL	<i>B</i>	-0.479	-0.400	-0.087	-0.111	-0.320	0.245	0.454	1.139
	<i>p</i> -Value	0.5479	0.7339	0.8570	0.4433	0.7239	0.2364	0.0047*	0.0001*
COMBIL + Age	<i>B</i>	-0.444	-0.415	-0.124	-0.117	-0.262	0.246	0.440	0.497
	<i>p</i> -Value	0.5881	0.7318	0.8025	0.4309	0.7778	0.2491	0.0070*	0.0124*
Age	<i>B</i>	-0.084	0.039	0.094	0.016	-0.149	-0.001	0.036	0.116
	<i>p</i> -Value	0.7860	0.9287	0.5984	0.7632	0.6568	0.9872	0.5146	0.1986
		TRL categories							
Grade 4 N = 14 <sup>a</sup> (IndB 6, ComB 8)		PHONO	PHONORTH	ORTHHRKT	ORTHKANJ	GRMRPDV	HOMPHON	GRMRPAC	ENGTRF
COMBIL	<i>B</i>	0.383	2.405	-0.029	-0.955	3.340	0.364	0.644	-0.041
	<i>p</i> -Value	0.0541	0.0468*	0.9018	0.0031*	0.0000*	0.0021*	0.0023*	0.8166
COMBIL + Age	<i>B</i>	0.385	2.465	-0.035	-0.958	3.363	0.370	0.655	-0.033
	<i>p</i> -Value	0.0573	0.0348*	0.8817	0.0036*	0.0000*	0.0011*	0.0012*	0.8485
Age	<i>B</i>	0.017	0.718	-0.072	-0.032	0.275	0.075	0.133	0.100
	<i>p</i> -Value	0.7960	0.0648	0.3609	0.7566	0.2421	0.0380*	0.0374*	0.0903

Note: PHONO, *Phonology*; PHONORTH, *Phonology and Orthography*; ORTHHRKT, *Kana Orthography*; ORTHKANJ, *Kanji Orthography*; GRMRPDV, *Grammatical and Morphological Development*; HOMPHON, *Homophone*; GRMRPAC, *Grammatical and Morphological Acquisition*; ENGTRF, *English Transference*; IndB, Individual bilinguals = 0.5; ComB, Community bilinguals = -0.5.

<sup>a</sup>Total number for the equation is 32 at Grade 2 and 34 at Grade 4.

\**p* is significant at the 0.05 level.

*Acquisition* appears mostly when particles are used as in English. The acquisition of appropriate particle use and its maintenance may not be difficult if mastered at an earlier stage through literacy practice, and used frequently. On the other hand, vocabulary and phraseology learned and used only/mainly in English could be difficult to express in Japanese. Such difficulty may increase with Length of Residence/Age, if knowledge and experience are gained mainly in English. Also, bilinguals in the higher grades may produce syntactically more complex writing, which would give more opportunities for transference features to appear.

The Grade 4 comparison revealed significant differences in all but three categories (*Phonology*, *Kana Orthography*, and *English Transference*) regardless of the Age control, and these appeared in categories that showed little difference in the earlier grades. Except for *Kanji Orthography*, all the significant differences were due to the much higher TRL rate in Individual bilinguals. The higher occurrence of non-standard *Kanji Orthography* in Community bilinguals, however, is mainly due to their higher use of *kanji*, which shows the development of more advanced orthographic ability in Community bilinguals.

In short, the results of the comparisons show that the disparity between the two bilingual groups widened significantly with grade in the range of categories, even with Age control. That is, Community bilinguals were able to develop their Japanese literacy much better than Individual bilinguals in general. The Written Test further investigated differences between the groups when problematic TRL features were specifically tested, as discussed in the next section.

#### *Written Test*

The Grade 4 comparison of the Written Test Score found no significant difference, although Community bilinguals scored slightly higher than Individual bilinguals on average (see Table 8). The insignificant difference contrasts with the results of the TRL Analysis, but this inconsistency could be explained by the fact that many of the aspects tested, such as particles and counters, were commonly problematic areas for bilinguals.

In contrast, an analysis of non-standard TRL form occurrence in Written Test (see Table 9) revealed a significant group disparity due to Individual bilinguals' higher production of non-standard forms. The comparison without the Age control (COMBIL) found significant differences in the four categories: *Grammatical and Morphological Acquisition*, *English Transference*, *Kana Orthography*, and *Grammatical and Morphological Development*, in the order of significance. While the group difference in *Grammatical and Morphological Acquisition* and *Grammatical and*

Table 8. Regression of the Written Test Score (WT Score) on Individual bilinguals vs. Community bilinguals (COMBIL) with/without the Age control for Grade 4.

Grade 4 N = 11 <sup>a</sup> (IndB7, ComB4)	WT Score		
	B	Beta	p-Value
COMBIL	-3.21	-0.078	0.1083
COMBIL + Age	-2.33	-0.057	0.2456
Age	-1.30	-0.089	0.0924

Note: IndB, Individual bilinguals = 1; ComB, Community bilinguals = -1.

<sup>a</sup>Total number for the equation is 46.

Table 9. Regression of the Written Test TRL categories on Individual bilinguals vs. Community bilinguals (COMBIL) with/without the Age control for Grade 4.

Grade 4 N = 11 <sup>a</sup> (IndB7, ComB4)		TRL categories						
		PHONO	PHONORTH	ORTHHRKT	GRMRPDV	HOMPHON	GRMRPAC	ENGTRF
COMBIL	<i>B</i>	0.750	3.000	1.964	1.714	0.143	1.429	2.179
	<i>p</i> -Value	0.2063	0.0770	0.0087*	0.0425*	0.7746	0.0000*	0.0011*
COMBIL + Age	<i>B</i>	0.492	1.599	1.445	1.555	0.161	1.688	1.521
	<i>p</i> -Value	0.4102	0.2963	0.0390*	0.0755	0.7588	0.0000*	0.0053*
Age	<i>B</i>	0.380	2.065	0.766	0.234	-0.026	-0.382	0.970
	<i>p</i> -Value	0.0989	0.0009*	0.0049*	0.4738	0.8957	0.0000*	0.0000*

Note: PHONO, *Phonology*; PHONORTH, *Phonology and Orthography*; ORTHHRKT, *Kana Orthography*; GRMRPDV, *Grammatical and Morphological Development*; HOMPHON, *Homophone*; GRMRPAC, *Grammatical and Morphological Acquisition*; ENGTRF, *English Transference*; IndB, Individual bilinguals = 0.5; ComB, Community bilinguals = -0.5.

<sup>a</sup>Total number for the equation is 46.

\**p* is significant at the 0.05 level.

*Morphological Development* was significant in the TRL Analysis, *English Transference* and *Kana Orthography* also showed significant differences when specifically tested. It thus suggests that Individual bilinguals were further behind Community bilinguals in the acquisition of grammar, morphology, orthography, and affected more by transference from English.

Thus, the overall findings derived from the TRL Analysis and the Written Test indicated that at Grade 4, Individual bilinguals produced significantly more non-standard features than Community bilinguals in all but two categories, *Phonology* and *Kanji Orthography*. The TRL Analysis results revealed that the between-group difference widened with each grade at all age levels, and in the range of TRL categories.

The Written Test results also found that the two groups were significantly different in the occurrence of non-standard features, but not in the score itself, possibly because the specific features tested were especially problematic to both bilingual groups.

Hence, these findings appear to indicate that living in a community where there are more opportunities for HL use and contact has facilitating influences on the development of HL literacy and tends to reduce the amount of transference from the majority language. The fact that the group difference appears more clearly in higher grades suggests that the effects of community increase with time; they affect HL literacy gradually, but especially during the crucial periods of literacy and general language development.

### ***Contact monolinguals vs. Non-contact monolinguals (CONTAC)***

The comparison between the two Japanese monolingual groups examines the possible effects of contact and school on literacy development (see Table 10). Since there is no difference in age at the same grade level, the effect of Age was not analyzed.

#### *Translanguage (TRL) Analysis*

No significant difference was found between the two groups at Grade 2 or at Grade 3. Especially noteworthy is the fact that no transference features were detected in either group, further confirming the insignificance of contact effects on Contact monolinguals' literacy, and indicating the important role that formal education plays in developing literacy. In general, non-standard features occurred somewhat less in Contact monolinguals' Japanese. This may also reflect the general tendency of Japanese parents to be more concerned with the literacy and educational development of their children during their stay overseas (Nagaoka 1998).

Although some Contact monolinguals produced lexical transference at Grade 4, the between-group difference was insignificant, indicating the extremely low occurrence rate. This is quite surprising, given that Contact monolinguals live in the English-speaking environment of Sydney and receive a daily English lesson. This finding may reflect the degree of social isolation in the Japanese temporary resident community and their relatively short length of stay in Australia. The benefit on the other hand is that Contact monolinguals' Japanese literacy is well developed and maintained. The results thus suggest that the influence of the macro-level socio-cultural context is reduced when sufficient institutional support at the micro-level

Table 10. Regression of TRL categories on Contact monolinguals vs. Non-contact monolinguals (CONTAC) for Grade 2 and Grade 4.

Grade 2 <i>N</i> = 16 <sup>a</sup> (ConM6, NconM10)		TRL categories							
		PHONO	PHONORTH	ORTHHRKT	ORTHKANJ	GRMRPDV	HOMPHON	GRMRPAC	ENGTRF
CONTAC	<i>B</i>	0.305	0.668	0.143	0.000	1.049	0.089	0.000	0.258
	<i>p</i> -Value	0.7085	0.5636	0.7630	1.0000	0.2422	0.6570	1.0000	0.2906
Grade 4 <i>N</i> = 20 <sup>a</sup> (ConM10, NconM10)		TRL categories							
		PHONO	PHONORTH	ORTHHRKT	ORTHKANJ	GRMRPDV	HOMPHON	GRMRPAC	ENGTRF
CONTAC	<i>B</i>	0.054	0.079	-0.159	0.390	0.225	0.000	0.037	0.138
	<i>p</i> -Value	0.7336	0.9331	0.4023	0.1241	0.6962	1.0000	0.8193	0.3520

Note: PHONO, *Phonology*; PHONORTH, *Phonology and Orthography*; ORTHHRKT, *Kana Orthography*; ORTHKANJ, *Kanji Orthography*; GRMRPDV, *Grammatical and Morphological Development*; HOMPHON, *Homophone*; GRMRPAC, *Grammatical and Morphological Acquisition*; ENGTRF, *English Transference*; ConM, Contact monolinguals = 0.5; NconM, Non-contact monolinguals = -0.5.

<sup>a</sup>Total number for the equation is 32 at Grade 2 and 34 at Grade 4.

(e.g. schooling in Japanese language) is given for minority language development and maintenance.

*Written Test*

The difference in the test scores was insignificant (see Table 11). Both groups scored close to full marks in the test, indicating that they have mastered the *kana* orthography by Grade 4.

Consistent with the findings from the TRL Analysis, no significant difference was found in the occurrence of non-standard features (see Table 12). Thus, all the results show that Contact monolinguals are at the same level as Non-contact monolinguals in their Japanese literacy development, despite the lack of support from the wider Australian society. While the sample comprises recent migrants and it is small in number, all the results unanimously indicate that effective full-time Japanese formal education can develop and maintain Japanese literacy as per the Japanese standard even in a minority context.

**Conclusion and implications**

This study has explored the effects of different sociocultural contexts on the development and maintenance of general as well as specific aspects of Japanese literacy by examining three contrasts: (1) Bilinguals vs. Monolinguals for the effects of the wider society; (2) Individual bilinguals vs. Community bilinguals for the effects of the local Japanese community; and (3) Contact monolinguals vs. Non-contact monolinguals for the effects of contact and school. The results suggest that the Japanese heritage children’s Japanese literacy is significantly influenced by the sociocultural context – how society, community, and school value and use a certain language and literacy in social practices. Just as a society’s use of literacy is profoundly influenced by its values and social practices (Gee 1996), so is an individual’s use and consequently development and maintenance of literacy in a society or a sociocultural context. As the findings indicate, the lack of such support from the wider society, the local community, and a mainstream school separately and together undermine the development and maintenance of Japanese literacy in a minority context.

Most influential of all is the effect of the wider sociocultural context: the Grade 4 bilinguals’ Japanese literacy is significantly underdeveloped compared to monolinguals in all aspects. The gap between the two populations is minor at an early stage of general literacy development, but widens quite rapidly in various aspects of Japanese literacy in subsequent years. This coincides with a marked increase in the

Table 11. Regression of the Written Test Score (WT Score) on Contact monolinguals vs. Non-contact monolinguals (CONTAC) for Grade 4.

Grade 4 <i>N</i> = 35 <sup>a</sup> (ConM4, NconM31)	WT Score		
	<i>B</i>	Beta	<i>p</i> -Value
CONTAC	1.52	0.049	0.3664

Note: ConM, Contact monolinguals = 0.5; NconM, Non-contact monolinguals = -0.5.

<sup>a</sup>Total number for the equation is 46.

Table 12. Regression of the Written Test TRL categories on Contact monolinguals vs. Non-contact monolinguals (CONTAC) for Grade 4.

Grade 4 <i>N</i> = 35 <sup>a</sup> (ConM4, NconM31)		TRL Categories						
		PHONO	PHONORTH	ORTHHRKT	GRMRPDV	HOMPHON	GRMRPAC	ENGTRF
CONTAC	<i>B</i>	-0.484	-0.048	-0.161	-0.113	-0.226	0.000	0.500
	<i>p</i> -Value	0.3341	0.9726	0.7909	0.8716	0.5939	1.0000	0.3490

Note: PHONO, *Phonology*; PHONORTH, *Phonology and Orthography*; ORTHHRKT, *Kana Orthography*; GRMRPDV, *Grammatical and Morphological Development*; HOMPHON, *Homophone*; GRMRPAC, *Grammatical and Morphological Acquisition*; ENGTRF, *English Transference*; ConM, Contact monolinguals = 0.5; NconM, Non-contact monolinguals = -0.5.

<sup>a</sup>Total number for the equation is 46.

use of Japanese academic register around Grade 4 (in textbooks and class rooms), many of which are compound *kanji* words. The significant difference thus substantiates the findings that the acquisition of *kanji* is necessary for achieving advanced levels of Japanese proficiency (Hatano 1995), and academic register is important for developing higher levels of language proficiency (Cummins 2000; Skutnabb-Kangas 2000). Also noteworthy is that as these bilinguals become more English dominant with age, transference from English increasingly affects not only their lexicon, but also their grammar and morphology, undermining further development of Japanese literacy. These results suggest that the bilinguals' exposure to and experience with Japanese literacy practices are insufficient for acquiring an academic register and attaining comparable levels of Japanese literacy with monolinguals after Grade 3. This is not surprising in a context where the economic and political status of English dominates, and support for minority languages is minor across institutions (Gibbons and Ramirez 2004), and the majority of the bilinguals attend mainstream Australian schools. Home and community schools may help to a certain extent, but cannot compensate for the lack of formal education in Japanese and support for Japanese literacy practices in a wider sociocultural context. Since the medium of education is 'probably the most important single institutional variable' (Gibbons and Ramirez 2004, 229) in HL maintenance and the chance of maintaining community/HL is greater if schools supplement it at primary level (Starks 2005), it is important that mainstream schools provide an opportunity not only to study the HL, but also to study *in* the language for the development of literacy to a higher level.

While the effect of society at the macro-level predominates, this research indicates that lack of community support in the micro-level sociocultural context tends to have a negative effect on the development of heritage language literacy. Despite the fact that both groups of bilinguals attended weekly community schools, Individual bilinguals' development of orthography, grammar, and morphology was significantly behind Community bilinguals at Grade 4, and their acquisition of grammar and morphology was much more affected by transference from English. Interestingly, at the lexical and structural level, Individual bilinguals' transference production was significantly higher than Community bilinguals at Grade 2, but no longer significant from Grade 3 onward. This indicates that as the range of English vocabulary and expressions increase with age, even Community bilinguals have increasing difficulty in learning Japanese equivalents used outside home and the immediate environment. In addition, since the difference between bilingual and monolingual populations remained significant despite the inclusion of bilingual groups that differed significantly in their literacy development, the results also suggest that while community support for the minority language development is advantageous, the language of a mainstream school and a wider society has a major effect.

On the other hand, the effect of the macro-level sociocultural context on the minority language is small when the language is sufficiently supported by the sociocultural context of school at the micro-level. In other words, the effect of contact with English speakers on Contact monolinguals was relatively insignificant; they were able to develop Japanese literacy to the same level as that of monolinguals in Japan. Although they are recent migrants, this indicates that formal schooling that utilizes and values minority language and culture could counteract the negative influence of the wider sociocultural context on minority language development.

Schools thus play an important role not only in children's linguistic development, but also in recreating and transmitting a dominant culture and ideology (Corson 1998).

Overall, these findings show that both macro and micro aspects of the sociocultural context intricately influence the development and maintenance of literacy in Japanese as an HL. That is, the effects of the sociocultural factors affecting HL development are three-fold: Society, School, and Community, each to a different degree according to the context an individual is placed in. Moreover, the significant group differences found in the study indicate that the effects of sociocultural factors may override those of individual factors. The findings therefore confirm the need to consider these sociocultural factors in investigating HL development and maintenance (Hamers and Blanc 2000). Considering aspects of the sociocultural context, such as the degree of contact with the ethno-linguistic community, for example, helps explain why some maintain their HLs better than others, within the same language group.

The characteristics and the extent of the bilinguals' Japanese literacy found in the study have pedagogical implications for community schools and LOTE classes in mainstream schools; Japanese heritage learners are different from either Japanese monolinguals or second language learners, though some of their non-standard Japanese features are shared (see also Oriyama 2002). Teaching Japanese heritage learners at community schools using the same textbooks as monolingual grade-peers in Japan is problematic since these books are not suitable for heritage learners' age or actual levels of Japanese literacy. This is especially the case when the amount and complexity of *kanji* and academic register used and taught in class suddenly increase in Grade 3, despite the heritage learners' struggle with basic *kana* literacy and a limited class time. This may cause many students to experience boredom and difficulty in keeping up with lessons, and to eventually drop out of school, as seems to be reflected in a drop in the number of student enrolments from Grade 3 onward at these community schools. A more flexible approach to teaching *kanji* and more focused instruction and practice in the areas of difficulty seem desirable, using engaging materials and activities appropriate to their levels of proficiency. This also applies to Japanese courses in mainstream schools. The significant disparity in the levels of literacy between the bilingual sub-groups also suggests that it is inappropriate to place them all in one course, as is the case in the current Higher School Certificate (HSC)<sup>6</sup> heritage Japanese course in NSW. While the study identified the problematic aspects in the acquisition and development of heritage Japanese literacy and could form the basis for a new approach, as indicated, further research is also needed to develop appropriate teaching materials and methods for Japanese heritage learners. In addition, further research is necessary to identify the special needs and the extent of heritage Japanese literacy development in higher grades, especially literacy in *kanji* and academic register.

The Japanese heritage learners' potential to acquire higher levels of literacy will be lost if no change is made in the style and the degree of institutional support provided for their HL development. While the value of HLs to individuals and nations has come to be recognized recently (He 2008), HL learners' specific needs must also be acknowledged in community school teaching and by the development of HL courses or bilingual programs in mainstream schools so that HLs become valuable resources for individuals, communities, and nations.

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### Notes

1. The Working Holiday program was first started with Australia in December 1980. The age restriction of Working Holiday makers is set between 18 and 30 years, and the average age of Japanese Working Holiday makers in Australia is between 23 and 24 years, and the majority is female (Japan Association for Working Holiday Makers 2006). The horticultural industry is dependent on Working Holiday makers, and from November 2006, Working Holiday makers are allowed to extend their stay for another year if they work as a seasonal worker for a firm for more than three months. This change is likely to increase the number of Japanese Working Holiday makers who come to Australia and also the number of people who decide to stay eventually. One of the benefits of Working Holiday programs mentioned in the 1997 report is that Working Holiday experiences can generate interest in future migration to Australia (The Parliament of the Commonwealth of Australia, Joint Standing Committee on Migration 1997).
2. Due to the changes made for the Census 2001 and 2006, information regarding intergenerational language transmission can no longer be obtained after the 1996 census (see Clyne and Kipp 2006).
3. LOTE excludes indigenous languages of Australia.
4. These Japanese community language schools are similar to Japanese heritage schools in the USA, whose aim is to help the children of Japanese migrants develop and maintain their Japanese language and culture. They are different from *hoshuukoo*, which caters for children of expatriates who intend to return to Japan eventually.
5. The criteria used to assess the quality of a regression model are  $\beta$  and  $p$ -values associated with a  $t$ -test for regression. Because it is the quality of each independent variable (each of the three contrasts) that matters in these analyses, the  $R$  squared value is not presented ubiquitously. The results of the three contrasts for the Translanguage Analysis at Grade 3 were not shown in the Tables to facilitate a clearer comparison of the groups over time.
6. Higher School Certificate (HSC) is a high school graduation examination in NSW. English is compulsory but other subjects are elective. Total marks from internal assessments and final examinations determine which tertiary institution and school one can enter. HSC Japanese assesses four skills of language (speaking, listening, reading, and writing), and the final examination assesses mainly reading and writing skills. Until 2005, Japanese heritage students were able to choose the HSC Japanese course from three choices: Continuers, Extension, and Background Speakers. Eligibility criteria now place all of those who 'have had no formal education in a school where the language is the medium of instruction beyond the year in which the student turns ten years of age' (Board of Studies NSW 2010) in the Heritage Japanese course.

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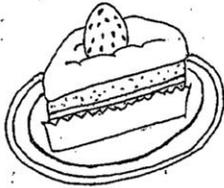
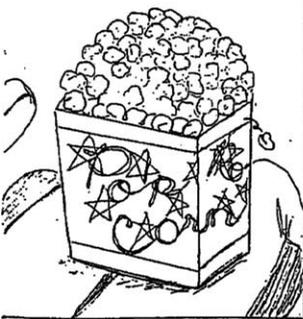
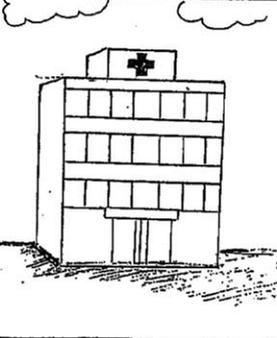
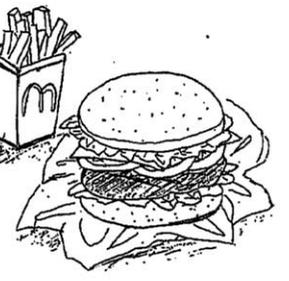
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Appendix 1. Example of the Written Test

		
<p>そか</p>	<p>けいき</p>	<p>うち</p>
		
<p>ほぷこん</p>	<p>ひいん</p>	<p>はんびおか</p>