

# **Relative clauses in English-Mandarin bilingual children: Language transfer and development in Singapore**

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## **Abstract**

The role of cross-linguistic influence in bilingual children's development remains a matter of debate. Some researchers have proposed that simultaneously bilingual learners develop the linguistic systems of two languages in the same way as matched monolingual children do. Other researchers have argued that bilingual children show different developmental pathways. This study investigates cross-linguistic influence in the acquisition of relative clauses by English-Mandarin bilingual children in Singapore. The elicitation task included narration and interview tasks. Thirty-six primary school students aged from 6 to 11 years old completed the task in both English and Mandarin. The results reveal that the number of relative clauses increased with age in both languages. Participants had a preference for subject relatives over object relatives. The most frequent error type in Mandarin involves postnominal relative clauses, which have not been reported in monolingual children in the literature, and thus can be treated as evidence of transfer from English. The findings of this study provide evidence for cross-linguistic influence in bilingual children.

## ***Keywords***

Cross-linguistic influence; relative clause; bilingual children; Singapore

跨语际影响；定语从句；双语儿童；新加坡

## ***Introduction***

The role of cross-linguistic influence in bilingual children's development remains a matter of debate. Cross-linguistic influence refers to emergence of grammatical features of one language that can be attributed to the bilingual's other language (Yip and Matthews, 2007). Several researchers (Chang-Smith, 2010; De Houwer, 1990; Genesee, 2001) have supported the Separate Development Hypothesis (SDH) which proposed that simultaneously bilingual learners develop the linguistic systems of two languages in the same way as matched monolingual children do, going through similar stages at a similar rate. Other researchers (Döpke, 1997; Yip and Matthews, 2007) have argued that bilingual children follow different developmental pathways from monolinguals due to cross-linguistic influence. The evidence they gave includes the finding that Cantonese-English bilingual children initially produced prenominal relative clauses (RC) in their English, which is evidence of transfer from Cantonese to English as Cantonese has prenominal RCs (Yip and Matthews, 2007). One possible explanation for the different findings could be the unbalanced development of the participants' two languages, since the direction of language transfer is generally from a dominant language to a non-dominant language. Participants in studies that support the SDH (Chang-Smith, 2010; De Houwer, 1990) were more or less balanced bilingual children, while those in Yip and Matthews' studies were Cantonese-dominant. Given that the environments where bilinguals receive input and people to whom they use languages are unlikely to be exactly the same, their two languages can rarely develop in balance. Thus, it is necessary to conduct more research on unbalanced bilinguals.

In view of the substantial literature on investigating bilinguals in early childhood using a longitudinal case study method, this paper investigates the acquisition of

relative clauses by English-Mandarin bilingual primary school students in Singapore using a cross-sectional design. A brief introduction of the language background of Singapore is necessary here. Different Chinese dialects were commonly spoken in Singapore, such as Hokkien, Cantonese, and Teochew before the 1970s (Dixon, 2005). A shift in social and home language from Chinese dialects to English and Mandarin has taken place since the 1960s. Two socio-political events facilitated this shift: making English the medium of instruction for content subjects in 1966, and the Speak Mandarin Campaign in 1980s. Establishing English as the medium of instruction for content subjects promoted the English proficiency of Singaporeans, while the Speak Mandarin Campaign encouraged wide use of Mandarin in Singapore among different dialect-speaking Chinese communities. According to the Singapore censuses of 2000 and 2010 (Department of Statistics, 2001; 2011), and a report by the Ministry of Education (2004a), the use of Mandarin and English as home languages is increasing while the use of dialects is decreasing. Current generations are exposed to English and Mandarin from birth, though older generations may still speak dialects at home. Nowadays, Singaporean children are generally English dominant despite their different home language backgrounds.

We shall now turn to the typological backgrounds of English and Mandarin in relation to the structure of relative clauses.

### ***Literature review***

#### *Typological features of relative clauses in English, Chinese and Singapore Colloquial English (SCE)*

A relative clause (RC) is an embedded clause used to restrict the reference of a head noun. The head noun plays a syntactic role in both the main clause and the RC. RCs

can take various forms in different languages. Generally there are two types: head-initial and head-final structures, depending on the positions of the head noun and the relative clause. The former type refers to a relative clause coming after the head noun while the latter one refers to the opposite. Ninety eight percent of SVO languages have head initial relative clauses, with Chinese being exceptional (Dryer, 2013).

English is a typical SVO language with postnominal RCs, usually introduced by a subordinating relative pronoun such as *who* or the complementizer *that*. There are different types of RCs based on the syntactic role of the head noun in the main clause. The following four sentences present four basic RC types in English: head noun as the subject in both main clauses and RCs (SS); head noun as the subject in the main clause but the object in RCs (SO); head noun as the object in the main clause but the subject in RCs (OS); and head noun as the object in both main clauses and RCs (OO). The head nouns are underlined in each sentence, and the corresponding RCs are highlighted by [ ].

- (1) The man [who saw him yesterday] is looking for him. (SS)
- (2) The man [whom he saw yesterday] is looking for him. (SO)
- (3) He is looking for the man [whom he saw yesterday]. (OO)
- (4) He is looking for the man [who saw him yesterday]. (OS)

In all sentences, *the man* is the head noun. In sentence 1 and 2, the head nouns are the subjects in the main clauses, while in 3 and 4, the head nouns are the objects. The subordinating relative pronouns are *who* and *whom* depending on the syntactic roles that head nouns play in the RCs.

A relative clause in Mandarin is realized by the particle *de* occurring between a RC and a head noun (Li and Thompson, 1989) which has also been treated as the relativizer. Examples 5-8 illustrate four types of RCs according to the role of the head noun in the main clause and in the relative clauses. The head noun is *nanren* ‘man’ and the RCs are highlighted by [].

(5) [zuótiān jiàn dào tā de] nàge nánrén zhèng zài zhǎo tā  
 [昨天见 到他的] 那个 男人 正 在找他。(SS)  
 Yesterday saw him RL man is looking for him  
 ‘The man who saw him yesterday is looking for him.’

(6) [tā zuótiān jiàn dào de] nàge nánrén zhèng zài zhǎo tā  
 [他昨天 见到 的] 那个 男人 正 在找他。(SO)  
 He yesterday saw RL man is looking for him  
 ‘The man who he saw yesterday is looking for him.’

(7) Tā zài zhǎo [zuótiān tā jiàn dào de] nàge nánrén  
 他在找 [昨天 他见到 的] 那个 男人。(OO)  
 he is looking yesterday he saw RL man  
 ‘He is looking for the man he saw yesterday.’

(8) Tā zài zhǎo [zuótiān jiàn dào tā de] nàge nánrén  
 他在找 [昨 天 见 到 他的] 那个男人。(OS)  
 he is looking yesterday saw him RL man  
 ‘He is looking for the man who saw him yesterday.’

The following typological features of RCs in Mandarin are relevant. First, relative clauses in Mandarin are prenominal, meaning that a relative clause precedes the head

noun it modifies. One explanation for this structure could be that the structure of a RC derives from the structure of adjective or adverbial phrases modifying head nouns. A relative clause can be treated as an extended adjective or adverbial phrase. Yip and Matthews (2007) used this consistency to explain the transfer of prenominal RC structures from Cantonese to English. This consistency also causes difficulty in distinguishing an adjective/adverbial modifying phrase from a relative clause. In this research, to be counted as a relative clause, it needs to include a predicate.

The second typological feature is that the relative clause is a subset of attributive clauses in Mandarin. The difference between a relative clause and other attributive clauses lies in the role of the head noun in RCs. To be counted as a RC, the head noun must play a syntactic role in the clause, such as a subject or an object as in 5-8. In Chinese, we also have clauses in which the head noun does not necessarily play a syntactic role. In example 9 from Li and Thompson (1989), the head noun is *shi* 'matter' while the modifying clause is *wo men zu fangzi* 'we rent a house'. However, *shi* does not play any syntactic role in the RC. Rather, the RC depicts the content of the head noun. Some researchers have explained that in these cases the relation depends more on semantics or pragmatics rather than on syntax (Chan et al., 2011).

- (9) wǒ men zū fáng zi de shì  
[我们 租 房 子]的事  
[we rent a house] de thing  
'the matter of us renting a house.'

To sum up, there are several typological differences between English and Mandarin in terms of relative clauses. First, English is postnominal while Mandarin is prenominal.

Second, a relative pronoun such as *who* or a complementizer such as *that* are needed to introduce RCs in English while in Mandarin *de* is used. Third, The RC is a subset of attributive clauses in Mandarin.

Singapore Colloquial English (SCE) is a product of language contact. Relative clauses in Colloquial Singapore English carry some features of Chinese. The most representative example is the structure with *one* (Alsagoff and Ho, 1998; Yip and Matthews, 2007). Examples of this type are given below (adapted from Alsagoff & Ho's examples).

(10) The man sell milo one went home

(11) The man who sell milo one went home

The relative clauses are postnominal as in standard English, but in sentence 10, the English complementizer *who* is missing. Instead, *one* is placed at the end of the RC, and functions as the complementizer in this type. The position of *one* at the end of the clause is the same as the relativizer *de* in Mandarin RCs, reflecting the influence of Chinese on SCE. In sentence 11, both *who* and *one* are present. The researchers explained that a contact language might not necessarily choose one option or the other. Alternatively, it may integrate features from both languages.

In addition, according to Deterding (2007), the use of *that* as a complementizer when the head noun is a human being is treated as ungrammatical. For speakers of English in Singapore, only *who* and *whom* are accepted.

Several error types have been described in English monolingual children. The first involves resumptive pronouns (Diessel and Tomasello, 2000, 2005; McKee et al., 1998). Resumptive pronouns refer to an unnecessary pronoun in a RC. For example, in *the man who I saw him yesterday*, *him* is the resumptive pronoun which is superfluous here. The second error type is the use of an inappropriate relative pronoun such as *what* (Diessel and Tomasello, 2005; McKee et al., 1998). The third error type is headless relatives. Using an elicited imitation task, Flynn, Foley and Vinnitskaya (2004) found that headless relative clauses were acquired before headed relative clauses in L1 acquisition by thirty-one children with varying proficiency levels. Meanwhile Diessel and Tomasello (2000) found that children at early stages frequently produced presentational copular clauses. In a presentational copular clause such as (12), the function of the main clause is to introduce the nominal element. The proposition mainly lies in the relative clause.

(12) That's the sugar [that goes in there]

Children's relative clauses arguably develop from such simple relatives (presentational copular clauses) expressing a single proposition to complex and full relative clause constructions. The last error type was the omission of complementizers at the early stages (Diessel and Tomasello, 2000).

In sum, the common error types found in English monolingual children include use of resumptive pronouns, using *what* as the complementizer, headless relatives and omission of complementizers.



There were also several error types reported in monolingual children acquiring Chinese. The first error type is again use of resumptive pronouns (Cheng, 1995; Chiu, 1996; Hsu et al., 2009) which was found to be the largest error type among participants aged from 3 to 8 years old. The data were from elicitation tasks in which participants were expected to produce a relative clause to depict the right character. The second error type is resumptive NPs (Chiu, 1996), where instead of a pronoun, speakers repeat the head noun in a relative clause. The third error type is headless relatives. Cheng's (1995) study confirmed that headless relatives predominated at early stages of development in Mandarin, as was also found in English (Flynn et al., 2004).

To summarize, the common error types across English and Mandarin were resumptive pronouns and headless relatives. A comparison of errors found in English and Chinese is shown in Table 1.

[Insert Table 1 about here]

Note that neither postnominal relative clauses in Chinese nor prenominal relative clauses in English were reported in previous studies. To investigate this issue further, the present study is guided by the following two research questions.

1. What error types are produced by bilingual children in Singapore in their English and Chinese?
2. Are these error types different from those of monolingual children?

## ***Method***

This study adopts a cross-sectional design by comparing performance of primary school students across different grades.

### *Participants*

Thirty-six students were selected from four mainstream schools, with nine from each school. The participants were from three grades Primary One (P1), Three (P3) and Five (P5), representing different age groups. According to school reports, the participants were at intermediate proficiency levels in both Chinese and English. The detailed language background of the participants was investigated by a questionnaire to ensure that participants were from families speaking two languages at home.

### *Instruments and tools*

A questionnaire designed by the Singapore Centre for Chinese Language was administered to parents to explore the language backgrounds of the participants. The questionnaire assessed two dimensions of language background: language use and language contact. The first dimension of language use is concerned with language for communication with family members. The second dimension is language contact which involves reading materials, media and language-related activities. Each dimension was assessed by 10 items. Participants were asked to rate each item on a 5-point Likert scale. A lower rating means more frequent use of Chinese over English, while a higher rating indicates more frequent use of English over Chinese. Participants' ratings on each of these items were subsequently converted to scores by the researcher by applying the following rules: a positive one score was given to an item that was rated as 1; 0.5 score was given to an item rated as 2; 0 was given to an item rated as 3; -0.5 score was given to an item rated as 4; -1 score was given to an

item that was rated as 5. A higher score means Chinese is more frequently used than English. A lower score means English is more frequently used than Chinese. An average score for all the items within one dimension was calculated. The average score of the two dimensions was generated as home language background (HLB) index, ranging from minus one to one. Minus one indicates a pure English background, while one indicates a pure Chinese background.

The task included two parts: a narration and an interview. All the participants were required to tell a story based on a series of six pictures. The content of the pictures was related to their school life. Then a series of seventeen questions was asked to elicit participants' comprehension and perspectives on the story. The task was designed in such a way that all the participants including Primary One students were able to perform it. Besides, the task takes the form of a frequently used pedagogical activity so as to examine the use of relative clause in a more natural environment than experimental conditions. All the participants completed the task in two languages, with the order counterbalanced.

#### *Data analysis*

First, RCs were coded in both languages. For the purpose of comparison across two languages, operational definitions of the RC in Mandarin are given below:

1. The head noun must play a syntactic role in the relative clause;
2. There should be a predicate in the relative clause. A predicate can take the form of a verb, adjective or prepositional phrase;
3. There should be a modifying relationship between the head noun and RC.

The data were double coded by the researcher and a research assistant based on the above definitions. The agreement was 95%. The ambiguous cases were eliminated.

After the coding, the relative clauses were further divided into different categories according to the roles the head nouns play in both main clauses and relative clauses. Number and types of RCs were compared across different grades, and error types explored.

## ***Results***

### *Language background information*

The results of the home language background (HLB) questionnaire are shown in Table 2. The HLB index ranges from -0.63 to 0.57 (M, -0.04). This means that all the participants are exposed to both languages at home, though to different degrees. Besides English and Mandarin, ten participants spoke Hokkien at home; four spoke Cantonese, Malay, Teochew, and Hakka respectively.

[Insert Table 2 about here]

### *Total number of relative clauses in English and Mandarin*

As illustrated in

, the participants produced one hundred and four relative clauses in total in both English and Mandarin. Thirteen of the thirty-six participants produced forty-nine RCs in Chinese, while twenty-two participants produced fifty-five RCs in English. More participants produced RCs in English than produced RCs in Chinese. Detailed information is shown in Table 3.

[Insert Table 3 about here]

[Insert Table 4 about here]

The number of relative clauses increased with age in both languages and in both sessions. The RCs in English outnumbered those in Mandarin in the narration session and vice versa in the interview session. In the Q and A session, the participants needed to talk about the characters in the story. When referring to the characters, they sometimes used relative clauses in Chinese but noun phrases such as "the green boy" in English. This leads to the number of relative clauses being slightly higher in Chinese than in English in the Q and A session. As shown in Table 4, SS is the dominant structure in both languages for P3 and P5, and OS is the second most frequently used structure. This demonstrated that participants had a preference for subject relatives over object relatives. P1 participants produced only two relatives, one SS structure and one oblique structure.

[Insert Table 5 about here]

#### *Postnominal RCs in Mandarin*

The largest error type is postnominal RCs in Mandarin. Five participants out of thirteen participants who produced relative clauses in Mandarin made a total of eleven such errors. This means thirty-eight percent of the participants made this error. Such postnominal RCs are not acceptable in Singapore varieties of Mandarin and we therefore assume that they are not part of the adult input to the bilingual children,

though we cannot exclude the effects of adult input on children's oral production.

Examples are given in 13-16.

(13) huì nòng dào (1.5) rén jiā [zhùzài nà gè jiā lǐmiàn]

会弄 到 (1.5)人 家 [住在那个家里面]

Will disturb people living in that CL house inside

‘...will disturb the people who live in that house.’

(14) yī wèi nánshēng [chuān zhe lán yī]

一 位 男 生 [穿 着 蓝 衣]

One CL boy wearing blue clothes

de hěn hàipà

的 很 害 怕

RL very scared

‘A boy wearing blue clothes is very scared.’

(15) kěshì nà gè gāngcái xiǎo nánhái [jiào lǎoshī tíng le

可是 那个 刚 才 小 男 孩 [叫 老师 停 了

But that CL just now little boy ask teacher stop

nèi xiē liǎng gè nánhái de dǎ jià] xià [/] xià le yí gè

那 些 两 个 男 孩 的 打 架] 吓 [/] 吓 了 一 个

those two boys fighting scare one CL

nánhái

男 孩

boy

‘But the little boy who just asked the teacher to stop those two boys fighting scared a boy.’

(16) zhè yì tiān wǒ kàn dào le xiǎo [//] yī [//] liǎng gè nán

这一天 我看到了 小[//]一[//]两 个男

This day I saw little[//]one[//]two CL boy

shēng [bǐ wǒ hái dà ] chǎo jià

生 [ 比我 还 大 ] 吵 架

Than me bigger fight

‘Today I saw two boys who are older than me fighting.’

In the above examples, all the head nouns preceded the relative clauses. In sentence 13, *rén jiā* ‘people’ is the head noun. The relative clause *zhùzài nà gè jiā lǐmiàn* ‘living in the house’ is used to describe the head noun. In Mandarin, the target form is *zhùzài nà gè jiā lǐmiàn de rén* ‘people who live in that house’. As the speaker put the head noun before the relative clause, the relativizer *de* was also omitted in this case. In 14, the relativizer *de* was correctly placed at the end of the relative clause, but again the relative clause is after the head noun. The relativizer was placed within the relative clause in 15. Example 16 is a comparative construction in which the head noun is *nánshēng* ‘boy’, and the relative clause *bǐ wǒ hái dà* ‘older than me’ is used to describe the head noun.

The detailed classification of relative clauses produced by these five participants is shown in Table 6. The following data indicate that among the five participants, the postnominal relative clauses had a fifty-eight percent chance of occurring. Their occurrence, therefore, can be treated as systematic. The HLB indices for the five participants concerned are 0.22, -0.21, -0.21, 0.26, -0.07, indicating that three are from families where English is more frequently used than Chinese, and two from families where Chinese is more frequently used.

[Insert Table 6 about here]

### *Prenominal relative clauses in English*

Only one example of a prenominal relative clause structure was found in English, produced by a Primary One participant. In 17, *teacher scold* is a relative clause modifying *the pupils*. It precedes the head noun. The complementizer was omitted. Based on the context, the intended meaning is that *the pupils who were scolded by the teacher are still angry with the teachers*.

(17) [teacher scold ] the pupils still angry with the teacher

This child is Chinese-dominant based on HLB, consistent with the transfer of prenominal relative clauses by Cantonese-dominant children as described in Yip & Matthews (2007).

### *Headless relatives in Mandarin*

There were four such errors from two participants. The example was given below. In Example 18, the relative clause is *chuān zhe hóng sè yīfú* ‘wearing red clothes’. The head noun and the relativizer are missing. This sentence can be interpreted in two ways. One way is to treat this sentence as a nominalization of the verb phrase. In this case, the particle *de* is needed at the end of *chuān zhe hóng sè yīfú* ‘wearing red clothes’ and there is no need to include the head noun. The nominalization refers to someone wearing red clothes. The other way is to treat it as a relative clause, in which case *de* and head noun are both needed. In either case, the particle *de* is needed.



(18) yī wèi < hóng sè > [//] chuān zhe hóng sè yī

一位 <红 色> [//] [穿着 红 色衣

one CL<red> [//] [is wearing red clothes]

fú ] (1.4) hěn hài pà (1.3)

服 ] (1.4) 很 害 怕 (1.3)

very scared

‘one wearing red clothes is very scared’

#### *Omission and non-standard use of relativizers in SCE*

In both English and Mandarin, participants sometimes omitted relativizers. This error type is always accompanied by other error types such as dislocation of the relative clause. The examples in Mandarin were discussed above. English examples are shown below:

(19) there was two girl [was[/] (1.6) was (1.4) talking and say what are they doing  
why are they fighting.]

(20) I laugh at the woman er(2.9) [pull both of them away.]

(21) this boy is a boy [likes to cause trouble]

Examples 19 and 21 are presentational copular clauses of the kind discussed by Diessel and Tomasello’s (2000) study. They argued that at early stages, children used simple relatives expressing a single proposition, without the complementizer. However, our participants were 6-12 years old, much older than those in Diessel and Tomasello’s study. This indicates that there is a possibility that this error is maintained for longer. The reason may involve transfer from Chinese as Chinese has serial verb constructions which allow more than one verb in a sentence.

Participants also used other relative pronouns as relativizers, such as *nà* ‘that’ instead of *de* in Chinese. In 22, the head noun is *nánshēng* ‘boy’. The relative clause is *méi shì xīhuān kàn rénjiā dǎ jià* ‘like watching other people fight when there is nothing to do’. The demonstrative *nà* ‘that’ functions as the marker of the relative clause instead of *de*, which can be attributed to her home language as the participant spoke Teochew at home according to the questionnaire. In Teochew, the demonstrative *hu* ‘that’ is used in relative clauses (Xu, 2007) which may explain the non-standard use of *nà* in 22.

(22) hé *nà* gè *méi shì xīhuān kàn rén jiā dǎ jià* *nà* *nánshēng*

和那个[没 事 喜欢 看 人 家 打架] 那男 生

and that nothing to do like watch others fight that boy

*měi cì bàn guǐliǎn gěi bié rén kàn xià bié rén*

每 次办 鬼 脸 给 别 人 看 吓 别 人

every time make faces to others to see to scare others

‘and the boy who likes to watch other people fighting when he has nothing to do makes faces to scare other people.’

In English, there were twelve RCs from five participants in which *that* was used when the head nouns are human beings. This usage is accepted in English but not in Singapore Colloquial English, according to Deterding (2007). However, this usage was found in Singapore pupils’ relative clauses.

(23) some teachers will also scold the little children that learn from him of their fighting.

(24) ask his friend that (1.0) know his home and home number

(25) the boy that told the teacher actually scared another boy (1.4) by spitting his tongue and jumping at him.

Although no typical SCE relative clauses were found in English, some modifying phrases with *one* were found. In Examples 26-27, participants used *one* instead of a head noun. These examples could also result from transfer of prenominal modification from Mandarin.

(26) when you win, blue shirt one cry

(27) green and white clothes one think about it

### *Summary of results*

To sum up, the number of participants who produced relative clauses in English and the number of relative clauses produced are more than those in Mandarin. Among these relative clauses, SS is the dominant structure while OS is the second most frequently used type in both languages, demonstrating the children's subject relative clause preference at early stages of development. The error types found in Mandarin were postnominal structures, headless relative clauses, and omission and non-standard use of relativizers. Error types found in English were prenominal structures, omission and non-standard use of complementizers for SCE. Participants produced more postnominal relative clauses in Mandarin than prenominal relative clauses in English.

### *Discussion and Conclusion*

Compared with the error types of relative clauses found in monolingual children acquiring Chinese, this study also found headless relatives, omission and non-standard use of relativizers. Dislocation of relativizers was found in participants who are older

than those discussed in the literature. Resumptive NPs and resumptive pronouns were not found in this research. The reason could be that the participants in this research may have moved beyond the early stage. The largest error type found in this study was postnominal relative clauses which were not found in monolingual children acquiring Chinese in the literature. This error was made by thirty-eight percent of the participants who produced relative clauses. Among the participants who produced this error, it had a fifty-eight percent chance of occurrence, demonstrating its systematicity. As English has postnominal relative clauses, it can be inferred that this postnominal structure reflects transfer from English to Chinese. This finding is consistent with Matthews and Yip's study (2007) in which Cantonese-dominant children transferred prenominal relative clauses from Chinese to English. Although these five participants are not all from families where English is more frequently used than Chinese, it does not necessarily mean their dominant language is not English. Given that English is the medium of instruction at school for all subjects except Chinese, English is presumed to be their dominant language.

Compared with the error types attested in monolingual children acquiring English, omission of complementizers was again found in this study. Previous studies found this error in the early stage of children acquiring relative clause (Diessel and Tomasello, 2000). However, this error was discovered in much older participants than those in the literature. This may be explained by the transfer from Chinese to English. The reason is, first, that Chinese allows serial verbs, which means one clause can include more than one verb without any complementizers. Second, in Colloquial Singapore English, when *one* functions as the relative clause marker, the English complementizer is omitted. In the context of this research, learners were expected to produce Standard English. They may avoid using *one* but forget to put the English

relativizer in its place. However, *what* as relativizer and resumptive pronouns were not found in this research. The reason could be that the participants in this research have moved beyond the early stage. Prenominal relative clauses were represented by a single instance in this study which may be evidence of sporadic transfer from Chinese to English. Though it is presumed that participants in this research are English dominant, this may not be the case for Primary 1 students who have not received as much English instruction as the participants from higher grades. According to the background questionnaire, Chinese is more frequently used than English for one of the P1 participants concerned, which may lead her to be Chinese dominant. Thus, the direction of transfer is still consistent with language dominance.

To sum up, the error types found in Chinese-English bilinguals were substantially different from those found in monolingual children in the literature. The findings can largely be explained by cross-linguistic influence. The main direction of transfer is from English to Chinese, as there were more postnominal relative clauses in Chinese than prenominal relative clauses in English, consistent with the hypothesis that language transfer occurs from dominant language to non-dominant language. This study provides further evidence on developmental pathways of bilingual children, and adds to the case for cross-linguistic influence in bilingual development. However, this is a small-scale study. More research is needed to confirm the findings in this research and further explore whether there is influence of adult input on students' oral production.

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