

Chapter 6: Transferring Literacy and Subject Knowledge Between Disparate Educational Systems

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Abstract

This is a retrospective longitudinal study of the education of two Australian third culture kids who attended local Japanese schools from preschool to the first year of high school. This is a postmodern account, set in the twenty-first century, of transition to a radically different educational system. Many postmodern accounts describe obtaining an education in a new country due to migration in order to escape persecution (e.g. Antin, 1997; Hoffman, 1989). In contrast, the current study explores an alternative educational choice made by parents who had relocated to a remote region of Japan for employment. The choice to educate their children locally was due to both an interest in and respect for the local culture, as well as convenience. This account concerns their daughters' experience of the Japanese public school curriculum from the first year of primary school to the first year of high school, and how this equipped them for the final two years of high school and beyond. In particular, it addresses the ways in which they viewed their learning in Years 11 and 12, and at the tertiary level in Australia, to have been influenced by their experiences of the Japanese curriculum.

Background

Third culture kids refer to those who have grown up in a culture other than that of their parents; they have relationships with the respective cultures but not a complete sense of belonging to either (Pollock & Van Reken, 1999, cited in Tokuhamma-Espinosa, 2003). As Kamata (2019) explained, perhaps the most famous third culture kid is former American President Obama, with an American mother and a Kenyan father, who spent part of his childhood in Indonesia. In the current study, the children were educated from preschool to Year 10 in Japanese schools, and made the transition from Years 11 and 12 to university in Australia. The transfer between

educational systems in countries where different languages are spoken depends on both bilingual and biliterate competence, and the ability to adapt to the differing requirements of each curriculum. In the case of Japan and Australia, both the languages and the curricula differ, and the transition between the two systems is daunting.

Literature Review

Linguistic Interdependence

A successful transition between two dissimilar education systems, in which dissimilar languages are spoken, could be aided by the process of linguistic interdependence. Cummins (1984a) posited a common proficiency which underlies a bilingual speakers' languages: "The interdependence or common underlying proficiency principle implies that experience with *either* language can promote development of the proficiency underlying both languages, given adequate motivation and exposure to both either in school or in the wider environment" (p. 143).

Cummins (1979, 1984b) explained that reading skills could also be transferred across a bilingual's languages. Moreover, Koda (2008) proposed a Transfer Facilitation Model, which specified the processes involved in the transfer of reading skills from one language to another. The premises of Koda's (2008) model were that children first attune themselves to the spoken language and then map it onto the written system. This metalinguistic awareness can transfer between languages.

Language Distance

The next issue is whether positive transfer of reading skills is equal across languages. Koda (2008) explained that positive transfer was facilitated between languages with linguistic and orthographic similarities; the extent of facilitation of the transfer of reading skills varies according to the learner's first language. Nevertheless, positive transfer of reading skills by children reading languages with different orthographies has been evidenced, such as between Arabic and French (Wagner et al., 1989), Khmer and English (Barratt-Pugh & Rohl, 2001) English and Hebrew (Geva et al., 1993), and English and

Chinese (Lin et al., 2018). Pasquarella et al. (2015) identified transfer of word reading *fluency* between both Spanish and English and English and Chinese, (but that of word reading *accuracy* only applied to the Spanish English bilinguals). They attributed the transfer of word reading fluency to “a script universal process” (p. 96).

The distance between English and Japanese is considerable. Pinker proclaimed they were “looking-glass versions of each other” (1994, p. 104). English, French and Spanish speaking trilingual, and long-term resident of Japan, Kurihara (2019) described her daily challenges with the Japanese language. Language distance has been acknowledged by the Foreign Service Institute of the U.S. Department of State; Japanese belongs to the category of languages which is “exceptionally difficult for native English speakers” (Tokuhamu-Espinosa, 2008, p. 66).

Despite language distance, neuroscientist Stanislas Dehaene advised that diverse writing systems operated on “very similar cortical processing routes” (2009, p. 119), and explained that “a broad range of universal, neurologically constrained features underlies the apparent diversity of writing” (p. 304). Language distance and diverse orthographies suggest that the transfer of reading skills from Japanese to English is more challenging than between languages which are less distant from one another and share a common script. Nevertheless, the morpho-phonological principal characterizes all writing systems (Dehaene, 2009), and arguably this may facilitate the interdependence of reading skills across a bilingual’s languages. As Page (2017) advised, “the phonological awareness skills developed in learning to read either a segment-based alphabetic script or a syllabet support one another and can be transferred to reading a different script system” (p. 39).

Differences in the Education Systems

In addition to the issue of linguistic transfer, there is the issue of transferring between educational systems. If there were a mismatch between these systems, students making a transition between the two may experience difficulties. Potential sources of such difficulties are contrasting emphases of accuracy and self-expression (Stephens & Blight, 2002), and the development of higher order thinking skills (McPake & Powney, 1998). Differences are not

only exhibited between the educational systems in each country but also between the stages of education within the systems. Lewis (1995) observed a dramatic change between Japanese primary and middle school education: “Why does child-centered early education give way, at junior high, to monotonous lectures and authoritarian control?” (p. 6). She attributed the high achievement of the Japanese educational system to pre-school and primary school rather than to cram schools and the demands of university entrance examinations.

Contrasting Emphases on Accuracy and Self-Expression

The Japanese writing system is characterized by intricacy and complexity, and therefore mastery requires an intense focus on the form of the characters in the three writing systems, *hiragana*, *katakana* and *kanji*. Rohlen & LeTendre (1996), Benjamin (1997) and Peak (1991) described the attention to form when learning Japanese, and Rohlen & LeTendre (1996) went on to criticize this degree of attention to form, in contrast to the American emphasis on spontaneity and creativity. In contrast, White (1987) criticized the American focus on spontaneity at the expense of taking pains. Clearly, there are many exceptions to the “attention to form” said to characterize learning Japanese and the “attention to creativity” thought to characterize learning to write in English. For example, children learning to write L1 Japanese develop self-expression when they write haiku or daily diary entries, and children learning to write L1 English pay attention to form when they learn spelling, punctuation conventions and genre-writing.

Fostering Higher-Order Thinking Skills

McPake and Powney (1998) compared British and Japanese educational philosophies and argued that the former fostered skills of drawing on multiple sources of information, critical thinking and forming an opinion, whereas the latter relied on memorization of the textbook and developing an extensive bank of knowledge. However, a nuanced perspective of Japanese education reveals that higher-order thinking skills are indeed fostered in educational practices. Primary school features the practice of *hansei*, a critical reflection on goals or experience (Benjamin, 1997; Lewis, 1995). The group reflects

during the *hansei* session and the teacher refrains from making judgements (Rohlen & LeTendre, 1996).

Another practice which may be related to the development of higher-order thinking is the long-term small group known as the *han*. In these groups, children perform a wide variety of tasks such as solving maths problems, song composition, cleaning and looking after classroom pets; the *han* is “a source of positive emotional involvement in social as well as cognitive or academic tasks” (Hoffmann, 2000, p. 197). This engagement with other children in cognitive tasks is arguably a source of the development of higher-order thinking skills. Hoffmann (2000) criticized the American dichotomy between higher and lower order thinking skills, and argued that “real thinking” and “rote” were not opposites, and that rote learning and repetition led to understanding (p. 200).

It cannot be assumed that students moving from the Japanese educational system to a western one have had little experience of critical thinking. Tanaka and Gilliland (2016) provided cases of adult Japanese students who were formally introduced to the notion of critical thinking during an EAP course in the United States. These students learnt to successfully apply critical thinking skills in Tanaka’s course. Accordingly, critical thinking can be fostered in post-secondary schooling, and not having been explicitly taught critical thinking does not preclude students from learning it later in a different educational setting.

Research Question

Is there a transfer of literacy and higher order thinking skills from Japanese to English which can be observed in the senior secondary school level in Australia?

Methodology

Data Collection

Data firstly consisted of documents related to schooling, such as samples of schoolwork, tests and assessment reports, at various stages of the participants’ education from Years 1 to 10 in Japan and Year 11 in Australia. These documentary artefacts reveal the culture

of pedagogy and assessment. As Holliday (2007) indicated, “cultural artefacts like documents can reveal deeper, more tacit aspects of cultural life” (p. 71). A further advantage of such documents is that they provide a snapshot of the state of achievement at particular points in time, which are difficult to recall in retrospect when more recent experiences are forefront in the subjects’ minds.

The second source of data was retrospective and longitudinal (Dörnyei, 2007), consisting of email interviews with the participants, conducted between 13th December 2017 and 17th February 2018, regarding their educational experiences. Pavlenko (2002) recommended practitioners treat language learning memoirs as “discursive constructions rather than as factual statements” (p. 216), and this interpretation similarly applies to this data.

The Participants

Both participants not only provided their consent to participate in this study, but also contributed to it. They are known here by the pseudonyms Eloise and Annika. Both Eloise and Annika were given extensive English language support before their transition to the Australian education system. This was because firstly, both parents were native English speakers and the language of the home was English. There was no language policy in the home; rather, English was used because it was the first language of the parents. In her study of bilingual families in Japan, Kamada (1995) explained the significance of both parents, and the siblings, using the minority language as a means of contributing to bilingual proficiency.

Secondly, the parents made an effort to talk to the children in English as much as possible in order to balance the input in Japanese from outside the home. Bedtime stories were read to them in English. The mother was befriended by another English-speaking mother raising a bilingual child, and they regularly exchanged English language children’s books and videos. Annika generally spoke English with the daughter of the other English-speaking mother. These experiences provided a foundation in oracy, a prerequisite of the development of literacy (Christie, 1984).

Not only was English the language of the home, the family returned to Australia twice every year for approximately five weeks each time, and the children attended Australian schools during these

visits. This formed the background to the full-time transition to the Australian educational system at Year 11.

As previously explained, children learn to read by mastering spoken language, and then mapping the spoken language onto the written system (Koda, 2008). This process was observed in the development of biliteracy by Eloise and Annika. Both of them attained proficiency in spoken Japanese and English before the process of mapping the sound to the symbol. Yamamoto (2001) explained the tendency of potentially English-Japanese bilingual children in Japan to only achieve passive bilingualism or even Japanese monolingualism, because of the enormous influence of the mainstream language. There is a need for active cultivation of bilingualism; the factors amenable to attaining English-Japanese bilingualism in Japan for the participants in Yamamoto's study were attendance at an English-medium school, or being an only child. The family in the current study conformed to neither of these conditions, and the parents were aware of the possibility of their daughters failing to acquire English proficiency in Japan. Therefore, they made keen efforts to engage with them in English at home, and to have them attend school in Australia during their annual spring (Australian autumn) and summer (Australian winter) holidays.

Context of the Research

The elder sister, Eloise, was the subject of a previous study of the transfer of literacy skills when she was eight years old (Stephens & Blight, 2004). This previous study investigated the principal of linguistic interdependence between English and Japanese. Eloise was in Year 3 at a Japanese primary school at the time of the study, and attended primary school in Australia during her long-term Japanese holidays. Despite the short time she spent at the Australian primary school, she achieved a proficient score in Australian state reading and writing tests in all areas except for spelling. This study supported the hypothesis that reading skills could be transferred from Japanese to English. A further study on the maintenance of English literacy while attending Japanese schools in a remote part of Japan was conducted by Stephens (2018). The current study follows up on the 2004 study, and concerns the transition from the first year of senior high school in the Japanese

system, equivalent to Year 10, to Years 11 and 12 in the Australian education system. In addition, the current study includes data about Eloise's younger sibling, Annika. It investigates whether the linguistic and academic skills attained in the Japanese system facilitated the attainment of those skills in the Australian educational system.

Researcher Position

As the mother of the participants, the researcher has a vested interest in their attainment of positive educational outcomes, such as a successful transition from Japanese-medium instruction to English-medium instruction. Therefore, this account is not that of a disinterested observer; she strongly conveyed her attitudes to them about their educational progress over the course of the study. Furthermore, the researcher is a teacher, and therefore she exerted influence over the participants' choices and attitudes not only as a mother but also as a teacher. According to Yin (2009) the test of researcher bias is "the degree to which you are open to contrary findings" (p. 72). Having a keen interest in the successful outcome of linguistic interdependence between the subjects' languages, the researcher was reluctant to pursue contrary findings, and thus there may have been some bias. However, some contrary findings, consisting of grammatical interference from Japanese to English, have indeed been reported (see Stephens, 2018).

Researching Children

Yphantides (this volume) indicated the value of incorporating the child's perspective into childhood research, while acknowledging the ethical concerns of researching one's own child. She explained her research project to her son, gained his consent, and secured his privacy by revealing neither his name nor the location of the research. She described her son as not only a participant in her study but also a duoethnographer. Although he did not write the story, he helped create the story, because his voice was incorporated into it as a result of their ongoing discussions. Similarly, in the present study, the researcher's daughters understand the nature of the research project and consented to participate. Furthermore, they contributed to the

research by sharing their insights into their educational experiences in each country, as young adults.

Data Analysis

Analysis was conducted of written assignments produced by both participants in Japan, and school assessment in Japan and Australia. Common and distinctive underlying literacy practices in each school culture were identified from these documents. The participants were questioned about the work samples they had produced as school children in an iterative process (Dörnyei, 2007); they reflected on these literacy practices and their responses prompted the researcher to solicit further reflection.

Results and Discussion

Transferring from Japanese-medium instruction to English medium instruction could be anticipated to be arduous. Nevertheless, because English oracy and some degree of English literacy, had been maintained in the home (see Stephens, 2018), and because oracy forms the basis of literacy (Christie, 1984; Koda, 2008), the transition for the participants was less challenging than anticipated. Asked about the transition from Japanese to English as the language of instruction, Eloise explained:

It wasn't difficult to understand instructions. I always understood what teachers were saying. The problem was more on the generating language. My spelling wasn't very good and my vocabulary was narrow compared to my peers.

In contrast, Annika had had a stronger sense of herself as an English speaker in Japan, and her response to the same question differed:

I was never particularly good at reading and writing in Japanese but reading and writing in English was easy to pick up.

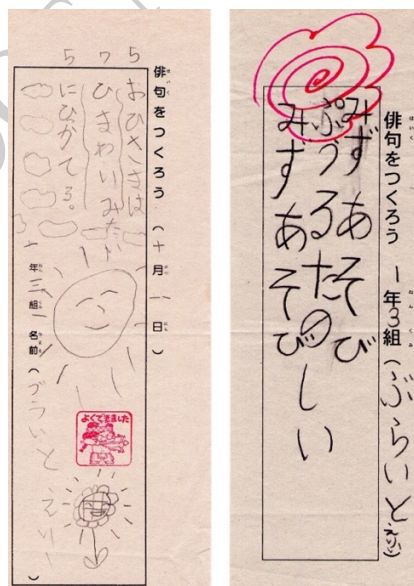
Because retrospective accounts are discursive constructions, supplementary evidence in the form of work samples and school reports were included in order to investigate the standard of literacy in both countries and the nature of the academic tasks.

Contrasting Emphases on Accuracy and Self-Expression and Creativity

Creativity and self-expression were evidenced in the practice of composing haiku. Haiku composition was cherished in Eloise and Annika's primary school because the school was located in the city of Matsuyama, renowned for its literature. Matsuyama was the hometown of the famous haiku poet, Shiki Matsuoka, and is where the famous novelist Natsume Soseki created the classic novel *Botchan*. Because of this literary tradition, haiku composition formed an integral part of the school curriculum from Years 1 to 6. Children were given homework of haiku composition from Year 1, and the school produced a monthly bulletin featuring selected haiku from each year level. The following haiku were composed by Eloise in Year 1:

Figure 1

Haiku Composed by Eloise in Year 1



In the early stages of writing haiku the scaffolding by the teacher was evident in the explicit numbering of the syllables, which appeared at the top of each vertical line of writing. The haiku began with a seasonal reference, according to the way in which the children were instructed. Lines 2 and 3 of the haiku were summed up in the illustration. The teacher drew a circle over the haiku in red to indicate her approval.

An important feature of haiku composition is that it requires both accuracy and creativity. The writer must be creative within the confines of the prescribed syllable structure of 5-7-5, and the first line contains a seasonal reference, which provides the setting for the poem. Arguably, the demands of self-expression within a prescribed format may be generalized to other written genres in other languages. Nevertheless, Minami (2002) contrasted the explicit and extended discourse style of English in middle-class North America, with the succinct expression of Japanese:

Haiku is, in essence, sparse formalized written discourse for two or more parties; this characteristic is very different from poetry in the United States, where one person articulates his or her ideas for vast audiences or for very different people (p. 70).

The relevance for the current study was whether the extended composition of haiku over six years in primary school for Eloise, and three years for Annika, inculcated writing habits that may have positively transferred to written composition in English. When asked whether learning to write haiku may have transferred to her skills in written English, Eloise and Annika responded:

I don't think practicing haiku did transfer to my English. I think they are quite unrelated, but maybe I'm just not aware of it. I'm not sure. Writing style or learning to be poetic was totally unrelated in both languages. I had to learn from scratch when I was writing in English. (Eloise)

It's a difficult comparison to make because I'm in a different

head space for each language. In haiku you're limited to the word count and rhythm of speech so it's not as free as writing in English. (Annika)

Eloise's and Annika's responses supported Minami's view (2002), and suggested that the conventions for writing haiku differ from those for writing in English, and that positive transfer between the writing systems is limited. However, their lack of awareness of a possible transfer does not necessarily mean that the practice of writing haiku did not provide them with an entrée into creative expression. As Hasan (1985) explained, "creativity and imagination function as the motivation for the onset of many kinds of learning" (p. 2). Both haiku and creative expression in English share the exercise of creativity and imagination. Hasan (1985) outlined the features of the verbal art expressed in both English nursery rhymes and poetry from centuries ago, in alliteration and rhyme. Explaining the "textual significance of parallel structure and repetition" (p. 12), she argued, "the working of the patterns and the text are one and the same thing, for without the work that the patterns of language are doing there would be no text" (p. 12). This explanation could be extended to haiku. In both haiku and English language poetry, the form and the rhythm are central. An awareness of the importance of the form of the particular language in relation to creative expression is fostered. The process of mapping creative verbal expression to form is common to both languages. Rather than being in conflict, this heightened awareness of the rhythmic conventions in Japanese may have indeed facilitated creative expression in English. It is this metalinguistic awareness, rather than the rhythmic patterns peculiar to each language, which would have been transferred.

Writing for Different Purposes

Besides creative poetic expression of haiku, children regularly produced written work, such as narratives and reports. These were not confined to *Kokugo* (Japanese) lessons; compositions were used to reflect on school concerts, excursions, and write science reports. These were not fill-in-the-blanks exercises, or rote-learning exercises. The children illustrated the theme of the story in a space above the

text, and then were free to produce their own text. This demonstrated that free writing was an integral component of a range of subjects.

Figure 2

A sample of Creative Writing in Year 1 by Annika



This sample of creative writing demonstrates that, contrary to stereotypes, creative writing formed an integral part of the curriculum from Year 1 in the Japanese primary school (See Appendix 1 for a further example). The above composition is a narrative, and has a date, a title, and an illustration.

Creative writing continued to be practised daily after a move to a primary school and middle school in a neighbouring prefecture, in the form of daily diary entries. For example, a diary entry by Annika in Year 5 of primary school (see Appendix 2) featured both horizontal and vertical writing. Hence children were familiarized with flexible writing directions from an early age. The second interesting

feature was that Annika chose a book report to be the theme of her diary entry. She discussed a book she had chosen herself, summarized it and reflected on it. This indicated that choosing books and reading them in the library was a standard practice. Finally, the teacher's comment was an acknowledgement of her progress in both her reading and her writing skills. The red stamp on the top right of the page read "Well done" and is in the shape of a *hanamaru* (floral symbol) indicating good work. The teacher wrote the same *hanamaru* symbol in red pen over Annika's report, which at first glance is communicated as high praise. The teacher's role in providing feedback to each child must be acknowledged, because this was provided to each child in the class every school day.

Transferring to the Australian Educational System

The following discussion addresses whether the skills and knowledge attained at the final levels of schooling in Japan, for Eloise and Annika, could be put to good use in the Australian education system. The first noteworthy feature of the Australian system is the subject selection. Japanese high schools are specialized and entry is competitive. In contrast, most Australian high schools do not have a competitive entry system, and because students have a wide range of skills and interests, schools offer a broad range of subjects.

Eloise

Unlike most other schools, entry to Eloise's school was dependent upon passing an exam, and consisted of just Years 11 and 12. As can be seen from the student report for the middle of the first semester in Year 11 below, Eloise chose to study Drama, English, Maths Studies, Music, Psychology and Visual Arts-Design. The English-language subjects in the respective countries were dissimilar because they were delivered from the perspectives of a first language in Australia and a second language in Japan, so they are not considered to represent the same subject. Only Maths was common to both the Japanese and the Australian schools. Eloise managed to pass all of the subjects apart from Psychology. (Surprisingly, this is one of the subjects that she later specialized in at university in Australia.)

The report card revealed extensive comments from the teachers, both affirmative and critical. Some of the comments concerned achievement, and others attitude. These comments revealed how Eloise adapted to the Australian system both academically and personally.

Figure 3

Eloise's Year 11 Report Card

Year 11 Results Mid-semester 1
DRAMA A- <p>Congratulations for an excellent start to your Drama studies at (name of school). You have confidently met the criteria by demonstrating very good skills of performance, and excellent analysis and evaluation skills. Your journal writing reveals that you clearly understand the scope and purpose of the task of reviewing the various techniques and exercises, and your efforts during class activities indicate a very good knowledge of acting principles and operating in the audience mode. Your participation in acting activities has shown a very good natural ability, especially in terms of characterisation and ensemble skills. I recommend that you continue to use your good grounding in Drama as a base to extend your knowledge and skill-level as we undertake more challenging activities. I wish you the very best for your Drama studies in Term 2.</p>
ENGLISH B+ <p>This has been a good term's work for you, Eloise, and I have been pleased with your positive approach. The persuasive writing exercise was quite effective, but it would benefit from a little more attention to detail and accuracy when editing your work. Your oral presentation was well structured and thoughtfully planned. You spoke with a clarity and enthusiasm for your topic which maintained the audience's interest throughout. I commend you on a consistent and enthusiastic approach to the subject Eloise and I appreciate your positive contributions to class work. That A grade cannot be far away.</p>
MATHS STUDIES B+ <p>Eloise, in class you work efficiently completing all set tasks. Your test results of 76% for Trigonometry and 80% for Quadratics (part A) were good, reflecting a sound understanding of the mathematical concepts</p>

being studied. I suggest that it would be to your advantage if notes were prepared for every test as this process assists with the development of your knowledge and refining of communication. Your workbook could be more organized, again this will assist you with revision. Eloise, you have demonstrated sound mathematical ability and have obtained a good grade that reflects this. However with a bit more revision, preparation and attention to detail you have the potential to further improve your grade for the semester.
MUSIC B
Eloise, your progress in the aural component of the course is very pleasing but the theory aspect needs much more time and effort, both in terms of the exercises complete and your focus in class. Work very carefully through the Grade 3 book and see me quickly with any questions. Your knowledge of the Baroque period is sound. Please see your formative performance report for feedback.
PSYCHOLOGY D
Eloise, you haven't quite settled into your studies in Psychology as shown by the inconsistency in your grades in each of the tasks. Your Term 1 grade is based on the following formative work: the "Introduction to Psychology" test, the Four Levels of Explanation of Behaviour task and two homework tasks. You failed to submit one of the homework tasks which has brought your overall grade down substantially. You need to utilise teachers' availability time if you are unsure of the homework, rather than merely skipping the work. In the test, some of your responses in the short answer section were inaccurate. For improvement, you will need to learn the terminology better. I suggest you put more effort into studying the flash cards as this will help you learn the key terminology and definitions. In the extended response section your explanation of a young girls playing with her doll was very brief and in need of further elaboration. You therefore need to revise the Four Levels.
VISUAL ARTS – DESIGN B
Eloise, you are a motivated and enthusiastic Design student with a sound knowledge of the design process. Your Beach House model is progressing well and promises to be of a high standard when completed. You have demonstrated a proficient use of design terminology and sound analytical skills in the Visual Study component.

Drama and English: The transition to the subjects explicitly focusing on English, namely Drama and English, suggest a smooth transition to this unfamiliar education system. Eloise received positive feedback for English “your persuasive writing was quite effective” tempered by the observation “it would benefit from a little more editing and accuracy when editing your work”. This comment bore some similarity to the feedback she received in a standardized test in Australia reported in Stephens and Blight (2004), in which she received a high score for English reading and writing, and a lower than average score for spelling. The teacher provided positive feedback for her oral presentation, drawing attention to structuring and planning, and having spoken with clarity and enthusiasm. Having studied neither persuasive writing nor oral presentations in Japan did not present an obstacle to learning these skills in the Australian system.

Although the comments on the report card suggest a smooth transition, Eloise’s comments suggest otherwise. When asked how she found the transition from Year 10 *Kokugo* in Japan to Year 11 English in Australia, she responded as follows:

The subjects were taught completely differently. I had never written essays in Japan for *Kokugo*. All of my assignments for English in Australia were essays. In Japan we only had tests. The transition took quite a long time. I would say I only became good at writing essays after being in Australia for three years. I found it bizarre that in Australia they never taught me how to write essays well. They just told me to write essays. I remember in second year of university deciding to become better at writing essays. I read books about writing essays (that were not part of my course) in order to figure it out. Once I did that, I became very good at writing essays.

Maths Studies: The grades suggest that there were few difficulties adapting to the requirements of the Australian Maths curriculum. Positive feedback was expressed by the teacher, describing “a sound understanding of the mathematical concepts being studied”. When asked how she found the transition from Year 10 Maths in Japan to

Year 11 Maths in Australia, Eloise explained the higher importance attached to literacy in the Maths classroom in the latter:

I found that Maths was done quite differently in the two countries. So, in Australia, I would get a question and I would calculate the answer in a different way to other people but I would still get the answer right. Australian Maths was a lot more language-based (e.g. if you look at the exam papers there is a lot more writing in the questions whereas Japanese tests were mainly formulae). I didn't enjoy doing math in Australia. I preferred the Japanese method of teaching.

Arguably, Maths is the most abstract of the school subjects, and because Maths is an international language, skills could be transferred easily between international school systems. However, the language used to describe mathematical processes did not appear to have been transferred. Pavlenko (2014) explained that numbers remembered in the first language are retrieved in that language despite the context. Both Eloise and Annika reported that they continued to perform multiplication in Japanese in Australia. Annika indicated that it was because she remembered the rhythm of the Japanese multiplication table. Accordingly, there appeared to be a transfer of skills across the education systems, but not the means of arriving at the result, or the language of inner speech used in calculation. Further research into the transfer of the language of mathematics in both inner speech and the processing of mathematical problems is called for.

Research Project: Arguably, the Research Project would be the most challenging subject to adapt to in the Australian curriculum. Firstly, the student had to determine and refine a research question, and secondly, they had to investigate the issue they had identified by gathering data themselves. Finally, they had to write up the project and submit it to be externally assessed. The nature of the research project reflected the value placed on the ability to identify a question of interest, refine it, and investigate it. This stood in contrast to the values implicit in their Japanese curriculum, particularly in middle school, where they were regularly given sections of the textbook to

master in order to prepare for the test. Asked about this transition, Eloise commented:

I found it very difficult because it was targeting the exact skills that I didn't have: your ability to think practically—conduct research based on your own interests. In Japan you don't do anything based on your own interests, the topic is chosen for you. And you don't do your own research. You are told how to think about things, or how to solve the problem. The only time I did a research project was during primary school in the summer holidays when you did a science research project (*jyūkenkyū*).

Challenges of an Unfamiliar Curriculum

Meeting the goals of the Australian curriculum was attainable, but the teachers' comments suggest that developing the skills to address the demands of the curriculum was challenging. Comments indicated the need for “preparation and attention to detail” (Maths Studies), “the theory aspect needs much more time and effort” (Music). Describing how she developed writing skills, Eloise commented:

When I learnt how to write in English I learnt how to think and form opinions. When I wrote essays in Japan it was only for one subject “Doutoku” which was a class teaching moral values etc. (I don't think we have the same subject in Australia.) But my writing in that class was not very sincere because I would only write what I knew the teacher wanted me to write. On the other hand, learning to write in English in Years 11 and 12 was a much longer process because it wasn't just about understanding the language but I had to learn to think critically. It took me a long time to do that well. (Eloise)

Asked specifically about the transfer of the literacy skills of reading and writing, Eloise explained:

Reading – I noticed that in Australia it was “cool” to have a wide vocabulary and read a lot, so it became more important to me to read more and deliberately try to expand my vocabulary. The content I have read in two languages is very different (maybe because of my age), now I find that I am better at reading in English, because I have studied very difficult topics like philosophy, psychology and art history at university. I can’t really understand Japanese books on philosophy as well as with English ones.

Writing – My writing skills are also a lot better in English because I had to think a lot more and write more essays in school. In Japan I didn’t think, I just figured out that I have to write what the teacher wants me to e.g. “bullying is terrible, we shouldn’t do it.” “War is terrible, we need to keep the peace.” In Australia I had to think critically about why something was the case and analyse texts – what techniques are used? What purpose do they serve?

Annika

Annika attended a different school for Year 11 and 12 from Eloise. Because she is three years younger than Eloise, she attended senior school three years later. Unlike Eloise’s assessment report, Annika’s included descriptions for the parent/guardian of the assessment criteria for each subject. In Year 11 Annika chose to study Art, English, History, Mathematical Applications, Music Sound Technology, Personal Learning Plan and Research Project, of which English, Maths, Personal Learning Plan and Research Project were compulsory. The parents were informed about the following assessment criteria for each subject:

Figure 4
Year 11 Assessment Criteria

<i>Art</i>	Practical Application, Knowledge and Understanding, Analysis and Synthesis Inquiry, and Exploration
<i>English</i>	Knowledge and Understanding, Analysis, Application, and Communication
<i>History</i>	Knowledge and Understanding, Inquiry and Analysis, Reflection, and Communication
<i>Mathematical Applications</i>	Mathematical Knowledge and Skills and their Application, Mathematical Modelling and Problem Solving, and Communication of Mathematical Information
<i>Music Sound Technology</i>	Practical Application, Knowledge and Understanding, and Analysis and Reflection
<i>Personal Learning Plan</i>	Understanding the Capabilities, Developing Personal and Learning Goals, and Reflecting on Learning
<i>Research Project</i>	Planning, Application, Synthesis, and Evaluation

All of the assessment criteria have some commonalities with Bloom's lower and higher level thinking skills of Knowledge, Comprehension, Application (lower), and Analysis, Synthesis and Evaluation (higher) (Davidson & Decker, 2006). Thinking skills, both lower and higher, formed the basis for assessment, and this information was made explicit to parents in the reporting process. Two of the subjects, *Personal Learning Plan* and *Research Project*, focused on the learning and thinking skills rather than explicit subject matter. This was a radical departure from the middle school curriculum in Japan, in which banks of knowledge were to be memorized from prescribed sections of the textbook and tested. Even at the time of writing (2018), three years later than when Annika was in Year 11 (2014), the Japanese national Center Examination for university admission consisted of responses to multiple choice questions. There

is a limit to how Bloom's higher order thinking skills may be assessed by multiple choice questions. One of the reasons for difficulties in Annika's adjustment to the Australian education system may have been due to the differing premises of education revealed in the methods of assessment. This is not to denigrate the role of memorization in learning that occurs in Japanese schools. As Tokuhamma-Espinosa (2011) explained, "the acquisition of declarative knowledge depends on both memory and attention, which means that complex mental processing is impossible without memorization" (p. 95). Both the memorization tasks in the Japanese curriculum, and the lower and higher order thinking skills in Australian curriculum, are useful and complementary. Nevertheless, the transition from one curriculum to another required considerable adjustment.

English: Asked how she felt about the transition to Year 11 English in Australia, Annika explained in the following dialogue:

It was difficult and I didn't know what was going on half the time.

Why was it difficult?

Because no one ever taught me how to write an essay.

How did you learn to write essays then? Now you write essays quite a lot.

Year 11, year 12 and university helped me.

How did they help you?

Taught me the structure of it

Showed me examples

It wasn't hard to pick up because I think in English.

I think that had a large amount to do with it.

Although Annika had mainly been educated in Japan from kindergarten to Year 10, she was in the unusual position of being dominant in English. A best friend in primary school and another in middle school in Japan were bilingual English/Japanese speakers, and she mainly spoke in English with these friends. The three other members of her family spoke to her in English while she was in Japan. Even while attending Japanese schools, Annika had daily exposure to English. Her comment above revealed that thinking in

English helped her to adjust to the different curriculum in Australia. Comprehension of the language was a pathway to comprehension of the demands of the pedagogy. In her volume *Mind, Brain and Education Science*, Tokuhama-Espinosa (2011) explained “the brain is a complex, dynamic, and integrated system that is constantly changed by experience. These changes are the results of new learning and the physical alterations that occur at the molecular level in the brain in response to experiences” (p. 96). Although Annika had been shaped by her prior learning experiences in Japan, she was able to adapt to different demands placed on her in the Australian system.

Research Project: As previously explained, the Research Project was anticipated to be the subject for which the Japanese middle school curriculum would have prepared them least, principally because of the degree of responsibility placed on the student to determine the content. As Annika reported:

How did you find adapting to the demands of the Research Project in Year 11 after making the transition to the Australian curriculum?

I didn't transition very well, like I said before I didn't know how to write an essay and I was too embarrassed to ask someone about it. But I learned by just doing it and receiving criticism for it.

We did persuasive writing and academic/scientific writing. Japan did none of that.

I did my own research. I never did research before.

I never read academic journals in Japanese.

These comments highlight how the practices of essay writing, and receiving and responding to feedback, led to proficiency. Not having had essays assessed in Japan, did not preclude her from acquiring this skill in Australia. Not only did Annika learn essay writing in Australia, she also learnt various genres of essay writing, such as persuasive and academic writing. The final new skill she mentioned was being able to conduct a search for information herself. Nevertheless, a foundation of these skills was evident in the book report presented above from the Japanese primary school. As

Lewis (1995) argued, the successes of the Japanese educational system are likely to be due to the learner-centred foundation in the primary school rather than the examination-based system thereafter.

Conclusions

This chapter addressed the transfer of literacy and other academic skills from Japanese to English in the transition of two children who were educated in the Japanese educational system until Year 10, and the Australian educational system from Year 11 until university. Arguably, the transfer of literacy skills from Japanese to English identified for Eloise by Stephens and Blight (2004), continued to exert an effect throughout both siblings' schooling. While they were in Japan, their spoken English was maintained in the home, and Japanese literacy was fostered at school. After the transition to the Australian school, their English literacy was facilitated firstly by their foundation of spoken English that their parents provided in the home in Japan, through the annual visits to the Australian school, and finally by the metalinguistic awareness of having become literate in a strikingly different language.

There were some parallels between the pedagogical activities in the Japanese primary curriculum and those of the high school Australian curriculum, but fewer between the Japanese middle school curriculum and the Australian high school curriculum. The Japanese middle school curriculum was test-centred and required children to memorize specified sections of the textbook to prepare for these tests. In contrast, the Australian high school curriculum required students to identify their own research question in the Research Project, choose their own form of data collection, and select their own reading matter. Despite the dissimilarities between the Japanese *middle* school and the Australian high school, the transfer of skills from the Japanese *primary* school to the Australian high school should be acknowledged.

At the time of writing Eloise and Annika are in university and there is a likelihood of minimizing the difficulties in adapting in the immediate year of transition, Year 11. With the passing of time they are preoccupied with new challenges and tend to forget those of the past. An examination of their Australian assessment reports, and their comments, reveal that adjusting to the demands of the different

curriculum was indeed challenging. The transition was greatly aided by the support and feedback of the teachers. This transition was possible because of the transfer of some of the academic skills between each system, and the potential for learning new skills that all students possess.

This case study only concerned two participants from a single family, and cannot be generalized to other families. The case of third culture children being educated in Japan until Year 10, and making the transition to an English-speaking education is rare, but unlikely to be solitary. The current study provides support for Cummins' (1984a) interdependence hypothesis of the transfer of linguistic skills between languages, and the notion that some of the academic skills learnt in Japan provided a foundation for academic study in the senior secondary and tertiary systems in Australia. In order to fully investigate these hypotheses, many more longitudinal case studies of third culture children making international transitions between the respective education systems are called for. Further studies should address not only the transfer of skills across the education systems, but also the benefits that children can derive from the transition, such as enhanced creativity.

This study described the transfer of academic skills across a range of school subjects. A more focused study of the transfer of skills between each of the school subjects merits further investigation. For example, does training in the writing of *haiku* transfer to aesthetic expression in English? How do the skills learnt in the visual arts, music and sport in the Japanese educational system transfer to a western educational system? Can children learn maths in a western educational system while using the inner speech for maths that they learnt in Japan? The pursuit of these questions may yield information that can aid third culture children to efficiently transfer between disparate education systems. Furthermore, insights into the respective education systems that these studies generate could inform intercultural understanding, and both educators and policy-makers in each system could learn from each other.

About the Contributor

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Appendices

Appendix 1.

Sample of Creative Writing in the Japanese Primary School

見つけたよ！！		5月10日 火
ミミズ		名前 ブライアム
		
ははの がに ちが すきですと はが が すき も です。と まと を う め ます。 と ま と が おお き くな り ま す。と ま と が す き です。う め る の が す 冬 です も い か い したい です。おうち で も う め る の が あ り ます。 (ははや花をよくみていますね。 )		

Diary Entry by Annika in Year 5

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