# Code-Mixing and Second Language Acquisition on Social Media by Digital Native Indonesian Children

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Abstract—The aims of this study are to (1) explain the forms of mixed-use of L1 to L2 codes in social media posts, (2) explain the factors that cause the use of L1 to L2 mixed codes and (3) describe language mastery. This study uses a qualitative descriptive analysis method. Data in code-mixing was obtained from secondary data, namely written posts with COVID-19 content on social media, Facebook and Twitter. A mixture of L1 and L2 codes in postings on social media includes words and phrases manifested in congruent insertion, change, and lexicalisation forms. The influencing factors are divided into (1) speaker factors, such as showing off, prestige, and language skills, and (2) linguistic factors, such as popular terms, topics, modes, speech partners, time and place/location. With the emergence of various terms related to COVID-19, the mastery of a second language for digital natives, in this case, English, is increasing. Although the use of code-mixing, there are some errors in writing, sentence structure, and cohesion, digital natives can master L2 through codemixing, including accuracy of word writing, word selection, syntactic structure, cohesion, and coherence in the sentence.

Index Terms—code-mixing, digital natives, language acquisition, social media

# I. INTRODUCTION

In today's digital era, social media has become necessary for everyone, especially children aged 15-24 in Indonesia. Data from Tempo Institute (2019) stated that as many as 150 million people, or 56% of Indonesians, use social media activities such as Facebook, Twitter, Instagram, and other social media to express various desires, feelings and share information. In social media, it is not uncommon for children to use a mixed language between Indonesian as L1 and English as L2. This condition is defined as the use of code-mixing.

The COVID-19 pandemic presents a new phenomenon in the world of languages. Many previously rarely-used vocabularies have become everyday language when discussing COVID-19 (Roig—Mar ń, 2020). Vocabulary can be in Indonesian or English. Using English vocabulary related to COVID-19, a popular term is one of the reasons for using code-mixing to make it easier for speech partners to understand the information conveyed. The habit of code-mixing indirectly affects mastering a second language in English. Mixing codes has several implications for maintaining first or second-language vocabulary (Kiranmayi & Celta, 2010; Lu, 2014). One is that when items are presented to students through code-mixing, they will rely on existing knowledge to use new vocabulary in other syntactic functions (Kiranmayi & Celta, 2010; Spice, 2018). Code mixing is a valuable tool for learning and maintaining a second language in the early stages of learning acquisition (Spice, 2018). Code-mixing makes it easier to master second-language words than memorization (Rahimi, 2014).

Setyaningrum (2019) examines the types, forms, and factors that cause code-mixing in "This Talk Show" on Net TV. In that study, it was found that the code-mixing carried out on the TV program was a mixture of regional language codes and foreign languages by words, phrases and rephrases. Nevertheless, until now, no one has studied the second language acquisition of digital natives through code-mixing during the pandemic. The purpose of this study is to (1) explain the forms of mixed-use of L1 to L2 codes in social media posts, (2) explain the factors causing the use of mixed L1 to L2 codes and (3) describe the mastery of second language features as a result of using mixed codes. The present study aims to answer the following research questions:

- 1. What is the form of code-mixing that L1 to L2 does in postings on social media?
- 2. What are the factors that cause code-mixing from L1 to L2?
- 3. How is the second language ability after using mixed code?

II. LITERATURE REVIEW

A. Code-Mixing

Code-mixing is mixing two or more languages in a language action where one word or phrase is used (Ariffin & Husin, 2011). Code-mixing is divided into three types, namely: (1) inward code-mixing, namely the type of code-mixing that absorbs related languages, (2) exit code-mixing, namely code-mixing carried out by inserting a foreign language such as English in the use of the Indonesian language, and (3) mixed code-mixing, namely code-mixing, in which there is a mixture of regional and foreign language codes (Chaer & Agustina, 2010). In this study, the focus of the research is exit code-mixing. Code mixing can be done by words, phrases or repetition of words (Rulyandi et al., 2014). Muysken (2000) divides the code-mixing form into three forms, namely (1) insertion of words, phrases, or clauses, (2) changes in doubling or marking of words or phrases, and (3) congruent lexicalisation. According to Halim (2015), the most frequently used code-mixing is code-mixing by phrases.

The factors that cause code-mixing are generally divided into two, namely, the speaker factor and the language factor. The speaker factor can be caused by needing to master L2 better (Kustati, 2014). While linguistic factors such as limited use of codes where speakers do not understand equivalent words when using primary language, use of more popular terms, habit factors, speech partners who have the same language background, speaker mode, scientific topics, purposes of speaking, variations, third attendance speaker, and to evoke a sense of humour (Ariffin & Husin, 2011; Kiranmayi & Celta, 2010).

## B. Second Language Acquisition

The second language is the language that is mastered after the first language. The acquisition of a second language is a complex learning process built by many linguistic, social, psycholinguistic, and intercultural factors (Song, 2018). The repetition process influences second language acquisition (Quick et al., 2019). Language is easily mastered by children up to 17 years of age and, after that, will gradually decline both in terms of complex syntax and easy syntax, which is usually mastered at the beginning of language acquisition (Hartshorne et al., 2018). Behaviourism theory assumes that a person after birth has nothing, so the acquisition of environmental language is significant. Thus, it is said that the environment plays an essential role in language acquisition (Purba, 2013). The language environment can be divided into formal and informal environments. Bilingual learning in class and courses only sometimes provides effective results in acquiring a second language (Kung, 2013). It is related to the competence of the teachers themselves. Research on the impact of using code-mixing on L1 and L2 was conducted by Lu (2014). This study stated that codemixing is also popular and growing in China to meet practical and pragmatic needs. Furthermore, Spice (2018) suggests that code-mixing plays a role in facilitating the acquisition of a second language at the beginning of language development. However, advanced levels of code-mixing are not approved because it requires more input from the target language.

Various methods are integrated with digital technology that can be applied to acquire a second language for learners, including blogs (Blackmore-Squires, 2010) and social media such as Facebook (Dizon, 2016; Kelly, 2018; Safitri et al., 2017). Several principles support using Facebook, such as peer learning, student interaction, collaborative and contextual learning. There are also principles of motivation, responsibility and peers, and a learner-centred approach. The motivation to follow second language learning plays an essential role in the second language acquisition position Motivation to participate in second language learning through the application of code-mixing plays an essential role in acquiring a second language (Kustati, 2014; Morita, 2004).

#### III. METHOD

This study uses a qualitative descriptive analysis method. Code mixed data were obtained from Indonesian (L1) and English (L2). Code-mixing in the elements of words, phrases, sentences, and phrases. Data tabulation is limited to code-mixing based on Muysken's opinion, which divides the mixed code form into insertion, alternation, and congruent lexicalisation. The data source of this research is secondary data originating from social media Facebook and Twitter on written posts of children with digital natives with COVID-19 content. The data obtained are written data by posts and words about various language terms during the COVID-19 pandemic as material for research analysis. When the data was traced, it was carried out from April to September 2020. Data tracing was carried out randomly by looking at their representation in tabulated data. The collected data is then inventoried and codified to determine what qualifies as data and deserves to be followed up for analysis. For checking the validity of the data, an inter-code analysis was carried out by two people who first confirmed the reliability of the exact reading comprehension. The data analysis technique used is the Miles end Huberman model, which includes data collection, data reduction, data display, and conclusion drawing/verification.

#### IV. RESULT

# A. The Form of Using L1 to L2 Code-Mixing in Posts on Social Media

Writing status on social media, digital natives use a mix of L1 and L2 codes contained in language and phrases. Based on the data obtained, code-mixing is done by inserting words in sentences. Word insertion occurs at a sentence's beginning, middle, or end. The beginning of the sentence can be seen in the post "insecure bole-bole aja.." (Data 9), "sendernya kehilangan arah" (Data 13), "Glamrock dulu deh..." (Data 21). The use of mixed code form words in the

middle of a sentence as in posts "masih intro, nanti reff, bridge, dan outronya beda lagi" (Data 2), "...nambah putih+glowing malah.." (Data 11), "..selalu excited dalam menyambut bulan Juni" (Data 15), "baca hasil research2.. yg virus strainnya asal Indonesia.." (Data 17), "..belum ada foto traveling lagi.." (Data 18), "..boleh cancel tapi...buat attempt lari FM.." (Data 19), "maknanya meningkat since #Covid19" (Data 24), "Suka sama creativenya iklan ini" (Data 29), "Sebenarnya males comment di fb.." (Data 31). Meanwhile using mixed code by words at the end of sentences is not found in posts.

Apart from being by words, mixing the code can also be done by phrases. Digital natives mainly insert L2 phrases in L1 sentences in writing their posts with various existing phrases. The type of noun phrase can be seen in the post "jenis artificial sinew,..." (Data 5), "...penyebaran imported case dapat dikendalikan" (Data 6), "...nyobain golden hournya Jakarta..." (Data 18), "...elite global..." (Data 23), "Video call sama sodara..." (Data 27), "...politic global..." (Data 28). Types of adverbial phrases in posts "so handsome (Data 12), "new normal"..., "new moral" (Data 8). Prepositional phrase in posts "Next time mungkin..." (Data 5), "Yg on corona jarak satu langkah" (Data 14), "after #pandemic era atau post #pandemic2020 (Data 20), "kerjaan due to Covid-19" (Data 25), "Udah sold out ya" (Data 30), "tetap stay at home" (Data 33). And gerund phrase in posts "Running events boleh.." (Data 19).

An insertion, alternation, and congruent lexicalisation found a more detailed description of the L1 to L2 code-mixing.

## (a). Insertion Form

The insertion of words can be either single or multiple constituent insertions. Single constituent insertion means that only one *word* is inserted. The words inserted in this study consist of nouns, verbs, adjectives, and adverbs.

```
hahah omg i'm sooo excited wkwk (Data 1)

"insecure bole-bole aja..." (Data 9)

"di like yaaa" (Data 10)

"...nambah putih+glowing malah..." (Data 11)

"..selalu excited..." (Data 15)

"Glamrock dulu deh..." (Data 21)

".. since #Covid19" (Data 24)

"Sebenarnya males comment di fb.." (Data 31)

"..Lockdown aku bikin gudang.." (Data 34)

".., Lockdown gagal.." (Data 35)
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"untuk pasien *suspect* covid nambah" (Data 36)

The insertion of a single constituent of the noun is like. A verb such as insecure, excited, and comment. Adjectives such as glowing, suspect, and lockdown. An adverb of time is since.

Besides being a single word, code-mixing can be done by single constituent phrases or just one phrase. Digital natives mainly insert L2 phrases in L1 sentences in writing their posts with the following types of phrases.

```
"..pada buat April mop.." (Data 4)
"jenis artificial sinew,.." (Data 5)
"..penyebaran imported case dapat dikendalikan" (Data 6)
"Running events boleh.." (Data 19).
"New Normal bareng.." (Data 22)
"kerjaan due to Covid-19 pandemic" (Data 27)
"Social distancing menghambat cita-citaku" (Data 38)
"Gaya hidup new normal." (Data 39)
```

The type of noun phrase can be seen in *artificial sinew, imported case, elite global*, and *video call*. The type of adverb *phrase is the new normal and social distancing. The type of verb phrase is sold out and stay at home. The type of prepositional phrase is due to Covid-19*.

In a more significant portion, the insertion of L2 in L1 is mapped by multiple constituent words and phrases side by side. Especially for the L2 word elements, which are categorised as double constituents side by side as follows:

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"Finally dapat keluar .. suspect (Data 40)
"suspect covid-19 .. full APD .." (Data 41)
"..boleh cancel tapi...buat attempt lari FM.." (Data 19)
```

The same is true for the L2 insertion data in multiple adjacent constituents. The side-by-side insertion of multiple constituent phrase elements is categorised based on the insertion of two phrases in the code mix that is performed. The data is described as follows.

```
"New Normal atau New Moral??? (Data 8)
"Terapkan social distancing & physical distancing" (Data 42)
"Mw new normal atau stay at home.." (Data 49)
".. masuk di new normal...ttp physical distancing ... (Data 53)
"Stay at home ga ada pemasukan, stay with you ga ada (Data 54)
```

The insertion of double constituent words and phrases side by side means that in one post, there are L2 words and phrases in L1. The element of English words and phrases, which include the insertion of double constituents side by side in the following data

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"Covid19, politic global and business... (Data 28)
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"grafikya flat konsisten .. lakukan social distancing" (Data 42)

"..kalau Lockdown... Sekarang di New Normal ..(Data 43)

The insertion of morphologically integrated constituents gets the insertion of words and phrases that get affixes. The data exposure is referred to as follows...jadi *video call* an aja (Data 48).

"masih intro, nanti reff, bridge, dan outronya beda lagi" (Data 2)

"sendernya kehilangan arah" (Data 13)

yg virus strainnya asal Indonesia.." (Data 17)

.. nyobain golden hournya Jakarta (Data 18)

"Suka sama creativenya iklan ini" (Data 29)

"Malam ini keluar result swab test nya...(Data 55)

The data obtained describes the insertion that is performed in the post using the suffixes —an and —nya. Constituent insertion uses the suffix —an is present in "...jadi video call an aja" meaning through video calls only. While insertion using the suffix can be seen in "outronya", "sendernya", strainnya, golden hournya, creativenya, and result swab testnya. The addition of his suffix means ownership.

#### (b). An Alternation Form

The form of using L1 to L2 code-mixing is also found by alternation. From the available data, the alternation is divided into marking and multiplying. L2 word elements and phrases which include tagging alteration are exemplified in the following data:

"..make me sad, upset and mad. .... (Data 16)

".. pake thread jenis artificial sinew.. harus di split, twist or both maybe" (Data 5)

In Data 16, the adverb form, preceded by a tagging, uses the word "and" and the element of the L2 phrase, which is included in the alteration of marking. Likewise, with Data 5, there is a nominal form, namely artificial sinew, preceded by a tagging, namely the word "or".

In contrast to tagging, which is reflected in the elements of words and phrases by multiplication, there are no posts mixed with code with L2 word elements categorised as multiplication alteration. However, we found elements of English phrases that include multiple alterations.

"..kasus impor atau imported case" (Data 44)

"Herd immunity itu... populasi sudah kebal,." (Data 45)

Multiplication alteration is indicated by the meaning or re-explanation of the phrase used.

# (c). Forms of Congruent Lexicalisation

Overview of the use of words and phrases in code-mixing events by congruent lexicalisation only in the event of code-switching in phrase elements.

Yg on corona jarak satu langkah (Data 14)

"FULL 3 MINUTES TO SET" (Data 12)

In the data from 14 congruent lexicalisation processes, it was found that the use of a predisposition on corona, means suffering from the corona. In Data 12, the lexicalisation process is congruent with the verbal phrase, namely "full 3 minutes to set", which means three whole minutes to set.

Elements of English clauses that include congruent lexicalisation

"life is never flat kalau bertemu mereka" (Data 3)

"... bye I love netflix and youtube. Stay safe and stay at home don't forget watch youtube and netflix" (Data 46)

"It's a normal... not new normal (Data 50)

In Data 3, there is a shifted clause, namely, *life is never flat*, which means *life is never flat*. On Data 46 which adds bye *I love netflix and youtube* which means *goodbye*, *I like netflix and youtube*. Even in Data 50, there is a clause *It's a* normal ... *not new normal*, which means *this is normal*, *not new normal*. The elements transferred to the congruent lexicalisation process are parallel and structurally parallel to the syntactic link between the L1 and L2 variants.

The use of code mix by sentences, which digital natives also do. These sentences can be seen in the following post.

"hahah omg i'm sooo excited wkwk" (Data 1)

"life is never flat kalau bertemu mereka" (Data 3)

"I don't know... I'll make it work somehow" (Data 5)

"It's really make me sad, upset and mad" (Data 16)

"how are you" dan "stay healthy" (Data 24)

"I hope God will grant my prayer. Aamiin" (Data 32)

Based on the description of the data, code-mixing by inserting words and phrases is mostly done. Code mixing is also carried out in sentences with cohesion although it is not coherent. Next is alteration and congruent lexicalisation.

## B. Factors Causing the Use of L1 to L2 Code-Mixing

The results of the tabulation of data show that the mixing of L1 to L2 codes is mainly caused by the time and place the posting took place. Starting in March, the COVID-19 pandemic began to be affected Indonesia, so the more popular term is widely used in posts on social media.

Mix code using a popular language chosen to facilitate the communication process. The data is referred to as follow:

- "New Normal atau New Moral" (Data 8),
- "dilakukan after#pandemic era atau post#pandemic2020" (Data 20),
- "how are you and stay healthy" (Data 24),
- "Video call." (Data 27),
- "..Lockdown aku bikin gudang.." (Data 34)
- "PSBB gagal, Lockdown gagal.."(Data 35)
- "untuk pasien suspect covid nambah" (Data 36)
- "..pake handsanitizer" (Data 37)
- "Social distancing menghambat cita-citaku" (Data 38)
- "Terapkan social distancing & physical distancing" (Data 42)
- "Ancaman terbesar adalah kasus impor atau imported case" (Data 44)
- "Herd immunity itu... populasi sudah kebal,..." (Data 45)
- "Malam ini keluar result swab test nya...(Data 55)

The tabulation of popular terms from the data from L1 is presented in the following table:

TABLE 1
TABULATE POPULAR TERMS

No.	Popular Terms L2	Translate popular terms in L1
1	New normal	Normal baru
2	Social distancing	Jaga jarak
3	Physical distancing	Pembatasan fisik
4	Lockdown	Penutupan
5	Swab test	Tesusab
6	Rapid test	Tes cepat
7	Suspect	Terduga
8	Handsanitizer	Pensanitasi tangan
9	Herd immunity	Kekebalan kelompok
10	Imported case	Kasus import

The show-off factor is also many reasons for using code mix, for example, "It's really make me sad, upset and mad...." (Data 16), "..#thefrakarsas bisa ..We always learn something" (Data 26), ..Covid-19 segera berakhir I hope God will grant my prayer." (Data 32). The assessment of the show-off factor of a speech is very likely to be subjective. The objective indicator is that the types of speech L2 on that data are performative speeches standard in L1. The choice of the prevalence of using L2 in the choice of L1, which is more prevalent, shows the speaker's egoism.

Topic factors where because the posts being traced discuss the topic of COVID-19, the status owner uses much codemixing according to existing COVID-19 topics, for example, "..imported case dapat dikendalikan..", "New Normal atau New Moral", "..elite global..", "Covid19, politic global and business..".

Language limitations also cause the use of mixed codes. It can be seen in several posts such as "New Normal atau New Moral". The word New Normal is an L2 word that refers to a relatively new concept, so even though there is a meaning in L1, the language limitations of the new concept cause code-mixing. Another word L2 in data "Insecure boleh-boleh aja..". The word Insecure (L2) in L1 means "conditions of insecurity or inconvenience, do not have synonymous equivalents in one special word with the same meaning in L1 other than the possibility that the word itself will become a standard loanword. The language limitation factor is also shown in the use of certain field terms/terminology such as the noun contained in "Ingat 3T (Trace, Test, Treat).." and "test positivity rate", these two examples are terms that are widely used in the medical field.

The mode factor also significantly encourages code-mixing. The mode in this context is the use of L2 into L1, which aims to emphasise and reinforce the information the speaker wants to convey, for example,

- "2020 dimana manusia tersesat karna digiring oleh sistem yang zalim (WHO) elite global, dibantu oleh media untuk menggiring manusia ketempat pejagalan. Wake up people. (Data 23)
- "...#thefrakarsasbisadansholatidulfitribersama. We always learn something." (Data 26)
- "Ya Tuhan setiap hari kuberdoa... I hope God will grant my prayer. Aamiin." (Data 32)
- "Tadi liat vlog .. And somehow I miss the good day when I can breath without wearing a mask in front of my nose. (Data 58).

Based on the four data presented, the mode factor shows that the use of L2 language partly represents the main idea of the whole speech. Hence, mixing foreign language codes aims to emphasise and clarify all information.

Apart from these factors, the speech partner factor also affects the occurrence of code-mixing, such as the following conversation Data 56:

- X: ... Laporkanlah test positivity rate,
- Y: Couldn't agree more, ..

X: So that way, genjot lagi jumlah tes kita. Ingat 3T (Trace, Test, Treat).

Based on the conversation, the two speakers responded by inserting a conjunction and a noun in L2 to enhance the interconnection of information and otherwise prevent information distortion.

There are also time and place factors, defined as conditions and situations that affect the communication process. So, in this context, the social media channels used are considered a unit of observation representing the condition and situation factors. The data shows that code-mixed speech that spreads from Facebook's social media tends to be characterised by words and phrases such as "Baju dan Masker yang matching in The New Normal" and "Aku bosan online learning". Meanwhile, data from social media Twitter tends to be more diverse, especially the use of mixed code sentences such as "Alhamdulillaaah... walaupun di tengah #covid19... We always learn something" and "Ya Tuhan setiap hari kuberdoa... I hope God will grant my prayer." This shows that certain types of social media have contributed to code-mixing representing environmental factors. The impetus of the images and the speaker's perceptions of specific characteristics of social media contribute to shaping code-mixing behaviour.

The factor of time and place, or rather the use of social media and IT, has driven various forms and increased the intensity of code-mixing. Data analysis from other IT channels, namely online learning channels, shows a high intensity of code-mixing behaviour among digital natives. For example, "Guys, tolong..., cara upload tugas.." and "Jadwal video conference...via Zoom meeting". It shows the use of L2 words and phrases, some other words whose usage intensity is relatively high are "login", "submit", "donwload", "e-learning", "virtual class", etc. Using multiple IT channels has encouraged the acquisition of L2, which in turn causes code-mixing behaviour among digital natives.

Another critical factor is the speaker's factor. The primary dimension of this factor is L2 language competence. The relevant data that shows this factor's evidence is shown by analysing the intensity of the code-mixing behaviour of one of the respondents. During the observation period from March 13 to April 13 2020, there were 26 posts, with 20 containing code-mixed elements. From this respondent's data, at least about 77% of their posts contain mixed codes with various forms. This percentage represents the relatively high intensity of code-mixing. This data also concluded that speakers of mixed codes with good L2 language competence tended to perform high code-mixed repetitions in their speech.

## C. Mastery of L2 as a Result of Using Code Mix

Mastery of language is reflected in code-mixing by digital natives of children in Indonesia. Mastery of word writing accuracy is illustrated in the following data.

"It's really make me sad, upset and mad..." (Data 15)

In this data, the writing of words that experienced code-mixing, "It's really make me sad, upset and mad." follows the rules of writing L2. As with capital letters at the beginning of the sentence, that is appropriate. The use of single quotation marks in the word It is is an abbreviation of the word "It is" following the rules for writing acronyms in L2. However, for Data 16, there is a lack of punctuation marks, especially commas after the word upset. So, the sentence is correct and does not experience punctuation errors based on the sentence above, namely: "It's make me sad, upset, and mad."

Mastery of L2 in the linguistic component of the broad scale is also seen in Data 17, which shows the right choice of words, syntactic structures, and meaning constructs in sentences. The data is referred to as follows:

"Sebelumnya selalu excited dalam menyambut bulan Juni ..." (Data 17)

In Data 17, the L2 code was mixed with the word "excited" in the L1 sentence in Indonesian. Analysis of the orthographic review of the word writing component can be said to be correct. Likewise, choosing "excited", which means "excited", can build the correct meaning in a series of sentences. Mix the code with the word "excited", referring to the speaker or, in this case, the owner of a social media account. The code mix is also a choice of adjectives believed by speakers to be a driving force in living life. The sentence in the post still refers to the syntactic structure of L1. Thus, the use of mixed code in these posts can be said to be good at using words in sentences.

The use of mixed codes by words and phrases in a sentence shows the ability of language users to insert single, side-by-side constituents and morphologically integrated constituents. The inserted words consist of nouns, verbs, adjectives, and adverbs. Besides being by words, using single or double constituent phrases is also found side by side. It means that there are L2 words and phrases in one post in L1. Likewise, the mastery of the morphologically integrated insertion feature mainly uses the suffix -an and -nya. The understanding in actualising the alteration includes marking words and phrases with nominal forms. Likewise, mixed codes are categorised under congruent lexicalisation by phrases and words.

Although it uses mixed code in the linguistic component at the paragraph level, it remains cohesive with the following sentence.

"FULL 3 MINUTES TO SET #belajardirumah beneran pake pomade dong!!! so handsome eh ma boi" (Data 12)

Phrases coded the post: "full 3 minutes to set" and "so handsome eh ma boi". The writing in the first sentence does not have a subject even though the meaning has cohesion with the following sentence. The second phrase also has cohesion with the previous sentence, but there is an error in writing "ma boi", which should be "my boy". The errors in writing words in these posts can be caused by a lack of knowledge and wanting to make the post look more slang. Also, the consequences of using a variety of media languages and incoherence are due to the variety of languages used. Likewise, with the previous Data 16, the placement of the word is at the beginning of the sentence, causing structural

errors. It is as a pronoun parsed before an explanatory sentence. As a result, the sentence in the post is not cohesive but still builds a coherent meaning with the following sentence. Coherence can be observed in the meanings of other sentences that connect the first sentence in the post based on context. The context in question is the Indonesian people who do not comply with preventing Covid 19.

From all tabulated data, several things need to be linguistically consistent with orthographic rules, such as the use of punctuation marks and writing letters in L1 and L2. The use of various languages on social media is often ignored or meaningless. The data that has been described shows that digital natives in their posts still make some mistakes. However, it can be argued that digital natives of children in Indonesia have mastered several language components. These components include word writing, spelling, and punctuation. In general, it can be said that social media positively impacts the acquisition of a second language for digital native children.

Mastery of language can also be viewed as the mastery of persuasion skills. Some code-mixed data in this study were analysed as persuasive sentences. Variations in the use of L2 in mixing persuasive sentence codes are by words/phrases complementing the entire persuasive sentence in L1 but by whole sentences L2 plus L1 as a compliment which can be nouns, phrases, or clauses. Examples of L2 form words/phrases on "... Ingat 3T (*Trace, Test, Treat*)." Examples of full-sentence forms L2 on "Stay at home and you can stay alive, percaya gue deh".

#### V. DISCUSSION

#### A. The Form of Using Mixed Codes L1 and L2 in Posting on Social Media

Based on the description above, it is stated that code-mixing is most used by inserting both words and. Next is the alteration form and congruent lexicalisation. The results showed that the form of code-mixing used in posting on social media was almost balanced between the types of words and phrases while by sentences, it was still lacking, but it has been done. It is in line with research by Halim (2015), who found that code-mixing is most often used at the level of phrase form. The same results were also obtained by (Purba & Suyadi, 2018) found that when mixing Indonesian and English codes, the most often done is inserting English words or phrases into Indonesian sentences. This insertion is undoubtedly inseparable from mastery of a second language.

The words or phrases often used in this study are terms related to COVID-19. It is in line with the findings of Okavia & Hayati (2020) that various English terms are widely used during a pandemic to communicate the problem of COVID-19. Language develops according to situations and conditions. This term aims to discuss the topic of COVID-19 because it is a popular term. The community, especially the digital native's generation, uses these terms in everyday conversation, for example, the new normal, lockdown, social distancing, physical distancing, and other words. The increased frequency of these words adds new vocabulary to its users. Previously, vocabulary related to COVID-19 was rarely used, especially on social media, but now it is used very often (Roig–Mar ń, 2020). Starting from just a word or phrase but with an increase in the intensity of using code-mixing with the term COVID-19 on social media to compile clauses or similar phrases such as stay at home and stay with me, new normal and new moral. The repetition process and environmental influences, such as exposure to language in the media influence second language acquisition (Purba, 2013; Quick et al., 2019). In this case, digital natives have understood the use of several words and phrases through the topic of COVID-19. Thus, indirectly the COVID-19 pandemic has increased the acquisition of a second language even though its use is still limited to mixing codes with words and phrases.

## B. Factors Causing the Use of L1 to L2 Code-Mixing

The results showed several factors motivated digital native children to mix codes, including popular terms, showing off, prestige, discussing specific topics, and language limitations. Code-mixing is a popular term that goes along with covering a specific topic. It is because the topic being searched for is related to COVID-19. The popular term most often used is new normal. This study's results align with Purba and Suyadi (2018), which suggest several factors that cause someone to mix code because they are talking about a specific topic. The issue of COVID-19 is an event that gets significant attention from the community at large. This ethic causes a high awareness of all the dynamics related to the COVID-19 issue. Words/phrases used rarely before became popular because they were used to discuss COVID-19 (Roig–Mar ń, 2020).

On the other hand, the issue of COVID-19 with various "renewal" conditions introduces a new concept. These concepts led to new popular terms, where many of these terms use L2 (Okavia & Hayati, 2020). This research shows that the issue of COVID-19 is becoming a "tool" that encourages the acquisition of new popular terms for digital natives.

Next is the factor of showing off and prestige; this factor is related to the desire of children to demonstrate their ability to use English. English will add to individual pride, where people will be interested in their posts, and their self-esteem will increase. It is in line with research by Kurniawan (2016), which states that increasing one's pride is one of the factors that cause children to use code-mixing in their posts.

Word limitations are also a factor causing code mixing in digital native children's posts. The emergence of new concepts in the L2 language caused code-mixing to occur. The lack of synonyms for the word L2 into L1 causes the necessity to use L2, which has consequences for implementing code-mixing (Shanmugalingam et al., 2018).

The mode factor contributes to the use of code mixes. The mode in this context is the use of L2 into L1, which aims to emphasise and reinforce the information the speaker wants to convey. The mode factor shows that the use of L2 lies

in part representing the entire speech's main idea. Thus, code-mixing is a speech mode used for information affirmation and affirmation (Trilipita, 2016).

Code-mixing behaviour by early speakers considers the character of the interlocutor. If the speech partner has a ready level of L2 language skills, code-mixing behaviour is also a response to support communication between speakers and speech partners (Kongkerd, 2015). Thus, code-mixing can be interpreted as an effort to accommodate the character of the speech partner, minimizing barriers and distortion of information in communicating.

The time and place factors are defined as environmental factors and conditions that affect the language process. In this study, these factors are more closely related to the influence factors of IT and social media channels on code-mixed communication. Through various IT channels, including social media, indigenous children get a new supportive environment to support their acquisition of the L2 language. The indicator is that some upturned vocabulary and phrases are slowly becoming standard, including submit, login, virtual class, and others, which emerge from new cultural activities resulting from the perceptions of native digital children with a digital environment.

The speaker's factor is also why the level of competency in L2 language and habits affects the tendency to code in various forms and intensities (Sutrisno & Ariesta, 2019). In a multilinguistic society, mastery of various languages is a necessity.

## C. Mastery of L2 as A Result of Using Code Mix

There are several errors due to the use of code-mixing in writing, such as structure, cohesion between words and sentences. However, the results of this study provide an overview of the acquisition of a second language through social media in general, which has a positive impact. It is in line with Dizon (2016), which suggests that compared to writing on paper, social media, especially Facebook, is more effective in helping students write fluently using a second language. Kelly (2018) stated that Facebook could support language acquisition, especially grammar and lexical knowledge. Someone who still needs to improve in mastering the second language can get and memorise many words from posts and conversations on social media (Kongkerd, 2015). Some principles that support using Facebook include peer learning, student involvement, collaborative and contextual learning. There are also principles of motivation, self and peer assessment, and a learner-centred approach. The motivation to follow second language learning plays a vital role in successfully acquiring a second language (Morita, 2004).

IT channels are a conducive learning environment for language learning for children, in this case, including social media. A conducive IT channel provides a new learning space for digital native children to develop their language skills. Digital interaction with an unlimited probability allows digital native children to get a rich language experience. Mixing the code itself is one of many types of learning experiences.

The main characteristic of digital native children's language learning process through digital interaction is its naturalness. Digital interactions will encourage children to be receptive to producing multilinguistic speech unconsciously. Learning children will likely occur in a bilingual manner with a communicative approach. The acquisition of the first and second languages is very different; the first language is obtained unconsciously through spoken input, while the second language combines conscious and written input (Maharani & Astuti, 2018).

Starting from Data 12, it is known that there is a habit of changing the writing of words that are already known to be stylish or look cool. The error is expressed that one of the reasons someone mixes the code is to make it look more relaxed, even though the writing should be more varied. The habit of writing in this style impacts readers' understanding, especially those just learning a second language. In addition, improper writing habits can impact when users write English in an official context because it can be considered incompetent (Kongkerd, 2015). Sutrisno and Ariesta (2019) explain that social media is a new way to learn more foreign languages. Using of code-mixing by influencers on Instagram is proven to make followers interested and motivated to hone their English and become a part of practising English for followers through social media. However, it is undeniable that everyone can express their opinion on social media even though the language is informal.

## VI. CONCLUSION

The use of mixed L1 and L2 codes in social media posts includes words and phrases embodied by insertion, alteration, and congruent lexicalisation. Of the various forms of code-mixing usage, the insertion of words and phrases is most often used in digital natives children's posts by inserting words and phrases related to the term COVID-19. The factors that influence it are divided into 2, namely (1) speaker factors such as showing off and prestige, language skills, and (2) linguistic factors such as popular terms, topics, modes, speech partners, time, and place/location.

With the emergence of various terms related to COVID-19, acquiring a second language for children with digital natives, in this case, English has increased. Through code-mixing, digital natives are already good in terms of writing accuracy, word choice, syntactic structure, cohesion, coherence, and meaning construction in L2 sentences. However, in code-mixing, there are some errors such as writing, sentence structure, coherence between words and sentences, and mastery of L2 native digital language.

## VII. PEDAGOGICAL IMPLICATION

The results of this study provide an overview of second language acquisition through social media has a positive impact. An analysis of the types of errors of learners in using a second language can be an input for teachers in terms of teaching content which will be emphasised so that the second language skills of learners are getting better.

The increase in second language acquisition resulting from code-mixing has implications for second language learning, which requires using code-mixing. Analysis of the types of errors of students in using a second language can be input for teachers in terms of teaching content which will be emphasised so that students' second language skills are getting better.

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