Language Production among Multilingual Children: Insights on Code Mixing

Produksi Bahasa pada Anak-Anak Multilingual:
Beberapa Pandangan tentang Campur Kode

Maria Klara Timorina Situmorang[1] Umar Mono[1]
Alemina Br Perangin-angin[1]*
[1]Universitas Sumatera Utara
*email: alemina@usu.ac.id
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Abstract

Code mixing is a common phenomenon in today's society, occurring in various settings such as schools, buses, and offices. This refers to the use of more than one language element (code) by multilingual speakers. The purpose of this research is to identify the types and forms of code mixing used by students and to analyze the factors involved. Code mixing utterances are classified into three types: insertion, substitution, and congruence. This study uses a qualitative method to analyze code mixing among five multilingual students aged 4-5 years. The results showed that in one international school class there were 20 code-mixed utterances which involved mixing Mandarin, Indonesian into English. Of these incidents, 14 of them were insertion code mixing. This indicates that the most common type of code mixing among multilingual children is code insertion mixing, in which non-matrix language words and phrases (Chinese and Indonesian) are inserted into the matrix (English). This is due to the fact that the children come from different ethnic backgrounds and some speak Mandarin as their mother tongue.

Key words: *language production, multilingual children, code mixing*

Abstrak

Campur kode merupakan fenomena umum dalam masyarakat saat ini, terjadi di berbagai setting seperti sekolah, bus, dan perkantoran. Ini mengacu pada penggunaan lebih dari satu unsur (kode) bahasa oleh penutur multibahasa. Tujuan dari penelitian ini adalah untuk mengidentifikasi jenis dan bentuk campur kode yang digunakan oleh siswa dan menganalisis faktor-faktor yang terlibat. Tuturan campur kode diklasifikasikan menjadi tiga jenis: penyisipan, pergantian, dan pemadanan leksikal. Penelitian ini menggunakan metode kualitatif untuk menganalisis campur kode di antara lima siswa multibahasa berusia 4-5 tahun. Hasil penelitian menunjukkan bahwa dalam satu kelas sekolah internasional terdapat 20 tuturan campur kode yang melibatkan percampuran bahasa Mandarin, Bahasa Indonesia ke dalam Bahasa Inggris. Dari kejadian tersebut, 14 diantaranya adalah campur kode penyisipan. Hal ini menunjukkan bahwa jenis campur kode yang paling umum di antara anak-anak multibahasa adalah campur kode penyisipan, di mana kata dan frasa bahasa non-matriks (Mandarin dan Indonesia) disisipkan ke dalam matriks (Bahasa Inggris). Hal ini disebabkan oleh fakta bahwa anak-anak tersebut berasal dari latar belakang etnis yang berbeda dan sebagian menggunakan bahasa Mandarin sebagai bahasa ibu mereka.

Kata kunci: *produksi bahasa, anak multilingual, campur kode*

INTRODUCTION

Effective communication is a crucial aspect of everyday life, as people constantly communicate about a variety of topics. In Indonesia, it is common for individuals to be bilingual or even multilingual, spanning from children to adults (Zein 2018). This linguistic diversity is reflected in the occurrence of mixed languages in various daily activities, such as in homes, schools, buses, and offices.

Code mixing, where speakers use elements from multiple languages in their speech, is a common phenomenon among multilingual individuals in Indonesia. This can be attributed to the diverse ethnic backgrounds and the country's history of colonization, which have contributed to the widespread use of different languages (Sneddon 2003). With code mixing becoming increasingly prevalent in daily life, it is important to study and understand this phenomenon to improve communication and promote linguistic diversity.

Muysken (2005) explained that code mixing based on intra-sentential, contextual and situational conversation. Code mixing is expressively purposing languages that are combined to increase social statue or to keep the speaker's prestige in the society (Holmes 2013). Many scholars have extensively studied code mixing patterns and reasons such as Pfaff (1976), Poplack (1980), Nortier (1990) and Myers-Scotton (1993). This is a complex yet effortless linguistic phenomenon common in bilingual and multilingual language performance.

Children who are raised in multinational families are often exposed to multiple languages through their parents. In some cases, these native languages are further supported by a broader community language system. When an individual has access to multiple languages, they have various methods of using and interacting with them, which can occur in many combinations. Multilingual speakers are known for their creativity in using different languages, and their linguistic abilities have been shown to surpass those of monolingual speakers.

According to Aikhenvald (2003), code-mixing is often stigmatized and avoided, despite the prevalence of multilingualism and frequent contact between speakers of different languages. However, this does not mean that code-mixing never occurs. In fact, it is quite common among children, particularly in international schools where more than two languages are used and Bahasa Indonesia is not the primary language. This is because children are still developing their language skills and are more likely to experiment with different languages, resulting in code-mixing. Additionally, children in international schools may come from different linguistic backgrounds and need to use multiple languages to communicate effectively. While code-mixing may be stigmatized in some contexts, it is a natural part of the language-learning process, and can actually enhance linguistic proficiency and communication skills.

Code mixing occurs when individuals who are bilingual or multilingual switch between languages during a conversation, often due to the influence of the topic or environment (Wardaugh 2011). The issue of mixing languages in the classroom is a topic of debate. Some argue that code mixing has disadvantages, while others believe that it can be advantageous. According to Hasan and Akhand (2015), code mixing can improve communication, which applies to both children and adults. In the language classroom, code mixing can serve various purposes, and both teachers and students may use it for different reasons.

Code mixing, according to Musyken (2005), can be categorized into three types: insertion, alternation, and congruent lexicalization. Insertion refers to inserting lexical items or constituents from one language into a structure of another language, which is common in communities with colonial or migrant backgrounds. Alternation is when a speaker switches from one language to another within a single utterance, but the languages are still relatively separated within the clause. Congruent lexicalization is when two languages share a grammatical structure that can be replaced with lexical elements from either language.

Code mixing can be more convenient than limiting oneself to only one language in multilingual settings. It can improve communication and promote more accurate language use, especially when the speaker and listener share the mixed languages. For instance, expatriate communities may find code mixing beneficial for effective communication. However, some linguists argue against code mixing due to its negative implications. Over-reliance on code mixing may reduce the need to speak the target language, hindering language learning. Furthermore, when mixing two languages with distinct phonologies, one's accent can become less native-like, as speakers tend to follow the dominant phonology of the language they speak (Chen, 2013). Therefore, while code mixing can be useful, it is important to balance it with maintaining and improving proficiency in the target language.

In this study, the usage of the three languages (English, Mandarin, and Indonesian) varied among the children. Some children spoke Mandarin as their native language and were more fluent in it than in English or Indonesian, while others were more proficient in English and Mandarin than Bahasa. However, as English is the primary language of the school curriculum, some students struggle to construct whole sentences in English, leading them to blend English with other languages in their daily conversations.

There have been several studies investigating code mixing in various language settings. Kanthimathi (2009) focused on Tamil-English bilingual children who used a bilingual language mode, while Poeste, Müller, and Arnaus Gil (2019) investigated language mixing in multilingual children. Although previous research has examined code-switching among students and interethnic Indonesian speakers, there has been limited research on multilingual students who primarily use more than two languages in their everyday conversations, particularly in international schools.

The study aims to investigate the phenomenon of code mixing in multilingual children, particularly in a kindergarten setting. With the increasing number of multilingual children attending international schools, it is crucial to understand their language behavior and the factors that contribute to code mixing. The objectives of the study are to identify the types of code mixing used by multilingual children, to analyze the forms of code mixing, and to identify the factors that contribute to code mixing.

METHODS

The research on language production among multilingual children aimed to gain insights into the use of code mixing, and utilized a descriptive qualitative research approach. This approach was chosen due to its focus on collecting and analyzing data in the form of words and observations, and its ability to provide a deeper understanding of the research problem. As Mackey and Gass (2011) notes, the choice of research approach depends on the specific problem being studied and the data required to solve it. The naturalistic approach of this study involved observing the learning processes of a class of 5 students, aged around 4-5 years old, in an international school setting. Notably, some of these students did not use Bahasa Indonesia as their native language. By analyzing the type and form of code mixing used by these multilingual children, this research aimed to identify the factors that influence this linguistic behavior.

This study collected data on the language production of multilingual children by recording conversations between teachers and students in the classroom. The aim was to observe natural communication and identify instances of code mixing categorized by Muysken (2000). To achieve this, the recorded data was transcribed and all instances of code mixing were classified by grouping related words or utterances together. The use of recordings allowed for a more accurate representation of the children's language use, and the transcript helped to categorize and analyze the data.

FINDING AND DISCUSSION

Here is a table presenting the findings on the types of code mixing that occurred in conversations among five kindergarten students aged 4-5 years old in the setting of international school in Indonesia.

Table 1. Findings regarding the types of code mixing used by multilingual children

No.	Sentences	Insertional	Alternation	Congruent Lexicalization
1.	*Ada nyamuk* here. ([There is] a mosquito here)	√		
2.	Teacher, *udah habis* my drink. (I finished my drink, teacher)	√		
3.	*Bu*, stand up *di sana*. (Madam, stand up there)	√		
4.	This salt is so *keras* one, teacher. (This salt is hard one, teacher)	√		
5.	*Nanti* you fall down *di sana*. (Later you fall down over there)	√		
6.	Teacher, look I have *tembak* toys. (Teacher, I have gun toys)	√		
7.	I accompany you *berenang* ya. (I accompany you to swim)	√		
8.	I want with *gēgē*. (I want with my brother)	√		
9.	Mommy *xihuan* coffee, but I am not. (My mommy like a coffee, but I [do] not)	√		
10.	My *jiejie* online at home. (My sister [does] online at home)	√		
11.	I *shuāi di sana* (I felt down there)	√		
12.	*Meimei* so *pusing* you know. (I have headache)	√		
13.	*Nainai* drive the car *tadi*. (My grandmother [just] drive the car)	√		
14.	Oh my God, *tadi kan sudah Gio bilang*. (Oh my God, I [Gio] have told you)		√	
15.	*Tā shì luse de* green color, right teacher? (is this green color, right teacher?)		√	
16.	*Wǒ bu shǐyong zhege mianju*, *tadi ini* wet. (I don't use this masker, it is just wet)		√	
17.	Teacher, look at this *lampu*.			√

	(Teacher, look at this lamp)	
18.	I want to *painiao*.	√
	(I want to pee)	
19.	O*ke*, you can take my bottle.	√
	(Okay, you can take my bottle)	
20.	Thank you, teacher.	√
	(Thank you, teacher)	

The data presented in Table 1 reveals that all kindergarten students who participated in this study use code mix in their conversations. Among the types of code-mixing, Insertion code-mixing is the most dominant, while Alternation and Congruent Lexicalization are minor. Each type of code-mixing has its own characteristics in terms of the language emphasized. Insertion code-mixing emphasizes Indonesian and Mandarin's words and phrases inserted into English as matrix language, while alternation code-mixing emphasizes English clauses and Bahasa Indonesia. Congruent lexicalization code-mixing emphasizes grammatical and lexical units that are commonly understood in the first language. These findings highlight the different points of emphasis in classifying code-mixing.

1. *Insertion Category*
   Insertion is the most common symptom found in cases of code mixing. This is commonly practiced because bilingual speakers will combine words from the language they understand into the matrix language (which they are currently using). In this study, speakers use the English language matrix in an international standard school setting.

   1. *Ada nyamuk* here.
      ([There is] a mosquito here)
   2. Teacher, *udah habis* my drink.
      (I finished my drink, teacher)
   3. *Bu,* stand up *di sana*.
      (Madam, stand up there)
   4. This salt is so *keras* one, teacher.
      (This salt is hard one, teacher)
   5. *Nanti* you fall down *di sana*.
      (Later you fall down over there)
   6. Teacher, look I have *tembak* toys.
      (Teacher, I have gun toys)
   7. I accompany you *berenang* ya.
      (I accompany you to swim)

   From data 1 to 7, it is found that there are utterances containing insertional category of code-mixing. The insertion in question is the embedding of Indonesian elements into English as the speaker's matrix language. Some of them are classified as well-defined constituent insertion because there are only one word of Indonesian inserted into the English sentences; it can be seen from the example number 4, 6, and 7 such as *keras* (hard), *tembak* (gun), and *berenang* (swim). Gun is a noun classes, swim is a verb, hard is an adjective.
   Furthermore, the data no. 1, 2, 3 and 5 are categorized as multiple contiguous constituents. The Indonesian phrase such as *ada nyamuk* (a mosquito) and *udah habis* (finished) are inserted in the English sentences. Apart from that, there is also an insertional contagious variation which gives rise to two Indonesian words in a sentence like data no. 3 and 5. In data no. 3, the insertional words are *bu* (madam) and *di sana* (there), while in data no 5, the insertional constituents are *nanti* (later) and *di sana* (there).
   In addition to using Indonesian as a second language, speakers also have knowledge of Mandarin. Thus, we also found several examples of inserting words from Mandarin into English sentences. See the following example.

   8. I want with *gēgē*.
      (I want with my brother)
   9. Mommy *xihuan* coffee, but I am not.
      (My mommy like a coffee, but I [do] not)
   10. My *jiejie* online at home.
       (My sister [does] online at home)

   Data no. 8, 9, and 10 show the insertion of Mandarin words such as *gēgē* (my brother), *xihuan* (like), and *jiejie* (sister) into English discourse. The insertion of Mandarin vocabulary is dominant in the use of

pronouns. Speakers seem more comfortable using pronouns in Mandarin to indicate their own identity or that of their interlocutors.

In addition to embedding Indonesian words into English, situations were also found where speakers combined Indonesian and Chinese vocabulary into English sentence. See the following example.

11. I *shuāi di sana*
(I felt down there)

12. *Meimei* so *pusing* you know.
(I have headache)

13. *Nainai* drive the car *tadi*.
(My grandmother [just] drive the car)

Data no. 11 is categorized as multiple contiguous constituents because the speaker used Mandarin word *shuāi* (felt down) and Indonesian word di sana (there) in English sentence. The word *shuāi* (felt down) is a verb, and word *di sana* (there) is an adverb. Similarly, data no. 12 and 13, the speaker also uses a combination of words from Mandarin, namely *meimei* (I) and *nainai* (my grandmother) and Indonesian *pusing* (headache) and *tadi* (just).

2. *Alternation Category*

Alternation is a category of code mixing which is also found in the utterances of the observed students. This alternation is divided into two variations, namely the Indonesian-English and Chinese-English variations. See the following findings.

14. Oh my God, *tadi kan sudah Gio bilang*.
(Oh my God, I have told you)

15. *Tā shì luse de* green color, right teacher?
(is this green color, right teacher?)

16. *Wǒ bu shǐyong zhege mianju*, *tadi ini* wet.
(I don't use this masker, it is just wet)

Data no. 14 shows the alternation from English to Indonesian. The speaker begins the sentence in English 'Oh my God' and then replaces it with an Indonesian clause *tadi kan sudah Gio bilang*. This mixing includes into alternation because it is more than a constituent and belongs to a clause.

In the data no. 15, The speaker replaces his matrix language into Mandarin. The speaker wants to show that the color he has chosen is in accordance with what his teacher asked for, namely green color. This emphasis shows the speaker's concern about using a piece of Mandarin in his speech.

Interestingly, in data no. 16, the speaker makes two substitutions in his speech. At the beginning of the sentence, the speaker uses the code in Mandarin *wǒ bu shǐyong zhege mianju* (I don't use this masker) which is then replaced again with the code in Indonesian *tadi ini* (it is just). In fact, speakers speak within the English language framework indicated by the word 'wet' at the end of the sentence.

3. *Congruent Lexicalization*

17. Teacher, look at this *lampu*.
(Teacher, look at this lamp)

18. I want to *painiao*
(I want to pee)

19. *Oke,* you can take my bottle.
(Okay, you can take my bottle)

20. Thank you, teacher
(Thank you, madam)

In data no. 17, 18, and 19 found a subtype of code mixing, namely congruent lexicalization. These three utterances are categorized into congruent lexicalization for reasons of homophonous words, namely *lampu* (lamp), *painiao* (pee), and *oke* (okay). These three words according to Muysken (2000, 123) act as a "bridge" or "trigger" for code mixing events. For data no. 20, congruent lexicalization occurs due to general structural equality between English as a matrix language and Indonesian.

Table 2. Frequency and Percentage of Code Mixing used
among Multilingual Children

Type	Frequency	Percentage
Insertion	13	65 %
Alternation	3	15 %
Congruent Lexicalization	4	20 %
Total	20	100 %

The recapitulation table 2 shows that 13 out of 20 data (65%) is insertion code mix; 3 out of 20 data (15%) is alternation code mix and 4 out of 20 data (20%) is congruent lexicalization. As the result, it is found that the most dominant type of code-mixing among multilingual child is insertion code-mixing. The children tend to attach word or phrase in Mandarin and Bahasa Indonesia into English conversation. Interestingly, the children can embed Indonesian, Mandarin or both into the matrix language they are currently using.

Since the student is in the development language stage, they mix the conversation to deliver their thought smoothly in the daily conversation of students who use more than two languages. It can be seen from the table and the descriptions of the findings above. As some experts stated that the students who still put effort into learning outside of their native, they mostly mix the language. As long as the speaker and listener can understand the core, then the mixing language can be used.

There were some factors that occur why the students mix the language conversation:
1. It was due to the fact that the children (the pupils) acquired multiple languages at home.
2. Due to the students' inability to effectively master two languages, they frequently mixed languages when conversing.
3. It was due to their environment, including their neighbors and acquaintances. Children who used Indonesian in daily conversation would be more likely to use two languages if they frequently interacted with environments that had a diverse linguistic heritage.
4. It was due to the formal and informal circumstances or intimacy. I discovered a small phenomenon in which the students chose to use the code when interacting with the teacher; they may have felt it was due to the formal nature of the situation; consequently, they must speak Indonesian or Mandarin as fluently as feasible. On the other hand, when students interacted with their own peers, they tended to use code mixing, possibly because they knew it was an informal setting or because of their closeness.
5. When explaining or interacting with the students, it was a common occurrence for some teachers to use a mixture of languages.

CONCLUSION

In conclusion, this study has identified three types of code-mixing used by multilingual children in their daily conversations, namely insertion code-mix, alternation code-mix, and congruent lexicalization code-mix. The results show that the most dominant type of code-mixing is insertion code-mixing, which is often used due to the children's diverse ethnic backgrounds and the usage of Mandarin as their mother tongue, followed by Bahasa Indonesia and English as their second language. This enables the children to communicate with trilingualism, but it can also lead to miscommunication with the educator who may not be proficient in all three languages. Therefore, it is important to continue to study code-mixing among multilingual children to better understand its impact on communication and language acquisition.

To facilitate effective language development in children, it is recommended that parents and teachers introduce one language at a time, followed by additional languages as the child's cognitive abilities and age allow. While language mixing may be permitted during the acquisition process, it is important to ensure that children are taught correct and clear sentences to avoid confusion. With sufficient practice and vocabulary development, children can generate words that are rich in substance and improve their language skills.

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