Japanese as a Translanguage: A Developing Minority Language in Japanese—English Bilingual Children in Australia

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1. Introduction

What are the characteristics of bilinguals' minority first language literacy, and how are they compared with those of the first language (L1) and the second language (L2) learners, respectively? The questions arose partly as a result of a longitudinal study of the development and maintenance of a minority first language literacy in Japanese–English bilingual children in Sydney, Australia, and partly due to the fact that despite a number of studies on bilingual acquisition, no study has yet been carried out to answer such questions. Moreover, the development and maintenance of Japanese literacy for the first and the second generations have been a major concern for Japanese communities overseas. This is because Japanese literacy is highly regarded to be 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 the Japanese culture. However, studies on various linguistic minorities have generally pointed out that of all language skills, writing seems to suffer most in the process of language loss since it is the least required skills in their daily lives and it would need constant use or training for its maintenance (Smolicz & Secombe, 1985; Butcher, 1995; Clyne, et al., 1997; Nagaoka, 1998; Noguchi, 1998). This may be especially true with Japanese, whose orthography involves two types of syllabic alphabets (*kana*) and a large number of complex ideographic characters (*kanji*). Accordingly, non-standard features in written language — the most salient characteristics of school-aged Japanese–English bilinguals' literacy in Japanese as a minority first language — were compared with those of Japanese monolinguals and L2 learners of Japanese who are native English speakers. This double comparison was aimed to distinguish developmental features from transference ones.

To clarify terminology, 'majority language' is a language used by a socially and culturally dominant group, whereas 'minority language ' is used by a group that is subordinate in a social and cultural context (Hamers & Blanc, 2000). A bilingual person in contact settings usually has a command of both majority language and minority language, regardless of order of acquisition. Just as monolingual competence, bilingual competence includes reading and writing skills as well as speaking skills (Butcher, 1995). This is understandable, considering the fact that the development of spoken and written language is interdependent, and that the mastery of reading and writing promotes overall linguistic development (Hatano, 1995; Lüdi, 1997; Garton & Pratt, 1998). Especially of interest are Hatano's (1995) claims that Japanese literacy has a facilitating effect in comprehension and acquisition of knowledge; that is, literacy increases the amount of vocabulary for speech and improves aural comprehension skills. There is also an increasing recognition as to the vital role of literacy in bilingual development, such as safeguarding long-term lexical retention (Cohen, 1989; Olshtain, 1989) and promoting general language development and maintenance (Smolicz, 1983; Rado, 1991; Saunders, 1991; Butcher, 1995). A number of

studies has also found that the development of minority first language literacy is important for L2 or majority language learning (Gibbons, White & Gibbons, 1994; Gibbons & Lascar, 1998; Cummins, 2000; Hamers & Blanc, 2000). However, the literacy aspects of bilingual acquisition have been largely overlooked in the field until recent years (Gibbons, 1999).

The term 'literacy' can be broadly defined, and have many meanings. Within bilingualism studies it is usually more narrowly defined, as in the following definition from Hamers & Blanc (2000: 374): 'State of an individual or community relating to the decontextualized use of language, especially in the written mode; a use of language which is characteristic of, but not exclusive to, reading and writing. It is a cognitive skill, and amplifier of language as a cognitive tool'. In order to operationalize the concept, literacy in this study is defined as 'the ability to use literate language according to its linguistic and socio-cultural rules', and the study focuses on its prominent feature, the use of written language.

The original term 'translanguage' in the present study was invented to stand for 'a developing minority language in a bilingual system', drawing on the theoretical framework of language transfer and 'interlanguage' (Selinker, 1972) in the field of second language acquisition. As the study is on Japanese–English bilingual children's Japanese as a first language and not as the second language, only the applicable concepts are adopted. In particular, the concept of interlanguage, or transitional dialect (Corder, 1967; 1981) is interpreted in a context of bilingual development in contact settings. The bilingual sample's two languages develop side by side, albeit unequally, due to the dominance of the majority language of the society, English. Under these conditions, it is supposed that the bilinguals' Japanese would be characterized by some developmental characteristics shared by the children acquiring Japanese monolingually, some transfer features found in a native English speaker's Japanese as a second/foreign language, and some individual/general traits observed only among Japanese–English bilinguals' Japanese.

To differentiate the original concept of interlanguage from the one applied to a context of languages in contact, a bilingual's developing minority first language is here termed 'translanguage'. This is based on the following considerations. Firstly, the conceptual bases in two languages are shared and transferable to each other (Cummins, 1980, 1981). In fact, significant cross-lingual correlations are found in the literacy competence of bilinguals (Iwasaki, 1981; Cummins, et al., 1984; Cummins & Nakajima, 1987; Laurén, 1987) and they are consistent despite the dissimilarity of the languages (Mohan and Lo, 1985; Cummins, 1991). Such interdependency excludes the cases of unavailable cross-linguistic equivalents due to culturally specific notions and a gap in the development of register in each language. Secondly, the minority language system would share certain characteristics of both monolingual first language acquisition, and second/foreign language learning, which are intertwined in a complex and dynamic way in the process of bilingual development. In other words, translanguage consists of both developmental and transference features. This is similar to the characteristics of interlanguage, whose rules are shared by the first and the second language. Thirdly, bilinguals' minority first languages are unstable in nature, continuously changing in competence and performance as a transitional language, whether it leads to full development or loss of the language. In short, translanguage is a conceptually transferable and transitional language. It is emphasized, however, that the term is employed in a positive sense, acknowledging its essential role in minority language development as a creative tool of communication to supplement any lack of knowledge and experience. It should also be noted that although translanguage

would include both standard and non-standard forms, only the non-standard features are investigated in the current study, as they would reveal the process of learning and the possible components of constructing unique translanguage rules.

2. Methodology

2.1 The subjects

There were three groups of subjects in this study.

- Translanguage (TRL) speakers: 63 Japanese–English bilinguals (age 6 to 12) in Sydney, Australia. (N = 33 for the Interview Test)
  They consist of 7 'Individual bilinguals' who reside in the predominantly English-speaking community in the southern suburbs of Sydney and 56 'Community bilinguals' who live in the North Shore of Sydney, where a fairly large concentration of the Japanese-speaking community resides. They are mostly the Australian-born children of permanent residents or Australian citizens, who go to local schools during the week and study Japanese at the weekend community schools.
- First language (L1) speakers: 66 Japanese monolinguals (age 6 to 12) in Iida, Japan.
  The sample was taken from a local elementary school in a small city in the Southern part of Nagano where the chance of finding '*kikokushijo*', or 'returnees' who have lived overseas is very slim. (N = 194 for the Interview Test)
- Second language (L2) speakers: 24 English monolinguals learning Japanese as an L2 in Sydney, Australia.
  Since it was not feasible to collect a sample of the same age group with Japanese proficiency comparable to the bilingual subjects, university students enrolled in one of the University of Sydney's Japanese courses were selected on the basis of their background as native English speakers. Other studies of native English speakers' L2 Japanese were also consulted for comparison, to validate the possibility of generalizing the results.

2.2 Procedures

Two types of data on language proficiency were collected; the Translanguage Analysis and the Interview Test. Firstly, as the initial focus of this study, the characteristics of Individual bilinguals' literacy in Japanese as a translanguage were investigated longitudinally for three years. In this Translanguage Analysis, uncorrected diary entries and compositions of all subjects were analyzed each week for any non-standard features and sorted by types and by subjects. After six weeks, they were classified into 28 categories (See Table 2.1), as no new TRL type had emerged. Details of each non-standard form were recorded in the log with standard forms according to the conventions used for translanguage description (See Table 3.1). Note that three types of script are used in the Japanese writing system: two kinds of graphically distinctive *kana* syllabaries, or syllabic alphabets (*hiragana* and *katakana*) and characters derived from Chinese (*kanji*), which are a semantic script but pronounced in several ways for historical reasons. For comprehensive reference to Japanese grammar, see Martin (1988), Makino & Tsutsui (1989), Shibatani (1990), and Tsujimura (1996).

Table 2.1 Non-standard Translanguage Types

1. Grammatical Analysis
Phonological
1.01. Lack/non-standard use of a voiced sound marker
1.02. Lack/non-standard use of the small *tsu* for a geminate obstruent consonant
Phonological + Orthographic
1.03. *Kana* non-standard spelling
1.03.a. *Kanji* non-standard spelling
1.04. Lack of one *kana* syllable (non-standard spelling)
Orthographic
1.05. *Katakana* and *hiragana* mixing
1.06. *Hiragana* non-standard spelling after *kanji*
1.07. Use of large letters instead of small letters
Grammatical + Morphological
1.08. Conjunctions
1.09. Lack/non-standard use of the topic marker *ha* (pronounced as /*wa*/) /the subject marker *ga*
1.10. *de* (location of action, means)/ni (location of existence, indirect object) and *O* (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 *no* instead of the direct object marker *O*
1.12.*de* (means: with, *te*-form of the copula)/*O* (direct object) and *to* (together with)/*kara* (from) confusion
1.13. Subject marker *ga* /sentence topic marker *ha* (pronounced as /*wa*/) confusion
1.14. Adjective/*na*-adjective confusion, adjective inflection
1.15. Counters
1.16. *ni* (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 *de* (1. location in/at which the action occurs or is done; 2. means) confusion
1.17. Verbal inflection
1.18. Tense confusion (present/past tense verb, present/present progressive tense verb)
1.19. Lack of directional verbs as auxiliaries
Morphological + Orthographic + Phonological
1.20. Homophonic confusion
A. *wa/ha* (pronounced as /*wa*/) confusion
B. *u/o* confusion
C. *he* (pronounced as /*e*/)/*e*, *i/e*, *yu/i* confusion
D. *o/O*, *ho/O*, *yo/o* confusion
E. Voiced sound for *chi/shi*, *su/tsu* confusion
1.21. Other non-standard features
2. Language Acquisition Analysis
Language transfer (Phonological+Orthographical+Morphological+Syntactic)
2.1. Transference from English
2.2. Direct translation from English

* TRL types in highlight were intended for elicitation in the Interview Test.

Secondly, in order to examine whether these TRL features and occurrence patterns are common to Japanese–English bilinguals, or a certain individual or age group, it was necessary to compare age/grade-norm Japanese literacy development within the bilingual population, as well as between monolingual and bilingual groups. Consequently, cross-sectional data were collected from Community bilinguals and Japanese monolinguals, and were examined and codified under the same TRL categories used for the sample of Individual bilinguals.

The Interview Test was designed specifically to elicit problematic aspects of grammar and other areas of the translanguage system that had emerged from the Translanguage Analysis

study of the Individual bilinguals' writing. In particular, it aimed to discover whether the non-standard translanguage (TRL) forms are characteristic of a certain bilingual individual, the bilingual population, or common to a certain age group. For this reason, only the bilinguals and the Japanese monolinguals participated in the test. Despite its name, the Interview Test is a writing test, excepting the case of Individual bilinguals who were interviewed individually for the test, so that they could provide both oral and written answers. This was partly due to the Individual bilinguals' possible inability to comprehend the task involved in the test, if conducted together as a whole class activity, but mainly to assess the degree of oral and written correspondence of non-standard TRL features. However, this point of interest is not dealt with in this paper due to the length limit (For comprehensive discussion, see Oriyama 2000).

The aspects of the TRL tested on all subjects correspond to the categories used in the Translanguage Analysis. Although only 16 out of 28 TRL types were intended for elicitation (as particular interests), 11 others had a possibility to be elicited in this measure. Accordingly, a wide range of TRL types was tested: phonological, orthographic, grammatical, morphological, and language transfer. Details of TRL aspects tested are highlighted in Table 2.1 shown earlier. The test is a picture description task. It is divided into five sections that are designed as stimuli, aiming to bring out particularly problematic words, grammatical markers, or structures, which were actually used by Individual bilinguals in a non-standard way. All sections are composed of various stimulus pictures designed to be easily understood by children

Lastly, as a final confirmation of the English transference nature of non-developmental TRL types, which were not produced by Japanese monolinguals, the need for writing data from native English speakers learning Japanese as a foreign/second language arose. This is to test the possibility that bilingual's non-developmental TRL forms were caused by reasons other than transference. For instance, these TRL could be developmental and specific to Japanese–English bilingual children.

The L2 data collected from the English monolingual sample were examined for any idiosyncrasies, and the characteristics of each were compared with the TRL category set to identify equivalents. At the same time, aspects of dissimilarity between L2 and TRL were also examined. The incidence of L2 correspondence to TRL was recorded to observe its general trend across the types. As the data consist of essay translations, reference to L2 Japanese studies was also made to verify the possibility of generalization to other L2 cases.

2.3 Data analysis

Data from all samples were assessed using the same indices of 28 TRL categories by counting the occurrence of each TRL type per entry. Then, the total number of words was counted for each entry, separating noun, adjective, adverb, copula, verb, particles and grammatical markers; roots of verb/*na*-adjective when inflected were counted as separate items, as in the following sentence from the data:

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Watashi	*wa*	*ookiku*	*nat-*	*tara*	*sekai*	*no*	*iroiro*	*na*	*tokoro*	*ni*	*iki*	*tai*	*desu*.
I	*top-m**	older	get	when	world	in	various		Places	to	go	want	*cop***

=14 words [I want to go to various places in the world when I get older.]
*topic marker **copula

The same principle was applied even if a phrase or a sentence was non-standard as underlined in the following phrase:

<Non-standard>					<Standard>	
1	2	3	4		1	2
<u>*make*</u>	<u>*mashita*</u>	<u>*no*</u>	***chiimu****		*maketa*	***chiimu***
lost(polite past)		*pos-m**	team		lost (plain past)	team
=4 words			[the team that lost]		=2 words	

* possessive marker ** *katakana* in Bold

Note: Polite speech forms (desu/-*masu*) were counted as separate items to record their use.

In the example, the verb for the 'plain' past tense should be used instead of the 'polite' past tense when it functions as a clause that modifies a noun. Also, the possessive marker '*no*' is used in a non-standard way as a connector between verb and noun, though it is only needed for connecting nouns. If the non-standard usage in this example were limited to the choice of a correct verb form, it would be considered a developmental feature, as it could occur even among monolingual children. Yet, the unconventional use of the possessive marker after the verb is particularly unusual. This may be an attempt to render the English relative pronouns (which, that, etc.) into Japanese. Furthermore, this non-standard use of '*no*' was found only among subjects in Australia, which suggests that if it is indeed developmental, it must be a form acquired very early before the development of literacy. Thus, this was regarded as a transference feature and counted as one incidence of such TRL type.

The counting of TRL types alone, however, is not reliable, for their occurrence may depend on the length of the written sample. Consequently, in order to make the frequency data comparable across subjects, the ***Total TRL rate*** (*per 100 words*) was computed for each individual per entry by the following formula:

$$\frac{\text{The total number of all TRL types per entry x 100}}{\text{The total number of words per entry}}$$

The result is the *Total TRL rate* (*per 100 words*) per entry and per person. This could provide a rough picture of TRL in the degree of distance from the target norm, when compared between subjects or groups, and longitudinally within an individual. The *Total TRL rate*, however, may overlook the complexity of TRL, which consists of a range of simple to complex linguistic rules. A more comprehensive way to analyze the data is an examination of the ***TRL rate*** (*per 100 words*) ***per TRL type and entry*** which is calculated as follows:

$$\frac{\text{The total number of each TRL type per entry x 100}}{\text{The total number of words per entry}}$$

This enables cross-sectional comparison of TRL type trends between groups, and within a group. However, since the focus of this paper is qualitative, the results of such quantitative analysis will not be discussed in the next section (For quantitative analysis results see Oriyama, 2000).

3. Results and discussion

3.1 Literacy in Japanese as a Translanguage — The characteristics of development and transference

As a result of the Translanguage Analysis and the Interview Test, two fundamentally distinctive features were discovered: one is a feature of development, and the other is transference. As discussed in Section 2.2, in order to confirm the distinction between the features of development and transference, TRL features were compared with non-standard features produced by Japanese monolinguals and English monolinguals learning Japanese as an L2. Table 3.2 presents the examples of non-standard TRL features that are summarized in Table 2.1. Due to the space limit, only one or two examples per sub-category (ex. *Phonological*) are shown. They are described following the conventions in Table 3.1.

Table 3.1 The eight conventions of translanguage description

1. underlined texts	Non-standard TRL forms	5. [pronunciation]	Pronunciation of *kanji*/Arabic numerals
2. ( ) after underlined texts	Standard forms	6. /pronunciation/	Pronunciation of special syllables excepting nasal coda
3. (‘translation’)	Translation of the assumed intended meaning	7. bold texts	*Katakana* in *rōmaji*
4. ‘translation’	Translation of *kanji*/the original sentence or word	8. (syllable)	Extra syllables

Table 3.2 The examples of non-standard translanguage features

Translanguage types	Features of Development	Features of Transference
Phonological 1.01.Lack/non-standard use of a voiced sound marker	1.01. *tomota* (*da*)*chi* (‘friend’)	
Phonological + Orthographic 1.03a. *kanji* non-standard spelling	1.03a. [*oo*] ‘many’([*oo*] ‘big’) *kikunattemo* ‘even when I grow up’	
Orthographic 1.05. *katakana* and *hiragana* mixing	1.05. *akachi**ya***(*ya*)*n* /akachan/ (‘baby’)	
Grammatical + Morphological 1.12. *de* (means: with, *te*-form of the copula)/*O* (direct object) and *to* (together with)/*kara* (from) confusion 1.14. Adjective/*na* -adjective confusion, adjective inflection 1.15. Counters 1.16. *ni* (1. location of existence; 2. time) and *de* (1. location of	1.14. *dekkai*(*na*) suberidai (‘huge slide’) 1.15. *tori ga nanbiki*(*wa*) (‘how many birds’)	1.12. *tomodachi de*(*to*) *asonda* (‘played with my friend’) 1.16. *suna no naka ni*(*de*) *asobimashita* (‘played in the sand’)

action; 2. means) confusion		
Morphological +Orthographic + Phonological 1.20.A. Homophonic confusion *wa/ha* (pronounced as /*wa*/) confusion	1.20.A. *heya* <u>*wa*</u>(*ha*) ('As for the room')	
Language transfer 2.1. Transference from English 2.2. Direct translation from English		2.1. *Hai, ima* <u>*kuru* </u>(*iku*) *yo*. ('Yes, I am coming now.') 2.2. ***<u>konbikuto</u>***(*zainin*) ('convict')

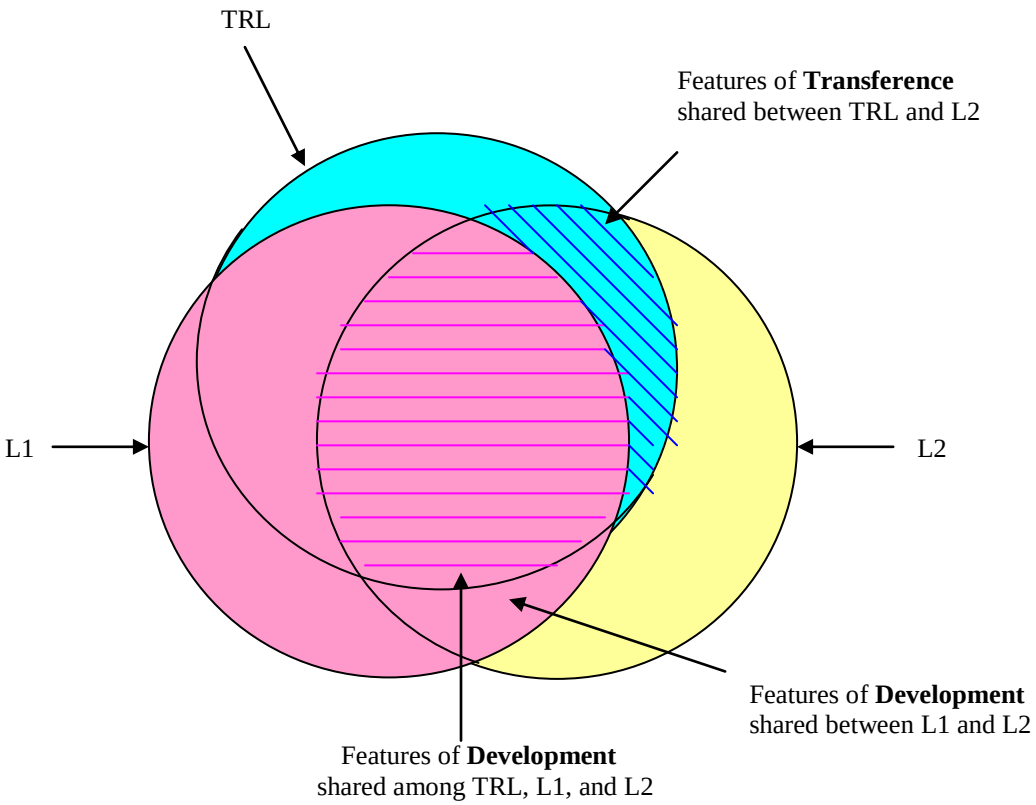
As shown in Table 3.2, features of transference were found only in the *Grammatical and Morphological*, and *Language transfer* sub-categories. In contrast, developmental features were more prevalent. Similarly, features of transference are more complex to explain compared to those of development. For instance, an example of developmental features in the *Phonological* category is the lack of voiced marker. On the other hand, an example of transference type 2.1 can be explained when considering both Japanese and English translation equivalents and structures. That is, *kuru* 'to come' is used instead of *iku* 'to go', even though the Japanese equivalent of 'I am coming' is actually 'I am going'.

The results revealed that none of the transference features were found in L1 Japanese but all of them were common to L2 Japanese. This is clear from Table 3.3 where transference features are highlighted in blue, and columns for each group are shown in light blue shading if TRL types are shared. These TRL types have also been observed in other L2 Japanese studies (Mizutani, 1994; Yoshikawa, 1997), testifying that they are not limited to the current investigation. This shows that these TRL categories are of the transference type, that is, due to cross-linguistic influence between Japanese and English. On the other hand, it was found that most of the developmental features are shared among the three groups. Non-occurrence of developmental TRL types 1.05, 1.07, 1.20B, 1.20D, and 1.20E, in L2 data could be related to age factors, such as the degree of cognitive development. This is because they are uncommon in older monolingual Japanese children in general, and those of the current study. This would be fairly reasonable, considering the fact that Type 1.07 is related to the degree of phonological awareness as mentioned earlier, and the rest is homophonic confusion in *kana*. The results thus indicate fairly universal developmental patterns across the different varieties of Japanese. Another finding is that there are some other features of transference unique to the L2 speakers. While age factors such as cognitive and metalinguistic competence might have affected the result to some extent, we can say that the developmental acquisition process in Japanese–English bilinguals is more similar to monolingual Japanese than it is to L2 Japanese speakers. These relationships across TRL, L1, and L2 Japanese are schematized in Figure 3.1.

Table 3.3 Comparisons of TRL, L1, and L2

	TRL	L1	L2
Phonological			
1.01. Lack/non-standard use of a voiced sound marker			
1.02. Lack/non-standard use of the small *tsu* for a geminate obstruent consonant			
Phonological + Orthographic			
1.03. *kana* non-standard spelling			
1.03a. *kanji* non-standard spelling			
1.04. Lack of one syllable			
Orthographic			
1.05. *katakana* and *hiragana* mixing			
1.06. *hiragana* non-standard spelling after *kanji* (okurigana)			
1.07. Use of large letter instead of small letter			
Grammatical + Morphological			
1.08. Conjunctions			
1.09. Lack/non-standard use of the topic marker *ha*/the subject marker *ga*			
1.10. *de* (location of action, means) /*ni* (location of existence, indirect object) and *O* (direct object) confusion			
1.11. Use of the possessive marker *no* instead of the direct object marker *O*			
1.12. *de* (means: with, *te*-form of the copula)/*O* (direct object) and *to* (together with)/*kara* (from) confusion			
1.13. Subject marker *ga*/sentence topic marker *ha* confusion			
1.14. Adjective/*na* -adjective confusion, adjective inflection			
1.15. Counters			
1.16. *ni* (1. location of existence; 2. time) and *de* (1. location of action; 2. means) confusion			
1.17. Verbal inflection			
1.18. Tense confusion			
1.19. Lack of directional verbs as auxiliaries			
Morphological +Orthographic+ Phonological			
1.20. Homophonic confusion			
A. *wa/ha* (pronounced as /*wa*/) confusion			
B. *u/o* confusion			
C. *he* (pronounced as /*e*/)/*e, i/e, yu/i* confusion			
D. *o/O, ho/O, yo/o* confusion			
E. Voiced sound for *chi/shi, su/tsu* confusion			
1.21. Other non-standard features			
Language transfer			
2.1. Transference from English			
2.2. Direct translation from English			

Figure 3.1 Non-standard TRL features shared with L1 and L2



It is clear from Figure 3.1 that TRL, L1, and L2 all share most of developmental characteristics, but TRL and L1 share much more between the two. Note, however, that L1 and L2 have common developmental features such as non-standard spellings of more complex *kanji* mastered at higher stages of learning. On the other hand, while L2 shares transference characteristic of TRL, it has its own features not observed in TRL. These are mostly in syntax and wording, which make interpretation difficult. Although L2 has generally more formal register use than TRL, it has more unnatural use of words compared to TRL. In this sense, bilinguals' TRL is superior to second/foreign language learners' L2 in terms of communicative ability in everyday register. Such a difference would be closely related to each group's language model and use; L2 use is usually limited to classroom practices that involve formal language, while TRL is mostly based on a colloquial language model, which is the main register used. Although the L2 sample is older than that of L1 and TRL, the situation may not be so different with younger L2 subjects, considering the study results that point out the insufficiency of LOTE (Languages Other Than English) study in Australian schools in achieving higher LOTE proficiency (Gibbons, 1994; Clyne, et al, 1997; Lo Bianco, 1997).

Compared to L2, TRL is much closer to monolinguals' L1 Japanese, especially in the early stages of development, and it is more systematic. Lack of literacy practices, especially in writing, would be a likely cause for this delay in the developmental aspects of language. As for transference, it is worthy of note that many cases of the transference examples in the *Grammatical and Morphological* category are in the use of particles. This cannot be explained simply by a lack of literacy training; rather, it could be related to the abbreviation of particle use in colloquial Japanese, compared to its formal or written form.

The resulting shortage of particle use in bilinguals' language activity would mean that particles are difficult to acquire, unless supplemented by formal speech and literacy activities that involve formal/academic registers. The same could be true with other transference TRL types; their use could be limited to everyday conversation.

4. Conclusion

In this paper, the characteristics of Japanese–English bilingual children's literacy in Japanese as a translanguage (TRL) was examined and compared with those of the first language (L1) and the second language (L2) speakers. The findings show that Japanese as a TRL was characterized by two elements: 1) developmental features that are entirely shared with Japanese monolinguals' Japanese as an L1, and mostly shared with English monolinguals' Japanese as an L2; 2) features transferred from English, which are wholly shared with English monolinguals' L2 Japanese, but not with Japanese monolinguals' L1. That is, developmental features were common to the three varieties, TRL, L1, and L2, whereas transference features were shared only between TRL and L2 speakers. Furthermore, it was revealed that the developmental delay of TRL despite its initial similarity to L1 could be attributed to lack of literacy practices that foster the acquisition of academic registers.

The identification of such TRL features made in this study has educational and theoretical implications. Educationally, the findings could be employed as a guide for teachers and parents in teaching Japanese to Japanese–English bilinguals in a similar context (e.g. community schools). In such a case, the elements of development and transference may require separate teaching approaches; for example, many cases of transference features found in the study could be used in the classroom to point out the difference between English and Japanese by contrasting English and Japanese translation equivalents. Developmental elements, on the other hand, may call for richer linguistic environments and a variety of activities to promote interest in literacy in early childhood, which would increase experiences with, and exposure to, diverse language behavior models. This could be done by providing a rich home environment for Japanese literacy development, as well as by joining a community-based playgroup that offers various activities for the development of literacy. In addition, formal teaching of literacy may need to devise more focused and systematic teaching methods, as bilinguals lack the background knowledge and experiences necessary for the acquisition of standard forms. Inevitably, however, more pedagogically oriented studies will be required to discover effective teaching methods for the bilingual population in a similar context. The time constraints in the community school are another concern, which needs to be considered in such work.

Theoretically, the study confirmed the view that bilinguals' TRL develops in a similar way to monolinguals' L1 through constant modification of prior knowledge, but bilinguals do this in two languages instead of one. Moreover, the study showed that bilinguals' Japanese as a TRL is not the imperfect variety of native speaker's Japanese, but a distinctive system of its own, which is transitional and susceptible to the degree of language use and experiences. Another finding of interest is that the bilinguals' TRL Japanese is closer to the Japanese monolinguals' L1 than to the English monolinguals' L2 Japanese, even after considering the limitations on data collection. In this light, Japanese–English bilinguals would have more potential to achieve a higher level of Japanese proficiency than L2 learners of Japanese, given adequate support for its development. It is thus important that

the bilinguals' special pedagogical needs be dealt with accordingly to maximize their potential, and that further research be conducted to better respond to such requirements.

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