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The development of verbal morphology and word order in an Indonesian-German bilingual child: A case study

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Abstract

The contexts and circumstances of the occurrence of cross-linguistic influence in bilingual children's language development are still a matter of debate. The present study argues that in the early development of a bilingual child exposed to two typologically distinct languages (Indonesian and German), the child developed two separate linguistic systems. The child, raised in Indonesia, was exposed to Indonesian by her Indonesian mother and to German by her German father. The study focuses on the early stages of verbal morphology and word order, from ages 1;3 to 2;2. The corpus took the form of conversational text or speech based on spontaneous interactions in natural settings. The data was collected using diary records, supplemented by weekly video recordings. In analysing the data, two software systems were used: ELAN and Toolbox. The speech was segmented based on utterances. All verbal morphology and word order was coded. The results show that verbal morphology in Indonesian and German was acquired by the child at different times, with the development of German verbs occurring later than Indonesian verb acquisition. In addition, there is evidence of interaction between the two developing systems. Cross-linguistic interference was identified when the child used the Indonesian vocatives-predicate combination in German utterances while, at the same time, the child also applied the German verb-final clause structure in Indonesian utterances when she should have produced German utterances. Thus, the results from this case study suggest that both language external and internal factors account for the occurrence of cross-linguistic influence.

Key words

development, verbal morphology, word order, bilingual child

1. Introduction

This study addresses the development of verbal morphology and word order in an Indonesian-German bilingual child. First, we focus on the development of verbs in Indonesian and in German and pay attention to the verbal affixes acquired by the child in both languages. We also examine how the child placed verbs in Indonesian and German utterances and discuss the possible interaction between the two developing grammar systems.

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The language acquisition process of children raised with two different languages remains one of the most challenging studies in the field of linguistics. Even though earlier research presents convincing evidence of separate development and confirms that the two languages are acquired autonomously (Carranza, 2007; De Houwer, 1990; Meisel, 1989; Mishina-Mori, 2002; Wei, 2005), the view of the two language systems being acquired in isolation has not been strongly supported by recent bilingual acquisition research findings (Genske, 2014; Kang, 2013; Kupisch, 2007; Matthews, Cheung and Yip, 2017).

While the assumption that bilingual children separate two different linguistic systems is commonly accepted, the possible interaction between the two developing systems has increasingly become the centre of attention. In other words, the two languages may influence one another in the course of development, leading to cross-linguistic influence (Adnyani and Pastika, 2016; Genske, 2014; Ge, Matthews, Cheung and Yip, 2017; Hulk and Müller, 2000; Kupisch, 2007; Soriente, 2007; Yip and Matthews, 2000, 2007). In this paper, the concept of interaction between two languages is supported. We hypothesise that, in acquiring two typologically distinct languages simultaneously (Indonesian and German), the child's two grammatical systems interact at the performance level, with features of one language influencing the grammar of the other. In addition, the possible circumstances for cross-linguistic influence observed in this study will also be discussed.

2. Background/previous research

As indicated, this study concentrates on simultaneous bilingualism. Myers-Scotton (2006) stated that bilingual child language acquisition commonly refers to the acquisition of two or more languages at a very young age. Meisel (1989) used the term bilingual first language acquisition to refer to children who hear two languages from birth. The same term was used by De Houwer (2005) in a study of children under six years old who had been exposed to two languages from birth.

Recent literature in simultaneous bilingual acquisition has argued that children exposed to two different languages develop separate linguistic systems. However, the potential of one linguistic system affecting the other as a form of cross-linguistic influence has been the focus of considerable research (Genske, 2014; Kang, 2013; Kupisch, 2007; Matthews, Cheung and Yip, 2017; Müller, 2008; Serratrice, Sorace and Paoli, 2004; Yip and Matthews, 2007). There has been continuing debate concerning the domains in which cross-linguistic influence may occur and the possible sources of its occurrence.

Some studies have provided evidence that cross-linguistic influence is determined by external factors. For example, Yip and Matthews (2000) reported that syntactic transfer experienced by Cantonese-English bilinguals was determined by language dominance. This external factor has been claimed to override language-internal factors, i.e. language dominance was the main source of transfer, where transfer from Cantonese as the dominant language was proven to be systematic in certain linguistic domains (Yip and Matthews, 2006).

Soriente (2014) also observed cross-linguistic influence in the acquisition of temporal markers in a bilingual child growing up with different typological languages: Jakarta Indonesian and Italian. She reported that the child acquired temporal markers in Indonesian, the dominant language to which the child was exposed. This was very similar to the development of Indonesian monolinguals. By contrast, Italian lagged behind, with the child expressing tense relatively late in comparison to monolingual Italians. Soriente (2014) argued that the inability of the child to produce morphologically correct forms in Italian was due to a lack of input. She also claimed that cross-linguistic influence occurred due to dominance in Indonesian, where pragmatically marked aspects were more salient in the mind of the bilingual child when compared to morphologically transparent languages, such as Italian. In a study of Korean-English bilinguals, the role of language dominance in predicting cross-linguistic influence in bilingual language acquisition was also claimed by Kang (2013).

On the contrary, some studies have shown that a pattern of cross-linguistic influence cannot be accounted for by dominance. Rather, it is mainly determined by internal factors. Döpke (1998) detected cross-linguistic influence in the development of verb placement among three German-English bilingual children. She discovered syntactic transfer from English to German. Döpke argued that the superficial similarity in the languages, with V-XP structures existing in both English and German, resulted in the occurrence of non-target structures in German. Similar results were reported by Müller (1998), who found transfer in the use of subordinate clauses among bilingual children exposed to German, together with English, French or Italian. For example, she found syntactic transfer from English to German,

arguing that this was the result of the ambiguity of input. German, she explained, favours both verb-object and object-verb word orders in subordinate clauses, while English has fixed verb-object word order, which does not create ambiguity.

Hulk and Müller (2000), in a study of a French-Dutch and an Italian-German bilingual that specifically investigated the use of object drops and root infinitives, claimed that the direction of cross-linguistic influence is unidirectional. The researchers suggested that for interference to take place, there has to be a certain overlap of the two languages at the surface level, and a syntax-pragmatics interface is involved. They discovered that cross-linguistic influence is at work in the domain of object drop, where the two conditions met. However, it was not found in the root infinitives, where overlap did not occur.

The cross-linguistic influence proposed by Hulk and Müller (2000) was corroborated by Genske (2014), who found transfer from German to English as a result of overlap in the surface word order in declarative main clauses. It was claimed that non-target-like English utterances by the bilingual child under study, where the child moved finite verbs over negation in English, was a result of the German influence.

Serratrice, Sorace and Paoli (2004), in a study of English-Italian bilinguals, confirmed language-internal factors, specifically in the context where the syntax-pragmatics interface affects cross-linguistic influence.

While some researchers consider cross-linguistic influence as a result of external factors and others assume that it is mainly determined by language-internal factors, another group of linguists have paid more attention to the combination of both factors. Kupisch (2007), in a study of the acquisition of determiners by German-Italian bilingual children, reported that both language dominance and internal factors, such as the properties of the grammatical domain of the target languages, are at work in cross-linguistic influence.

Ge, Matthews, Cheung and Yip (2017) conducted a study on the acquisition of right-dislocation (RD) in Cantonese-English bilinguals and found bidirectional cross-linguistic influence. They observed some influence from the dominant language, Cantonese to English, in the domain of English pronominal RD; the influence was also detected from the less dominant language, English to Cantonese, in the acquisition of pronominal RD in Cantonese. They further claimed that Hulk and Müller's (2000) hypothesis was generally supported by their data, yet the bidirectional transfer found could not be explained based on the structural overlap between Cantonese and English RD. A study conducted by Sorace and Serratrice (2009) presented notable interaction between internal and external factors in the development of languages by bilinguals.

In a recent study of possessive construction in French-English bilingual children by Nicoladis (2012), another explanation for cross-linguistic influence was proposed. Nicoladis claimed that language processing or speech production models play a vital role in predicting cross-linguistic influence. In this sense, bilingual children receive two different languages, and the construction of the two languages is activated at all times, resulting in competition between them, which generates lexical or syntactic cross-linguistic influence. Herve, Serratrice, and Corley (2016), in a study on French-English bilingual children, corroborated Nicoladis's finding and presented evidence supporting the role of the processing mechanism.

To summarise, research findings regarding the contexts in which cross-linguistic influence occurs and the determinants in simultaneous bilingual language acquisition are far from conclusive and remain the subject of ongoing debate. Therefore, additional research in simultaneous bilingual acquisition needs to be conducted, particularly in terms of different domains of linguistics. It is also necessary to look at different language pairings in order to determine the extent to which interaction is occurring between the two acquired languages in the development process.

This current research investigates the simultaneous bilingual development of an unstudied language pair: Indonesian and German. The study exclusively focuses on the development of verb morphology and word order in the verb phrase. It also observes whether there is a structural influence in the course of development and, if so, how such an influence can be explained.

In this case study, the child had dominant exposure to a colloquial variant of Indonesian, receiving more input from this language than the other (German). The effect of this dominance, we hypothesise, is that the child would develop Indonesian more rapidly than German. However, in this language combination, language-internal factors have to be paid attention to and given equal importance. The two

languages are unrelated linguistically and syntactically. In German, for example, in certain contexts, verbs must be placed at the end of the sentence, whereas such a rule does not apply in Indonesian. In the colloquial variant of Indonesian, word order is relatively flexible and much freer, where syntactic options may be affected by pragmatic situations. So, there is ambiguity in input with regard to the domain of word order of the colloquial Indonesian being learned. Ambiguity refers to the presence of more than one linguistic structure that have about the same meaning (Nicoladis, 2012).

We assume that even though the two languages simultaneously learned by the child are structurally very different, the potential for the two languages to interact is not unfeasible. Cross-linguistic influence may also be predicted by linguistic features, where one is more salient than the other. This study also provides new insights, not only in relation to how the child develops two linguistics systems but also what the possible explanations for such interaction might be.

In brief, in the data we expect that:

1. There is potential influence from the dominant language (Indonesian) to the non-dominant language (German) in particular linguistic aspects.
2. To a particular degree, the non-dominant language (German) has an influence on the dominant language (Indonesian), as word order structure in German is more salient compared to that in Indonesian.
3. For cross-linguistic influence (CLI) to occur in a bilingual child, it is not necessary to have similar/same underlying structures between the two languages.

3. The contrast of verbal morphology and word order in German and Indonesian

German is an inflected language, whereas Indonesian is not. Verbs in German are lexical, modal and auxiliary. Verb tenses are formed by inflections on the root of the verb. The inflections in German verbs are illustrated in Table 1.

Table 1. Verb inflection in German

	Lexical verbs		Modals		Auxiliaries	
		hear		May		have
1st sg	-e/ø	<i>höre</i>	-ø	<i>darf</i>	-e/ø	<i>hab, habe</i>
2nd sg	-st	<i>hörst</i>	-st	<i>darfst</i>	-st	<i>hast</i>
3rd sg	-t	<i>hört</i>	-ø	<i>darf</i>	-t	<i>Hat</i>
1st pl	-en	<i>hören</i>	-en	<i>dürfen</i>	-en	<i>haben</i>
2nd pl	-t	<i>hört</i>	-t	<i>dürft</i>	-t	<i>habt</i>
3rd pl	-en	<i>hören</i>	-en	<i>dürfen</i>	-en	<i>haben</i>

From Table 1, it can be seen that there are five verb inflections in German: *-E*, *-ø*, *-ST*, *-T*, and *-EN*, depending on the subject of the sentence.

Colloquial Indonesian is mostly isolating and partly agglutinative (Soriente, 2014). In the Indonesian morphological system, there are no inflections nor grammatical categories for gender, number, or articles (Soriente, 2007). Verbs in Indonesian do not change according to the subject or tense. A verb in Indonesian may consist of a root, with or without verbal affixes. In other words, it may consist of a single morpheme or several morphemes attached together.

The colloquial variant of Indonesian is, in general, an S-V-O language, but its word order is very flexible. Basic clauses can be formed by a subject and a predicate that is not necessarily a verb. A non-verbal predicate such as a noun or adjective can be juxtaposed with a noun or pronoun without any copula or linker. As a copula is non-obligatory, predication can be expressed by a two-word or one-word non-verbal utterance. In colloquial Indonesian, null subjects and objects are allowed in finite clauses (Ewing, 2005).

Cahyono (2016) stated that in Indonesian flexible word order can occur in declarative, interrogative and imperative sentences. The following examples are taken from Cahyono (2016), where a word order that has the grammatical function of S-P can be inverted to P-S:

- (1) *Aku beli karpet.*
I buy carpet
'I bought a carpet.'
- (2) *Beli karpet aku.*
Buy carpet I
'I bought a carpet.'
- (3) *Kamu maksud?*
you mean
'What do you mean?'
- (4) *Maksud kamu?*
mean you
'What do you mean?'
- (5) *Astria makan!*
Astria eat
'Eat it, Astria!'
- (6) *Makan Astria!*
Eat Astria
'Eat it, Astria!'

Colloquial Indonesian is almost entirely used in face-to-face contact and reflects personal relations between interlocutors. It is closely connected with pragmatic aspects, where the speech of the participants is context bound and they share the same background knowledge, which does not have to be explicitly stated (Sneddon, 2006). Spontaneous conversation in colloquial Indonesian rarely occurs as complete and well-formed sentences according to a prescriptive SVO structure. Its common features can be omission, inversion, ellipsis, repetition and redundancy.

In German, however, word order is more salient and transparent. The base position of a non-finite verb is at the end of the verbal phrase. The position of the main verb remains after an auxiliary or modal verb, resulting in an S-AUX-O-V structure. When there are no auxiliaries or modal verbs, the finiteness features are attached to the main verbs. As a result, the main verb has to take the place of the auxiliary or modal verb, resulting in the German word order of S-V-O.

4. The acquisition of verbal morphology and word order in German and Indonesian

Poeppel and Wexler (1993) reported that monolingual German children could differentiate finite verbs in second position and non-finite verbs in clause-final position at a very young age. Monolingual German-speaking children obtained the full inventory of verb inflection within three to six months after their second birthday (Clahsen, 1986).

In relation to the acquisition of verb morphology and word order in monolingual German, Mills (1985) observed that in the early acquisition of full verbs children usually use the –EN ending as the infinitive. Mills also explained that the use of the –EN ending is related to the frequent use of modals and auxiliaries in adult speech that send the main verb in infinitive or infinitival imperative form to the end of the clause.

In the case of word order, Mills (1985) argued that at the two-word stage word order is most frequently verb-final, when a verb is expressed. At the onset, non-finite verbs are used more frequently when compared to finite verbs; therefore, the verb-final structure is the most common structure used by monolingual German children (Clahsen, 1986; Mills, 1985). The same pattern was observed by Döpke (1996), who argued that at the early stage of German language acquisition both bilingual and monolingual children preferred verb-final word order.

In a study of Dutch early child language where children were growing up with an SOV language, Wijnen, Kampen and Gillis (2001) found, from analysing lexical inventories, that infinitive verb forms make up the majority of early verb lexicons. They confirmed that during the early stages of grammatical

development children show intensive use of infinitival verb forms and argued that infinitives are indeed more easily acquired than finite forms. They suggested that infinitives, overall more salient and semantically transparent due to their systematic appearance in the sentence final position, thus have a stronger impact on the course of acquisition when compared to finite forms.

In the case of Indonesian acquisition, there are some previous studies on the acquisition of Indonesian by monolingual Indonesian-speaking children. Dardjowidjojo (2000) observed the language development of his granddaughter and reported that single meaningful words were available in the child's utterances at around the age of 1;5. The first verbs also occurred in the child's speech around 1;5. Some verbs started to be combined with affixes when the child was around 1;9. He provided evidence that the first affix developed by the child was the passive prefix *di-*. The child then began to use the suffix *-in* at age 1;9.2. The two-word stage began at age 1;8.2, combining verbs in a verb phrase.

A study conducted by Yulianto (2009) on three monolingual Indonesian-speaking children at different stages of development revealed that the children could already produce first words at around 1;0. Word combinations were already available at around age 1;6, in which verbs were already included.

Furthermore, data regarding the acquisition of monolingual Indonesian-speaking children, available in the CHILDES database for Jakarta Indonesian (GIL and Tadmor, 2007), show that verbs are already combined in utterances at around age 1;6 (data from Timo). The two affixes *di-* and *N-* are used productively by children at a very young, around 1;6 and 2;0 (data from Timo and Riska).

Adnyani (2014), in a study of her first child, an Indonesian-German, found that the first Indonesian words occurred in the child's utterances at age 1;2 and the first verbs were available at age 1;5. In the German language, first words were produced at 1;5. However, at that age, no verbs were available yet in the child's utterances.

In the present research, the development of verb morphology and word order are the focus of study. The aforementioned literature provides some basis for comparison with this study.

5. Method

5.1 Participants and linguistic environments

This research is based on a case study, using longitudinal observation, of the first author's second child. This child has been exposed to both Indonesian and German since birth. The family lives in Indonesia. Within the nuclear family, the father communicates with the child in German and the mother in Indonesian. The father was born in Germany and the mother in Indonesia. In the family, the couple talk to each other in Indonesian, since the father speaks the language fluently whereas the mother is less proficient in German. The child also interacts in Indonesian and German with her older sister, who speaks both languages fluently. The mother works full-time during the week outside the home. When the mother is away, an Indonesian-speaking lady helps the family and communicates in Indonesian with the children. Indonesian is the main language spoken at home and within the extended family. Therefore, the child has had more exposure to Indonesian than German.

5.2 The data

Data was collected from conversational text or speech based on spontaneous interactions amongst family members. Information was gathered in natural settings when the child and other family members or the caretaker were involved in various daily activities. This data was collected in the form of diary records, supplemented by weekly video recordings. The study followed the child between the ages of 1;3 (15 months) and 2;2 (26 months).

5.3 Transcription and analysis

The speech produced by the child was segmented based on utterances, using Lanza's (1992) definition of utterances as a word or a group of words with a single intonation. This method of segmenting speech was also used by De Houwer (1990) and Mishina-Mori (2005) in researching bilingual development.

Based on the diary and video recordings, 892 utterances were collected in Indonesian and 284 in German. The cumulative vocabulary in Indonesian was 331 and 107 in German. The data was transcribed orthographically, along with phonetic transcriptions. Moreover, every utterance produced by the child was accompanied by a contextual description and explanation.

In analysing the data, two instruments were used, namely ELAN and Toolbox, with the help of two students from the Faculty of Languages and Arts at the Universitas Pendidikan Ganesha (Undiksha), a state institution from northern Bali. ELAN was used to annotate or transcribe the data. After the data was annotated in ELAN, it was then interlinearised to Toolbox. In Toolbox, every utterance was transcribed in its phonetic form, then split into morphemes that were glossed according to parts of speech and meaning.

6. Results and discussion

6.1 Development in Indonesian

The use of Indonesian verbs was first developed by the child when she was at age 1;4. The verbs acquired were in the form of single morphemes, which were bare roots. Serratrice (2001) reported that the tendency to produce bare root verbs in early language development is found in both monolingual and bilingual children. This is the stage when the child produces single-word utterances. The first Indonesian verbs produced by the child in this study can be seen in Table 2.

Table 2. The first verbs in Indonesian developed by the child

Age	Sound produced	Words	English equivalents
1;4	[taʔ]	<i>mintā</i>	to ask for something
1;4	[nom]	<i>minum</i>	to drink
1;4	[boʔ]	<i>bubuk</i>	to sleep
1;4	[doʔ]	<i>duduk</i>	to sit
1;4	[buboʔ]	<i>bubuk</i>	to sleep
1;4	[dudoʔ]	<i>duduk</i>	to sit
1;5	[tɪŋ]	<i>kencing</i>	to pee
1;5	[tutop]	<i>tutup</i>	to close something

While the words produced early in the child's development were in the form of single syllables, with a tendency to delete initial unstressed syllables (e.g. [taʔ] *mintā* 'to ask', [nom] *minum* 'to drink', [boʔ] *bubuk* 'to sleep', [doʔ] *duduk* 'to sit'), these were indeed utterances that conveyed a certain meaning. For instance, when the child said [taʔ] *mintā* 'to ask', it was usually produced when seeing someone holding food, such as bread, cookies or sweets, accompanied by a specific gesture, such as sticking her hand out with the palm up. As another example, when she pronounced [nom] *minum* 'to drink', it was usually used when pointing at bottles, milk or glasses. Deleting unstressed syllables was also found in the development of monolingual Indonesian children (Dardjowidjojo, 2000). As the child approached 1;5, she started to produce verbs in two syllables. Other verbs emerged in either single- or two-syllable forms.

At age 1;5, the child started to put bare root verbs into two-word utterances. The following are some examples of two-word utterances progressively produced by the child:

- (1) [mama nom] 1;5
Mama minum
 mother drink
 'Drink it, mother!' or
 'Mother is drinking tea.'
- (2) [papa naŋ] 1;6
Papa renang
 father swim
 'Father, let's swim!' or
 'Father is swimming.'

- | | | |
|-----|--|-----|
| (3) | [mama aŋon]
<i>Mama bangun</i>
mother get up
'Mother, get up!' | 1;7 |
| (4) | [kaka? bubu?]
<i>Kakak bubuk</i>
elder sister sleep
'Sister is sleeping.' | 1;5 |
| (5) | [tutu abris]
<i>Susu habis</i>
milk finished
'The milk is finished.' | 1;7 |

Examples (1) to (5) were produced between the ages of 1;5 and 1;7. At this age, the child was able to combine bare root verbs with another word in a single utterance. It is indeed true that the verbs mostly used by the child are verbs that typically occur in their bare form also in adult speech. These bare verbs are quite numerous and have a very high frequency. As seen in the preceding discourse, the child was only able to produce those words in single-word utterances. In example (1), the child said *Mama minum*, for instance, when holding a bottle of baby oil and sticking it close to her mother's mouth, wanting her mother to drink what was inside the bottle. The same expression was used by the child when pointing at her mother, who was drinking tea. The utterance in example (2), *Papa renang*, was expressed by the child when calling her father to swim with her or seeing her father swimming. Example (3), *Mama bangun*, was said by the child as she tried to pull her mother's hand to get up. In example (4), *Kakak bubuk* was uttered by the child as she pointed to her elder sister, who was sleeping; *Susu habis*, in example (5), was expressed by the child as she was indicating to an empty milk bottle. Thus, there is evidence that, at age 1;5, the child was able to combine verbs with an addressee or with a subject. In other words, the verbs were used to ask someone to do something or to indicate that someone was doing something.

At age 1;6, the child started to place verbs in three-word utterances. The utterances were produced in the form of declarative as well as imperative clauses. Later, at age 1;10, she started to use verbs in the interrogative form. The following provides some examples of these developments:

- | | | |
|-----|--|-----|
| (6) | [papa tɪŋ nai?]
<i>Papa kucing naik</i>
Father cat climb
'Father, the cat is climbing the wall.' | 1;6 |
| (7) | [cana main dindin]
<i>Sana main dindin</i>
there play bike
'Let's play with the tricycle!' | 1;8 |
| (8) | [kaka? muŋa talon]
<i>Kakak punya kalung</i>
elder sister has necklace
'Sister has a necklace.' | 1;8 |
| (9) | [utɪŋ makan pupu?]
<i>Kucing makan krupuk</i>
cat eat crackers
'The cat eats my crackers!' | 1;9 |

- (10) [boleh mam dɪm] 1;10
Boleh main game
 may play game
 ‘May I play a game?’

In Indonesian, the subject of an imperative sentence may be deleted when the interlocutor is definite (Alwi, Dardjowidjojo, Lapoliwa and Moeliono, 2003). In colloquial Indonesian, which adults use to communicate with children, the subject is very often omitted. Such a construction can be seen in example (7), with the child demanding that her mother plays with her. Examples (8) and (9) show that the child was able to place verbs in an S-V-O construction, with the subject of the sentence preceding the verb and other elements following.

In example (10), the child formed an interrogative clause. In the clause *Boleh main game?* ‘May play game?’, the subject is omitted. It is likely that the child has just learnt to omit a subject in a sentence and repeated it. The point is that sentences used by the child at this very age are absolutely fine for adult speech as well. In other words, the child used a construction that is also used by adults. In this case study, with inputs from adults speaking Indonesian, the child was familiar with the omission of the subject. Expressions such as *Mau makan?* ‘Want eat?’, *Sudah minum?* ‘Already drink?’, and *Mau main?* ‘Want play?’ were frequently found in adult inputs when speaking to the child. Thus, at this stage three-word sentences, apart from problems in phonetic productions involving truncation, can be accepted as absolutely fine.

The first affix in Indonesian developed by the child was recorded at age 1;9. This affix was the prefix *ber-*, which was attached to the base verb stem *renang* ‘to swim’ to form the word *berenang* ‘to swim’. This finding differed from that of Dardjowidjojo (2000), whose Indonesian monolingual granddaughter developed the passive prefix *di-* first. Data from CHILDES of Jakarta-Indonesian monolingual children also shows that the prefix *di-* was the first affix available in the children’s speech. In our study, the child’s acquisition of the prefix *ber-* may be related to the intensive use of the prefix in the input. Besides, the verb in which the prefix *ber-* is required refers to the activities that the child had done almost daily, such as *berenang* ‘to swim’.

In Indonesian, when attached to a base verb, the prefix *ber-* generates an intransitive verb. It undergoes morphophonemic changes, such as the [r] of the prefix being lost when the base stem begins with the consonant “r” (Sneddon, Adelaar, Djenar and Ewing, 2010). The prefix *ber-*, combined with the stem *renang* ‘to swim’, was realised by the child as follows:

- (11) [mənaŋ mənaŋ yu?] 1;9
Berenang berenang yuk
 swim be-swim let’s
 ‘Let’s swim!’
- (12) [mama bənaŋ dudu] 1;11
Mama berenang juga
 mother be-swim also
 ‘Do you (mother) also want to swim?’
- (13) [mama, bənaŋ pake? pampon] 1;11
Mama berenang pakai pelampung
 mother be-swim use float
 ‘Mother, I swim wearing the float.’
- (14) [aku ikut bələnaŋ] 2;2
Aku ikut berenang
 I join be-swim
 ‘I swim with you!’

- (15) [aku bələmbot] 2;2
Aku be-rambut
 I be-hair
 'I have hair!'
- (16) [bədili ka?] 2;2
Be-diri Kak
 be- stand sister
 'Stand up, Sister!'

In example (11), the word *berenang* 'to swim' was realised with the sound [mənaŋ]. In earlier discourse, the child realised the bare root *renang* 'to swim' with the sound [naŋ] or [ənaŋ]. As mentioned previously, in her early development, she often deleted weak syllables. In later development, because the word *renang* consists of a trill [r] and she was not able to produce a trill yet, the child deleted this initial sound, leaving [ənaŋ] to be produced. When the prefix *ber-* is attached to the word *renang*, the word form is *berenang*, a word consisting of three syllables. The prefix *ber-* becomes *be-* when the base stem starts with an initial trill sound [r]. However, at age 1;9, the child could not produce words consisting of three syllables. Hence, three-syllable words were reduced to two-syllable words by omitting the middle syllable. Moreover, the labial consonant [b] in the initial position was replaced by the homorganic nasal [m] because it is influenced by the nasal sound in the second syllable. Thus, the word produced was [mənaŋ] instead of [bənaŋ]. Changing labial stops for their homorganic nasal [m] was a process frequently observed in the child's language development. She also replaced [b] and [p] with [m] in the production of other words [muŋa] *punya* 'have', [muŋa] *bunga* 'flower', and [maŋa?] *banyak* 'many/much'. Therefore, there is evidence that the child acquired the prefix *ber-*, but, because of her limited speech abilities at this stage, she realised it with the sound [mə].

Examples (12) and (13), when the child was aged 1;11, show that she was able to say [bənaŋ] *berenang*, but she still could not produce the trill [r] or three-syllable words. Example (12) represents a yes-no question uttered with rising intonation. In Indonesian, other than subject-verb inversion, forming a yes-no question can be done through raised intonation (Alwi, Dardjowidjojo, Lapoliwa and Moeliono, 2003). When the child was aged 2;2, as shown in example (14), she was finally able to produce *berenang* with three syllables, although the trill [r] was replaced by the lateral [l].

Examples (15) and (16) show that the child was also able to use the prefix *ber-* with other words. In example (15), the fact that the child has very thin and short hair sometimes causes people (Indonesian) to wonder. Once an acquaintance could not help but ask, probably joking, *Mana rambutnya?* 'Where is your hair?'; the child looked at the man very upset, as she pulled her hair and responded [aku bələmbot] *aku berambut* 'I have hair!'. The prefix *ber-* was also used by the child when asking her sister to stand up as she tried to pulled her sister's arm, wanting her sister to follow her as described in example (16).

The second affix available in the child's speech was the suffix *-in* at age 1;0. The suffix *-in* often occurs in the speech of interlocutors when speaking Indonesian and was frequently used around the child. Thus, the child progressively produced the suffix. The following are examples of when the child used the *-in* suffix:

- (17) [mama bəti:n uka] 1;10
Mama bersihin luka
 mother clean-in wound
 'Mother, clean my wound!'
- (18) [aku bupɪn] 1;11
Aku hidupin
 I start-in
 'I start the engine.'

- (19) [aku bunyiin buku aku] 2;1
Aku sembunyiin buku aku
 I hide-in book my
 'I hid my book.'

Examples (17), (18), and (19) indicate causative meaning, in which the object undergoes the state of the verb base. In example (18), the word *hidupin* 'to start', which was pronounced by the child as [bupin], since she deleted the initial weak syllable 'hi' and substituted the alveolar stop [d] with the bilabial stop [b], has the meaning 'to cause the engine to be on'.

The next example shows the production of the suffix *-in* to indicate the object as a recipient:

- (20) [mama apin] 1;10
Mama suapin
 Mother feed-in
 'Mother, feed me!'

The suffix *-in* was also found in the child's utterances using question words such as *ngapain* 'why'. The following are two examples of the production of *-in* in question words:

- (21) [mama ngapain cali manga pagi- pagi] 2;1
Mama ngapain cari mangga pagi-pagi
 mother why-in get mango early morning
 'Mother, why do you take the mango in the early morning?'
- (22) [ngapain olang ma] 2;1
Ngapain orang ma
 why-in people mother
 'What are they doing?'

The third affix developed by the child was the colloquial suffix *-an*. As it was available in the child's speech, this suffix correlates with the prefix *ber-* in that it creates intransitive verbs. In this case, the meaning of suffix *-an* is to emphasise the base verb. The following examples illustrate this point:

- (23) [boleh manam ma] 1;10
Boleh mainan ma
 may play-an mother
 'May I play mother?'
- (24) [papa manam] 1;11
Papa mainan
 father play-an
 'Papa is playing.'

Example (23) is a question in which the child moved the verb to the initial position. Example (24) is a statement with an S-V construction, in which the child emphasised that her father was playing with her.

It appears that the development of the child's Indonesian is somewhat standard and corresponds with the general trend of children producing single words, then two-word utterances, and eventually three-word utterances and more. Her Indonesian language development matches the milestones of monolingual children. In other words, the stages of language development take place in about the same timeframe.

Most of the first verbs produced by the child were actually bare verbs, and these bare verbs, in general, also occur in monolingual Indonesian-speaking children. In Indonesian, bare verbs have a very large distribution and can occur without any prefix. The use of bare verbs is very common in colloquial

adult Indonesian. For this reason, the bare verbs occurring in the child's speech are not a symptom of a lack of knowledge of verbal morphology.

6.2 Development in German

The first German verbs acquired by the child were observed when the child was 1;7. This was three months later than the emergence of her first Indonesian verbs. Most of the German verbs initially developed by the child were in the infinitive form, which can be seen in Table 3.

Table 3. The first German verbs developed by the child, age 1;7-2;2

Age	Sound produced	Words	English equivalents
1;7	[pan]	<i>fahren</i>	to drive
1;7	[holɪn]	<i>holen</i>	to take
1;8	[kakən]	<i>kacken</i>	to go to the toilet
1;8	[baən]	<i>baden</i>	to have a bath
1;8	[pɛntɪn]	<i>fernsehen</i>	to watch TV
1;8	[lɪs]	<i>lies</i>	Read (Imperative)
1;9	[pilən]	<i>spielen</i>	to play
1;10	[etən]	<i>essen</i>	to eat
1;11	[kɔm]	<i>kommt</i>	to come
1;11	[təntʊŋ]	<i>getrunken</i>	drunk (past perfect)
2;1	[laciən]	<i>rasieren</i>	to shave
2;0	[ge:n]	<i>gehen</i>	to go

In Table 3 we can see that, initially, the child developed non-finite verbs in German. This tendency is also found in the development of monolingual children acquiring German. In the early development of verb morphology, German monolingual children prefer the –EN ending with regard to verb-final structure (Clahsen, 1986; Mills, 1985). This was also evident in this case study, with the child producing the –EN suffix extensively. This finding implies that a bilingual Indonesian-German child experiences similar developmental stages as monolingual learners in terms of early verbal morphology.

Wijnen, Kampen and Gillis (2001) highlighted that there are three main factors possibly affecting the use of infinitives in the early grammar of children raised in root-infinitive languages, which are the frequency of input, the distribution of words, and conceptual transparency.

Considering that all the aforementioned factors play important roles in the preference of infinitival verbs in the child's early verb production, in this case study we analysed the corpus of utterances addressed by the father to the child. 33% of the utterances used by the father to the child contained infinitives, whereas 67% of the utterances used finite verbs. This means that in communicating to the child, non-infinitives were more available in the father's speech.

It is rather surprising that the child produced the less frequent verb construction provided by the input. We then tried to take a deeper look at the infinitives uttered by the father. We identified that the use of infinitives by the father had certain characteristics, which may affect the output in the child's speech: highly repetitive; use mostly as questions concerning the child's activities; use as confirmation of the child's activities; and use to show prohibition, as shown by the following examples between the ages of 1;7 and 2;2.

- (25) MOT *Saya mandi dulu.*
 I shower first
 'I am going to have a shower.'
 CHI mama
 FAT *Deine Mama geht duschen.*
 your mother go shower
 'Your mother is going to
 have a shower.'
Bleib mal here!
 stay here

‘Just stay here!’
 CHI mama (starting to cry)
 FAT *Deine Mutter geht jetzt mal*
 your mother go now
duschen!
 shower
 ‘Your mother is going to have shower now!’
Lasst die mal duschen!
 let her have a shower
 ‘Let her have a shower!’

- (26) CHI [caca bənan]
Kaca berenang!
 glass swim
 ‘Goggles for swimming!’
 FAT *Erst mal musst du baden.*
 first must you bathe
 ‘First, you must bathe!’
 CHI (taking her toys)
 FAT *Nicht, nicht, nicht*
 Don’t don’t don’t
Geh’ erst baden!
 go first bathe
 ‘Go have a bath first!’
 CHI *Ini* (taking a toy with her)
 this
 ‘I take it with me.’
 FAT *Ja, geh mal baden!*
 yes go bathe
 ‘Ok, go have a bath!’

- (27) FAT *Willst du es anmachen?*
 will you it turn on
 ‘Will you turn it on?’
 CHI Papa aus.
 papa off
 ‘Father, it’s off.’
 FAT *Sollte ich es anmachen?*
 shall I it turn on
 ‘Shall I turn it on?’
Anmachen?
 turn on
 ‘Turn it on?’
 CHI [an]
 FAT *Ach so!*
 oh so

- (28) CHI [mo tolʊn]
Mau turun!
 want down
 ‘I want to go down.’
 FAT *Du willst runter gehen?*
 you will down go
 ‘Do you want to go down?’

- (29) CHI *aku mau duduk di sana*
 I want sit there
 'I want to sit there.'
 FAT *Wo willst du sitzen?*
 where will you sit
 'Where do you want to sit?'
 FAT *Auf der Mauer?*
 on the wall
 'On the wall?'
 CHI *Ja* (approaching the wall)
 yes
 'Yes!'
 FAT *Du kannst nicht auf der Mauer*
 You can not on the wall
sitzen!
 sit
 'You cannot sit on the wall!'
 CHI *aku di sini* (pointing at the wall)
 I here
 'I am here.'
 FAT *Ne! Du darfst nicht auf der Mauer*
 no you may not on the wall
sitzen!
 Sit
 'No, you may not sit on the wall!'

In examples (25), (26), (27), (28), and (29), the father used a lot of repetition with infinitive constructions, with the intention of getting the child's attention and knowing that the child would easily comprehend what it meant. In addition, the infinitive forms occurred relative to the use of modality or a verb like 'go'.

Wijnen, Kampen and Gillis (2001) explained that lexical items at the end of utterances are easier for children to segment and identify compared to elements that are placed in the middle of utterances. Generally, the impact of sentence-final position is attributed to prosodic factors. Wijnen, Kampen and Gillis (2001), in their study of children acquiring infinitive constructions in their early grammar, claimed that infinitives are easier for children to pick up and store compared to finite verbs because they are more informative, being systematically placed in the sentence-final position, and are semantically transparent. In other words, infinitival verbs become more salient than finite forms.

In Indonesian verbal morphology development, the child could already combine verbs with other elements at age 1;5, and a similar development occurred in German at age 1;8. By this age, the German verb was starting to be combined with other linguistic elements. However, the verbs were mainly combined with vocatives, such as in the following examples.

- (30) [papa pentin] 1;8
Papa fernsehen
 father watch TV
 'Father, can I watch TV?'
 (31) [papa fan] 1;9
Papa fahren
 father drive
 'Father, I am driving.'

- | | | |
|------|---|------|
| (32) | [papa holin]
<i>Papa holen</i>
father take
'Father, take my toys!' | 1;10 |
| (33) | [papa laciən]
<i>Papa rasieren</i>
father shave
'Father, shave!' | 2;1 |
| (34) | [lɪs buh]
<i>Lies buch</i>
Read book
'Read the book!' | 1;8 |
| (35) | [hendə etən]
<i>Hände essen</i>
Hand eat
'Bite my hand!' | 1;11 |

In the above examples, most of the verbs produced by the child are in the infinitive –EN ending, and the interlocutor is her father from whom she gets German input. In examples (30) to (33), the verbs *fernsehen*, *fahren*, *holen*, and *rasieren* were combined with the word '*papa*', which functioned as the vocative. The vocative function identifies the person being addressed. Imperatives in German require finite forms that the child is unable to produce. Instead, she places infinitival forms like *fernsehen*, *fahren*, and *holen* after the vocative. The only exception is example (34) where the verb form *lies* is correct.

If we compare the child's utterances with monolingual German-speaking children, it can be said that the child's language development in this case study is delayed. Poe@el and Wexler (1993) reported that a monolingual German-speaking child aged 2;1 can produce verbs with other linguistic elements, where finite verbs systematically appear in second clausal position and the infinitive forms in the sentence-final position. At the same age, systematically placed infinitive and finite forms in the correct clausal position was not yet developed by the child.

If we take a closer look at the examples presented in (30) to (33), the child uses imperatives using the infinitive form. Therefore, utterances constituted by a vocative and a simple verbal predicate, often in the infinitive form, are very common. These could be the result of a transfer of the dominant Indonesian language where such utterances are allowed. This can be seen in examples (30) to (33). When the child uses imperatives, she often uses the infinitive form with –EN. Example (34) is the only well-formed imperative sentence.

The only example that provides the use of the correct imperative form without the –EN ending is example (34) when she used [lɪs buh] *Lies Buch!* 'Read the book!', ordering her father to read her a book. In this utterance, the child combined a verb with an object and used a V-O construction. She frequently used the same utterance whenever she wanted her father to read or show her pictures in the book. However, the proper imperative form of such an utterance should be *Lies das Buch!* At this age, the child is not able to use German articles, therefore she used V-O without any article. To compare it to monolingual German children, the study conducted by Kauschke and Hofmeister (2002) showed that in early lexical development in monolingual German, function words which cover prepositions, auxiliaries, articles, conjunctions and question words begin to emerge at 1;3 and increase over time. The child in this case study does not use a determiner probably because they do not occur in Indonesian, the dominant language.

In example (35), the child asked her father to bite her hand. However, the word *beissen* 'to bite' was replaced with the word 'to eat' *essen*. In this utterance, the child used an O-V combination.

At age 1;9, the child started to produce three-word utterances in German, which can be seen in examples (36) to (39). The development of three-word utterances in German again took the child three

months longer when compared to her ability to produce them in Indonesian. Some examples are provided as follows:

- | | | |
|------|---|------|
| (36) | [papa pilən ban]
<i>papa spielen Ball</i>
father play ball
'Father, let's play with the ball!' | 1;9 |
| (37) | [ban pilən papa]
<i>ball spielen papa</i>
Ball play father
'Father, let's play with the ball!' | 1;10 |
| (38) | [papa mama kom]
<i>Papa, mama kommt.</i>
father mother come
'Father, mother is coming!' | 1;11 |
| (39) | [papa wi gein]
<i>Papa, wir gehen.</i>
father we go
'Father, we are going!' | 2;0 |

Again, in examples (36) to (39), the word 'papa' has a vocative function. In the case of the verb *spielen*, the child often placed the verb either in a V-O or O-V construction. In examples (38) and (39), the child started to combine verbs with subjects. However, since the data in this construction was limited, we cannot draw any firm conclusion related to the finiteness in the child's utterances.

6.3 Cross-linguistic interference from the non-dominant language

Current research shows that in the development of simultaneous bilingualism relating to two distinct languages, cross-linguistic interference has been identified (Soriente, 2007; Yip and Matthews, 2007). However, the context and the circumstances in which cross-linguistic influence has the potential to occur is still a matter of ongoing debate. Some researchers have claimed that cross linguistic influence is due to external factors such as language dominance and frequency of input, while others have claimed that language-internal factors override the external factors. Another group of researchers have claimed that cross-linguistic influence is the result of a combination of both external and internal factors.

Throughout the course of this study, it was noted that Indonesian was the stronger or dominant language and German the weaker. This can be seen, for example, in the number of vocabulary items acquired from ages 1;3 to 2;2. The child acquired approximately 331 vocabulary items in Indonesian and about 107 in German. Children growing up with two languages acquire the weaker language (i.e. the language not commonly spoken within the child's environment) to a lesser degree (Meisel, 2007; Schlyter, 1993). Others also observed that one language is often developed more rapidly than the other (Dopke, 1998; Schlyter, 1993). It was also noted by the scholars above that the weaker language displays a degree of lexical and structural transference from the stronger language.

In the preceding examples, CLI from the stronger to the weaker language is shown. For instance, in the case of (34), the child does not use any determiner in the V-O structure. The absence of a determiner in the child's German utterance is a result of transfer from Indonesian, where it is not necessary to specify an object with a determiner. Other examples are the generalisations of the use of the infinitive form, as can be seen in examples (36), (37), and (39). The child uses the infinitive form as if it can play the role of any predication.

However, in the case of the child's bilingual development, it was also observed that she used the Indonesian lexicon within the German verbal structure rule. We noticed that despite German being her weaker language, the child experienced cross-linguistic influence from German word order. She was applying it in Indonesian utterances, where she placed verbs in clause-final position in contexts where

she was expected to produce German utterances. The following are some examples in which the child used Indonesian verbs but followed German verb-phrase structure rules:

- | | | |
|------|----------------------------------|------|
| (40) | [kaka? oti buat] | 1;8 |
| | <i>kakak roti buat</i> | |
| | sister bread make | |
| | ‘Sister, prepare me some bread!’ | |
| (41) | [andan pake?] | 1;9 |
| | <i>sandal pakai</i> | |
| | sandal wear | |
| | ‘Father, wear your shoes!’ | |
| (42) | [teh buwat] | 1;10 |
| | <i>teh buat</i> | |
| | tea make | |
| | ‘Father, make some tea!’ | |
| (43) | [papa kopi buwat] | 1;10 |
| | <i>papa kopi buat</i> | |
| | father coffee make | |
| | ‘Father, make some coffee!’ | |
| (44) | [cəpatu buka?] | 1;11 |
| | sepatu buka | |
| | shoes take off | |
| | ‘I am taking my shoes off.’ | |
| (45) | [mau pəməŋ bəli] | 1;11 |
| | <i>Mau permen beli</i> | |
| | want candy buy | |
| | ‘I want to buy candies.’ | |
| (46) | [mau liç bupin] | 1;11 |
| | <i>mau licht hidupin</i> | |
| | want lamp put on | |
| | ‘I want to put the light on.’ | |
| (47) | [aku ini buwat] | 1;11 |
| | aku ini buat | |
| | I this make | |
| | ‘I made this thing.’ | |

Examples (40) to (47) show that the child used Indonesian words and placed them in a German syntactic verbal phrase pattern by moving the verbs to the final position. Here, the verb phrase follows German word order. Since the verb phrases followed German word order, this obeyed the morpheme order principle proposed by Myers-Scotton (2006), indicating that German supplied the morpheme order. In the matrix language model proposed by Myers-Scotton, in bilingual speech, the two languages involved do not participate equally. Only one of the participating languages supplies the morphosyntactic frame for the bilingual clause. The language that supplies the morpheme order is the matrix language. The preceding examples identify German as the matrix language.

For instance, in examples (45) and (46), the child applied the German (S)-MOOD-O-V pattern and used the Indonesian lexicon in her utterance. The only difference in example (46) is that the child also mixed the Indonesian and German lexicons.

It was observed that the verb-final rule used by the child with the Indonesian lexicon only occurred when she was talking to her father or her sister, the two main sources from whom she received German input. Such a construction was not used by the child when talking to her mother or other Indonesian-speaking relatives.

In this case study, we observed that the child was competent in producing O-V German phrase structure rules. As previously discussed, the Indonesian word order system is very flexible and much freer when compared to German word order. In colloquial Indonesian, an utterance can consist of a single predicate, subject, or object when interlocutors share the same background knowledge. Pragmatically, the position of a verb in an utterance can be at the beginning, middle, or even the end of a clause. Thus, the word-order system in Indonesian is ambiguous. In contrast, German word order appears to be more salient and marked when compared to the Indonesian system. Therefore, the child applies the German word order in contexts where she actually should produce well-formed German sentences. In fact, the child seemed to be more familiar with the Indonesian lexicon at the time, as it was more available than the German lexicon, but applied German syntax with verb-final structure.

In other words, the interactions between the developing languages in this case were caused by language-internal factors in the context of verb placement at clause-final position. Indonesian word order was more ambiguous, whereas German syntax was more transparent for the child. The child had a preference for using infinitival clause structures when communicating with a German interlocutor. Wijnen, Kampen and Gillis (2001) claimed that the strong preference of children exposed to infinitival verbs relates to its semantic transparency and salience.

Returning to the cross-linguistic influence proposed by Hulk and Müller (2000), which hypothesised that cross-linguistic influence only occurs when two conditions, namely structural overlap and a syntax-pragmatics interface, are involved, in this case study the first condition was not satisfied. There is no shared underlying syntactic structure between Indonesian and German word order, yet cross-linguistic influence occurred.

Despite the Hulk and Müller hypothesis of structural-overlap-induced CLI, the current study reveals that for CLI to occur in a bilingual child, it is not necessary to have similar/the same underlying structures between the two languages. We suspect that the source of divergence is due to different sources of data. While Hulk and Müller's study involved two languages that come from the same typology, our study was based on two typologically distinct languages. In this study, even though the two languages do not have the same underlying structures, CLI occurred as German has a more salient word-order structure compared to Indonesian.

In this case study, however, the two linguistic systems were competing because of ambiguity. The fact that Indonesian has variable word order possibly influenced the child to place the verb in final position, a rule that applies to German. Therefore, placing the verb in final position is compatible with pragmatic strategies. Thus, syntax-pragmatics interface of a certain degree could be felt contributing to the occurrence of CLI. Hence, further studies involving different pairing of languages with different typologies need to be conducted.

7. Conclusion

In the development of verbal morphology, particularly the way in which the bilingual child placed verbs in utterances, it has been shown that a cross-linguistic effect was at work, with interaction between the two languages observed during the developmental process.

While the development of the child's Indonesian followed that of monolinguals, German verb morphology acquisition lagged behind when compared to Indonesian. It took the child approximately three months longer to perform German verbal development. Despite the fact that German verbal development was acquired later than Indonesian, the order of acquisition remained the same. For example, at first, the child produced single-verb utterances, followed by two-word utterances in which the child combined verbs with other linguistic elements, and then three-word utterances, and so on.

Cross-linguistic interference was evident. The cross-linguistic interference was observed in four different contexts. First, cross-linguistic interference was identified in the context of combining vocatives with a single verb which function as a predicate in German utterances. This frequent use of addressee-predicate seems to be an influence of the structure from Indonesian, the dominant language where such a construction is acceptable. Second, CLI from the stronger to the weaker language is shown, in the case of the child not using any determiner in the V-O structure. The absence of a determiner in

the child's German utterance is a result of transfer from Indonesian, where it is not necessary to specify an object with a determiner. Third, the generalisations of the use of the infinitive form, where the child uses the infinitive form as if it can play the role of any predication.

On the other hand, cross-linguistic interference was also observed from German, the weaker language, in the context of placing verbs in clause-final position in Indonesian utterances. The child's applying of German verb-structure rules in Indonesian was due to the salience of the infinitival verb forms in German syntax. Therefore, cross-linguistic interference was induced by the competing two systems because of ambiguity.

To conclude, in this case study, the occurrence of cross-linguistic influence in bilingual language development is determined by both language-external and language-internal factors. In this sense, a single factor or circumstance cannot be fully held responsible for the existence of cross-linguistic influence. However, more investigation and study are needed to develop a better understanding of the language development of bilingual children and to test the various factors accounting for cross-linguistic influence.

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