Code-switching as a Result of Language Acquisition: A Case Study of a 1.5 Generation Child from China[1]

Yalun Zhou, Ph.D.[2]

Michael Wei, Ph.D.[3]

Abstract

Despite individual differences, all bilinguals share the ability to act in their native language, in their second language, and to switch back and forth between the two languages they know (Van Hell, 1998). Chinese is the largest Asian American ethnic group in the United States. Their use of code-switching is an increasingly important issue in understanding their language choice and language development. This study on code-switching between a 1.5 generation Chinese child and her parents will add perspectives on the growing literature of Chinese American families, their language interaction and language development.

Introduction

There are several definitions for code-switching. Gumperz (1982 b) defined code-switching as "the juxtaposition within the same speech exchange of passages of speech belonging to two different grammatical systems or subsystems" (p. 59). The emphasis is on the two grammatical systems of one language, although most people refer to code-switching as the mixed use of

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[1] This paper was presented at the 2007 Annual Conference of Teaching English to Speakers of Other Languages (TESOL), Seattle, Washington.

[2] Yalun Zhou, Ph.D., Assistant Professor, Director of Chinese Minor Program, Dept. of Communication and Media, Rensselaer Polytechnic Institute, zhouy12@rpi.edu

[3] Michael Wei, Ph.D., Associate Professor, TESOL Program Director, School of Education, University of Missouri-Kansas City, weiyou@umkc.edu

languages. Milroy and Muysken (1995) stated that code-switching is "the alternative use by bilinguals of two or more languages in the same conversation" (p.7). Macswan (1999) also claimed that "code switching is a speech style in which fluent bilinguals move in and out of two (or conceivably more) languages" (p.37). With different notions of definition, code-switching has been studied in different ways, thus cultivating different interpretations or understanding toward this language phenomenon.

General perspectives about code-switching

When looking at code-switching regarding bilingual speech, it is inevitably related to language processing and the inference of first language.

From the language processing perspective, the correlation between low L2 proficiency and transfer can be explained by the assumption that L1 morphemes remain highly active in beginning L2 learners due to their higher frequency, and are therefore easily selected for production (Poulisse & Bongaerts, 1994). However, Odlin (1989) pointed out that the correlation between low L2 proficiency and transfer applies primarily to negative transfer, whereas certain types of transfer, such as cognate vocabulary use, occur even at high levels of proficiency.

The cognitive approach allows us to observe the way in which the actual shift is achieved. However, the picture is by no means complete, and a number of issues demand further exploration (e.g. the relative contribution of local versus global processes and the interference of working knowledge to the switch).

Although code-switching is not accepted as normal ways of speaking by some linguists, common people, however, regularly use mixed codes in a variety of situations, and treat

code-switched utterances as grammatically accepted sentences (Agnihotri, 1998).

Research on the acceptability of mixed code in the social and cultural context across the linguistic and cultural boundaries suggests that code-switching is neither random nor meaningless. Rather, it is a device that conveys important social information ranging from relationship roles between speakers to feelings of solidarity, intimacy, and so forth (Valdes-Fallis, 1978).

One of the most important results of the sociolinguistic research of recent decades on code-switching demonstrates that a speaker's vocal movement from one language to another, both over prolonged stretches of discourse and in single words or phrases, constitutes a continuous unitary communicative performance. Researchers have dealt with bilingual communication in terms of the 'code-switching paradigm,' attempting to specify when, and under what conditions, or how and by what devices speakers select the varieties to communicate his/her meaning. While people generally view code-switching either as language proficiency transfer or systematical communicative performance accepted by social context, sociolinguistic research findings have shown that fluent bilinguals seem to have the capacity to switch from one language to the other and to apparently separate both languages completely (switching proficiency). In addition to a bilingual's degree of L2 proficiency, the bilingual status of the interlocutor, and the communicative setting appear important for the degree of code switching (Rodriguez-Fornells, Van der Lugt, Rotte, Britti, Henze, & Munte, 2005). Similar research perspectives are demonstrated with Chinese-English code-switching.

Chinese-English code-switching: A close look on research findings

Chinese-English code-switching is observed quite frequently as in the following example:

Wei shen me ta na me *sad*? [Why is she so sad?]

Because ta xiang mama le. [Because she misses her mom.]

Code-switching can appear in the process of language acquisition or after a person has acquired certain degree of English.

In a study on the code-switching and code-mixing behavior of a child learning English and Cantonese-Chinese simultaneously, Kwan-Terry (1992) found that code-switching of the bilingual child can be concluded into two categories: inter-sentential and intra-sentential code-switching. Among them, her findings of code-switching in inter-sentential involvement have shown that the more emotionally involved a child is, the more likely he/she is to want to use the language norm. This echoes Gumperz' statement (1971) that the degree of personal involvement is a feature affecting code-switching. Kwan-Terry's finding also responds Grosjean's study in 1982 that a bilingual child uses code-switching to reinforce his/her meaning by repeating a same phrase or a sentence in two languages.

Code-switching also happens when the interlocutors change in a conversation. In a study on a bilingual Chinese English child in an after-school Chinese program, Ruan (2003) found that the subject switched her language from English to Chinese when adults or the Chinese teacher joined the conversation, or quoted some Chinese in English utterances when emphasizing the Chinese teacher's words for practical purpose. For example, the teacher said, "*Bu ke yi da ren*!" [the teacher said, 'You are not allowed to punch other people!'].

Kuang's (2002) case study demonstrated that when Chinese-English code-switching

occurred between parents and children, although the older speaker may initiate a discourse in one language (usually the ethnic language), the younger speaker may choose not to conform (i.e. choose the non-ethnic language to respond):

Mother: *Mommy* pu si wan ni cher yiang, hah. [Mandarin mixed with English: Mommy doesn't like that you are like this, hah?]

Son: What did you say mom?

Mother: I said, tomorrow we take pizza.

Son: Tomorrow already ah? I thought you said afterward? (p.98)

This extract showed that the mother tended to speak ethnic language to show authority showing her dislike her son's behavior. The son chose English as preferred language with his mother. To emphasize, the mother also shifted back to English.

Li (1998) conducted a similar study in United Kingdom regarding code-switching behaviors. He analyzed several code-switching conversations and concluded that while Chinese adults preferred to speak and to be spoken to in Cantonese, their children preferred English. In the meanwhile, the conversation demonstrated what Chinese parents expected their children to do, i.e. to comply with the authority structure of the family in the Chinese culture. Children should do as their parents tell them to. Thus, the fact that a bilingual speaker has chosen to code-switch invites a more detailed analysis which can demonstrate that in addition to its capacity of highlighting the status of on-going talk, code-switching as a contextualization cue has the capacity to bring about higher-level social meanings such as the speaker's language attitudes, preferences, and community norms and values.

Qi (1998) investigated the factors that influence the language-switching (the author preferred this term) behavior in the thinking processes of a bilingual engaged in second language composing tasks. Qi found that the participant often verified her choice of a difficult L2 word by cross-checking the appropriate equivalent of the word in L1 and L2.

'Gaoya' [Chinese Pinyin; its intended English translation equivalent is 'exquisite']. Oh, this is a difficult word. 'Gaoya,' *Noble*? *Noble* means 'Conggao,' *Noble* songs? *Sounds strange*. Mm – *Graceful*? Yeah *graceful means* Gaoya. Okay. I'll *use this word* (Qi, 1998, p427).

Qi's findings suggested that the use of code-switching made it possible for a thought to be developed cross-linguistically without slowing down the pace of thinking. The language-switching enabled an initiated thought to continue to develop and helped generate content that the participant sometimes felt less competent to produce exclusively in L2.

In a study examining patterns of language choice and code-switching behavior between competent English speaking parents and 4.0-6.0 year old children who were either born in or moved to the United States within six months of birth, Pan (1995) found that, in dinner table conversational settings, children incorporated English into more of their utterances, and were more likely to code-switch in the Chinese-English direction. She summarized five types and direction of code-switching during the family dinner discourse:

Type	Direction	Example
C → E codeswitch	All English following either all Mandarin or Mandarin with some English lexical	Mother: ni hai yao bu yao *rice*? [do you want more rice]

	items	Child: no, I don't want any more.
E → C codeswitch	All Mandarin following either all English or English with some Mandarin lexical items	Mother: ni hai yao bu yao *rice*? [do you want more rice] Child: wo bu yao le [I don't want any more]
C → E codemix	Utterance of combination following an all-Chinese utterance	Ni hai yao bu yao fan? [do you want more rice] 'wo bu yao *rice* le [I don't want more rice]
E → C codemix	Utterance of combination following an all-English utterance	Mother: do you want more rice? Child: wo bu yao *rice* le. [I don't want rice any more]
Nondirectional	Utterance of combination following another utterance of combination	Mother: ni hai yao bu yao *rice*? [do you want more rice] Child: yes, I want more rice. *Wo e le [I am hungry]*

(Adapted from Pan, 1995, pp.320-321)

Pan also gave an excerpt of a conversation between a mother and her child to demonstrate the child's perception about code-switching:

Mother: ni bijiao xihuan *Chinese* haishi *English?[Do you like Chinese or English better]*

Child: wo meici dou jiang *Chinese*. Meici *body* dou rang wo jiang *English. [I always speak Chinese. Body always makes me speak English]*

The child's description suggested that he/she saw his movement between the two languages as spontaneous and even automatic. Pan further proposed that for parents who were competent second language speakers needed to be more reflective about their own language use, and adopt a pedagogical stance in maintaining minority home language.

In a context that English is only used as foreign language, a situation in which the speakers use Chinese as the native language and communicate with most people in Chinese, code-switching has shown similar functions as with the above cases. Chen's (1996) ethnographical study showed five functions of code-switching of his college students and faculty colleges in a Taiwan campus: expressive, directive, metalinguistic, poetic, and referential. His research found that referential functions occurred most frequently when vocabulary lacks available Chinese equivalents or lack semantically appropriate Chinese equivalents. Chen's results revealed that code-switching was used as linguistic variety that was concerned with both communicative appropriateness and social identity marker.

The aforementioned studies about code-switching reveal that, despite individual differences, all bilinguals share the ability to act in their native language, in their second language, and to switch back and forth between the two languages (Van Hell, 1998). One of the perennial questions in bilingualism research is: 'Why do bilingual speakers switch from one language to another in conversational interaction?' Sociolinguists who studied code-switching before the 1980's focused their attention on extra-linguistic factors such as topic, setting, and relationships between participants. The underlying assumption was that only one of the language varieties was appropriate for a particular situation and that speakers needed to change their choice of language to keep up with the changes in situational factors in order to maintain that appropriateness. After the 1980's, sociolinguists began studying the situation as an analytic concept in code-switching. They called for a focus on member procedures, concluding that the meaning of code-switching must be interpreted with reference to the language choice in the preceding and following turns by

the participants (Li, 1998). The research focuses on “how” questions instead of “why.” It is about how the meaning of code-switching is constructed in interaction and why it is switched. Switching may involve intersentential, intrasentential and lexical switching. Sociolinguists study the social and linguistic functions of code-switching.

With regard to Chinese-English code-switching, it also mainly relies on the research findings of sociolinguistic studies. Pan’s (1995) study gave a detailed description of proficient parent-child code-switching in the dinner table settings. What will it be in conversations when discussing academic issues? The current study on code-switching of a 1.5 generation child and her parents might provide further insights of Chinese-English code-switching on academic issues. Before we discuss this study, we would like to briefly review the definition and language characteristics of 1.5 generation.

1.5 Generation and their language characteristics

1.5 generation immigrants are generally defined as those who immigrated before adolescence and were primarily educated in the U.S. They are "familiar with U.S. culture and schooling, have different learning needs from other English language learners. They sound like native speakers of the new language in conversation; have adequate social skills in the new language; speak the mother tongue at home; are less skilled in the academic language, especially in the area of writing; have little or no literacy in the mother tongue, especially in the area of writing systems and academic registers (Harklau, 2003).

"1.5 generation" immigrants share some characteristics of both first- and second-generation immigrants and yet are unlike both (Harklau, 2003; Harklau, Losey, & Siegal, 1999; Rumbaut &

Ima, 1988). Research indicates that the 1.5 generation might fare better educationally and might be better adjusted than their peers who were born in the U.S. (i.e., the second generation). Chiang-Hom (2004) discovered that, compared to second generation Chinese American peers, foreign-born Chinese American adolescents had higher academic achievement, fewer psychosomatic problems, similar or lower depressive feelings and psychological stress, and a lower likelihood of participating in violence or delinquency. Overall, the 1.5 generation and the second generation of Chinese Americans had better academic achievement than the third generation.

The characteristics of 1.5-generation immigrants have decided that they are different from the American-born bilinguals. They normally have stronger home language competencies and use more home language to communicate with parents at home. However, they are not competent enough to talk about academic issues in home language because they move to foreign countries before they acquire cognitive academic competence. The exploration of code-switching and code-mixing with this group of bilinguals is comparatively fewer and worth deeper investigation. The purpose of this study is to explore code-switching with a 1.5 generation Chinese child's family whose parents are proficient English speakers. In the context of a proficient bilingual Chinese-English family (all are ELLs), when both languages are manipulated fluently, what kind of code-switching is produced when discussing academic issues? Will it identify Pan's (1995) switch directions and Chen's (1996) functions of code-switching, especially the referential function where equivalent Chinese vocabularies are not available? What are the new insights of this particular code-switching setting?

Method

Participants

The participants of this study are a 1.5 generation child, Mary and her two parents, David and Cathy. The parents are also two researchers of this field. David was an assistant professor at a Midwestern university. Cathy was enrolled as a Ph.D. student in English as a Second Language at the same university. David and Cathy devoted as much time as possible to Mary's English and Chinese education. They were not only parents but also home teachers and researchers, tracking their child's progress in language acquisition and taking every opportunity to enrich their child's learning both in languages and in content areas.

Mary was the focus of the study in terms of her code switching with different people at different settings, especially code switching at academic context. She moved to the United States when she was seven and half years old. Before that, she had received neither formal Chinese schooling, nor English education. Fluent in spoken Chinese, Mary was highly motivated to learn English, so that she could be friends with other children of her age and make progress in school. She exited ESL program within 10 months and was identified by the Gifted and Talented Program after two years of learning English. Paralleled with her English acquisition was her Chinese acquisition in literacy and in content area knowledge. She attended a Chinese school on Sundays. When discussing her English and Chinese learning, she cheerfully agreed to be audio-taped and interviewed. By the time the current study was conducted, Mary was a fluent

bilingual, trying to improve her content area knowledge in both languages: English and Chinese.

Data Collection and Data Analysis

Data was collected through recordings of Mary's conversations with different English speakers and Chinese English bilinguals. The researchers also recorded their tutoring with Mary on different subjects in English and Chinese. All conversations were transcribed by the second author. Data also include field notes and researcher's journal entries. Each instance of code switching and code mixing was coded and labeled according to its potential function. Then the similar coded instances were grouped together into major categories and patterns.

Results

Mary's code-switching is characterized by her language acquisition stages: beginning stage, dominated by Chinese; second stage, acquiring large quantity of English; and third stage, mastering English and learning Chinese as a heritage language. Her code-switching as a result of language contact and language development shows unique characteristics. At the very beginning, Mary used Chinese all the time for talking with Chinese speakers since she did not have the capability to speak English. One and a half months into her English learning, a conversation between Mary and an ESOL student from El Salvdor was recorded.

Mary: Today you…Today you what? Oou? Today you home! Ha? Today me…go home, watching TV, reading log, a ha, you reading log…finish? My reading log not finish. A ha. Hum. (laugh). How old are you? Ha? Eight? Seven. (laugh). Ha? My birthday (Mary asked the first author in Chinese what English word for June and before the first author

got a chance to reply, she continued), six, 18, no, no, February two, no, no February two, six, no, March, no, I don't know. You what? Today? February 10, March. You, March 10? February 10th. Where are you from? Ha? EL SALVDOR? (Laugh). Ha? Today I no finish little bit…

From this conversation on the phone, it was clear that Mary's speech was limited to simple phrases and some highly functional or formulaic expressions like watching TV, reading log, I don't understand, bye-bye. The imbedded sentence structure is Chinese (e.g. Today me...go home; I no finish little bit). To make herself understood, Mary tried hard to dig out every word she knew to express herself. Mary did not know how to say her birthday—June 18th. She said six, 18. She tried hard to express that meaning, but finally she gave up. When she did not understand something, she used Chinese word "ha?" to beg a pardon.

Undoubtedly, Chinese was her language of preference at this stage of Mary's life. She resorted to Chinese whenever possible. Her English is obviously translated from Chinese inserted with a few English words or formula when she talked with English speakers. When talking with her parents, Mary usually used Chinese.

After the first three months, especially after six months, code-switching was obvious in Mary's speech. She started mixing some English vocabulary in her Chinese sentences more and more frequently. For example,

wo qu chui *flute*. [I'm going to play flute.]

wo yao qu *watch TV*. [I'm going to watch TV.]

zhe ge zhou mo women yao guo *Chinese New Year*. [We are going to observe Chinese New

Year this weekend.]

Mary's code switching in the early stage was mainly with formulaic expressions. The following formulaic expressions were used consistently when she was switching between two languages: whoops, ah-ha, and, I don't know, yeah, no, and I mean, etc. For example,

Ta hen nanguo, *I mean*, ta bu gaoxing. [He is very sad, I mean he is unhappy.]

In the second stage of Mary's language acquisition, she was able to control more English utterances, and most of the direction of her code-switching is from English to Chinese:

I'm happy because *wo hen congming*. [I'm happy because I'm smart.]

He said something like *wo bu xihuan ni.* [He said something like I don't like you.]

Sometimes, Mary inserted English words into her Chinese sentences first, and then switched back to English:

Amber *xiang qu xuexiao,* but she doesn't like her teacher. [Amber wants to go to school, but she doesn't like her teacher.]

After two years she used complete sentences in English and complete sentences in Chinese, one after the other. The code switching happened in larger chunk toward sentence level. For example,

Anyway, the average is like 93. dan ta yao women nadao 98. [Anyway, the average is 93, but he wants us to reach 98.]

I don't remember where she went. Ta haoxiang shi qu le zhongguo. [I don't remember where she went. It seems she went to China.]

Tamen wu nianji jiu you nan pengyou le. *People are like getting engaged at 18 years old*.

[They have boyfriends at grade 5. People are like getting engaged at 18 years old.]

Mary: wo buxiang du mai huocai de xiao nuhai *because it's sad.* [I don't want to read *The Little Match Girl* because it's sad.]

I know why. Because he was hen haixiu, suoyi *he sticks his head in the sand.* [I know why. Because he was very shy so he sticks his head into the sand.]

Four years after Mary studied English in America, Mary became a competent English speaker. English emerged as her dominant language. However, her parents made a family language policy: only Chinese at home, hoping that Mary could keep her heritage language. To comply with this policy, both Mary and her parents tried not to speak English at home. Mary's code-switching was found profoundly in her discourse. She switched two language back and forth naturally without breaking the grammatical congruent in each language, nor slowing down the language processing speed. This was more obvious when talking about academic issues.

Parent: zuo tian shu xue ceyan cuo le jige? [How many mistakes did you make in math quiz yesterday?]

Mary : wuge [five]. *Dont' worry. It's five out of 200. Whenever I said three, you think it is three out of four. When I say four, you think four out of five. No!*

Since Mary had not received formal education in China, all her knowledge and vocabulary about schooling was in English. This makes her code switching dominantly from English to Chinese, and Chinese only constituted as a very little portion in such settings:

Parent: jintian shuxue xue shenme? [What did you learn in math class today?]

Mary: Nothing. All we did was go in, talk about the problem of the day. He didn't explain

what the answer was and explained how he did it and the teacher told us the right answer, and explained the right way to do it, then we got new books, then we wrote down our names in our new books, then we told the teacher everybody told their teacher their number for the new books. And he wrote it down, then *ta jiu* [he, the teacher] passed back the test from yesterday and told us to correct it, but we already corrected it. So I don't know why he passed it back without giving the new correction grade, so he said to turn it back in again, so we did …. Then *women jiu zuo yige book limian de* investigation *dongxi* with a partner [Then we did some investigation exercise of the textbook with a partner].

After Mary had fully acquired English, her parents (i.e. the researchers) increased the intensity of teaching Mary's heritage language—Chinese. At this time, both Mary and her parents code-switched in the process of Chinese learning and teaching. For example, this conversation happened when the parent wanted to examine Mary's understanding of Chinese vocabulary:

Parent: fanbo shi shenme yisi? [What does *fanbo* mean?]

Mary: *retort*.

Parent: Dui. *Debate* de shishou yao fabo duifang…ye jiao *rebut*. Yigeren chenshu, yigeren fanbo. [Right. When debating, you need to retort the other party. It is also called rebut. One declares a statement, the other rebuts.)

Mary: *Yeh, yeh*.

When teaching new vocabulary or correcting mistakes, the parent would code-switch too. For example, this is a conversation when reviewing Chinese vocabulary:

Parent: Zanshang— *appreciation with admiration*.

Didao—

Mary: *underground.*

Parent: *Tunnel*

Discussion

This study did not utilize code-switching to comfort, or to go against the hierarchical order of parent-child relationship shown in some studies (i.e. Kuang, 2002; Li, 1998). The findings in this study supported Pan (1995)'s types of code switching and switching directions. In this study, Mary, a typical 1.5 generation child, demonstrated all types of code switching that Pan listed in her study, and had her own code-switching characteristics in the process of language acquisition. At the beginning when Mary had just arrived in America, she demonstrated few code-switching utterances with her parents since she mostly spoke Chinese. When she talked with English speakers, she usually used direct translation of Chinese into English. For example, when she wanted to express her birthday, June eighteenth, she directly translate June into "six" in her English. When she wanted the other party to repeat, she used Chinese interjection "Ah?" Gradually, Mary's code-switching gradually increased and occurred either from English to Chinese or Chinese to English. At the beginning stage, the code-switching tended to be more on a lexical level or with formulaic expressions.

After two years, Mary was more likely to use mixed utterances of larger chunks of phrases or sentences combined with English and/or Chinese without breaking the sentence structure or meaning. This situation lasted for one year before she used nondirectional code switching:

utterances of mixture depending on what kind of language is initiated in the conversation. No matter what language is initiated, she tends to have longer English sentences, with fewer and shortened Chinese sentences. She is able to switch back and forth between two languages fluently.

In the third stage of Mary's language acquisition, Mary was competent in English, excelled in American schools, and was fluent in spoken Chinese. Due to the fact that English had become Mary's dominant language after five years' of American schooling, her preference was to speak English. However, she still had certain Chinese sentences in her conversation. The following conversation paralleled Gumperz (1971) and Kwan-Terry (1992) that the more emotionally involved, the more language norms Mary would use. It also explained Mary's language preference when speaking:

Parent: ni xihuan shuo zhongwen haishi shuo yingwen? [Which language do you prefer to speak? Chinese or English?]

Mary: dang niba luyinji fang zheli, wo dangran jiu shuo zhongwen luo. Dan pingchang dang wo *excited or something like that, I don't.* [When you put a tape-recorder here, I, of course, speak Chinese. But when I got excited or something like that, I don't].

This conversation is an example of how personal involvement affects language choices, whether it is actively or passively.

When asked why she sometimes switched back to Chinese, Mary said: "wo xiang qilai shuo zhongwen. Wo pai zhongwen tuibu, kao *SAT* jiu bu hao." [I think of speaking Chinese because I am afraid my Chinese level will decay and I cannot perform well in the SAT]. This means that

personal determination influences Mary's code-switching.

What makes Mary's code-switching unique is that her parents required Mary speak Chinese at home so that she can keep her heritage language. This policy provided the researchers another finding in this study, that is, as a result of language use and language contact, Mary's second language dominant her daily life. When she has to learn the first language as heritage language, she code-switches a lot and the switching level goes back to the beginning stage when she first learned English as a second language. How the code-switching develops in her heritage language learning is awaiting further study.

The other characteristics of code-switching in this family is that the parents also code-switch although they require Mary speak Chinese. This responds to the claims that code-switching is used when there is need to reinforce or clarify in communication (Chen, 1996; Kwan-Terry, 1992). Since Mary's Chinese knowledge is not strong enough to paraphrase Chinese vocabulary, both the child and the parents have to code-switch so that the understanding or clarification is easily and effectively expressed. This purposeful use of code-switch takes Pan's (195) stance that competent bilingual parents should choose language in regards to heritage language maintenance. Whenever Mary could not find adequate Chinese equivalents in describing her school life, the parents would model the Chinese equivalent. Sometimes, by using code-switching, both parents and the child can check each other's understanding toward language. When the first author explained the Chinese words "youqu" as both interesting and interested, Mary corrected her mother that, "No, youqu is only interesting. Interested should be ganxinqu." This code-switching nevertheless suggests that code-switching is a tool to examine the understanding of both

languages. It also demonstrates that competent bilingual code-switching is sometimes a conscious choice, not a sign of deficient language competency.

Conclusion

Mary, as a 1.5 generation child in America, has to learn English as a second language. After she acquires English proficiency, English becomes her dominant language, and the first language has to be learned as heritage language. This acquisition development is in concordance with similar findings of other studies, i.e. a child's second language is more like her first language and more accessible than the child's first language (Altarriba, 1992, 2000; Heredia, 1997).

The third stage of Mary's code-switching shows that when a 1.5 generation child has acquired fluency in both languages, they can switch between them unconsciously. It is not because of a deficiency of language ability, but an acceptable result of language acquisition. Although the neurolinguistic choice of L1 or L2 needs further exploration, one possible explanation for this might be that language shift occurs after a certain level of fluency and frequency of practice. Mary's code-switching on one hand proves Chen's (1996) research that when there is no available Chinese equivalents, the speaker tends to code-switch. Most of her lexical switches did have referential function. On the other hand, the fact that Mary is older and more proficient in English than the subjects in Pan's (1995) study shows Mary's code switching occurs more on sentential level since English seems to be Mary's dominant language.

During the process of Mary's language acquisition, Mary and her parents are inevitably going to code-switch. The purpose can be referential, reinforcement, or consciously adoption.

The reasons are as the following:

First, the vocabulary gap and academic knowledge gap determine that there is not available one-on-one equivalent. Some of those are due to Mary's lack of formal schooling in China. Some of those are due to the differences of two languages.

Second, the English acquisition stages characterize the patterns and directions of code-switching of Mary. It develops from lexical to sentential level and discourse level.

Third, a consequence of English as dominant language for the 1.5 generation is that they have to learn their heritage language as a second language, especially in the content areas. In this process, similar code-switching patterns and directions might happen. Further studies might prove this.

Mary's case study reveals that the 1.5 generation children have shared some common characteristics of code-switching among bilinguals. The switch can be lexical or sentential depending on the stage of language acquisition. It verifies the claims that fluent bilinguals seem to have the capacity to switch from one language to the other and to apparently separate both languages completely (switching proficiency). In addition to a bilingual's degree of proficiency in L2, the bilingual status of the interlocutor and the communicative setting appear important for the degree of code switching (Rodriguez-Fornells, et al, 2005).

Mary's case of acquiring English and heritage language suggests that code-switching is natural and inevitable in language acquisition and development. It should not be viewed as deficient. If competent bilingual parents of 1.5 generation children want to assist their child's English acquisition or maintain their child's heritage language, code-switching can be a useful

pedagogical strategy. It can either help reinforce and clarify the meaning or makes content area knowledge learning more accessible.

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