

ROLE OF L1 AND L2 IN THE ACQUISITION OF BAHASA INDONESIA AS A THIRD LANGUAGE

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ABSTRACT

This study aims to analyse the role of L1 and L2 in the Bahasa Indonesia acquisition as L3. The participants of this study were *Bahasa Indonesia bagi Penutur Asing* (BIPA) students from Universitas Negeri Surabaya. Data were collected when participants carried out conversations using Bahasa Indonesia and described pictures shown to them. The participants' speech was analysed for language transfer and the participants' tendencies to use L1 or L2. The results show that L1 influences the phonological shift in L3 articulation. This happens to participants' whose L1 typology is close to L3. L1 also plays a dominant role in helping participants to master L3 vocabulary when the typology is close to L3. If the L1 typology is far from L3, L2 is the main supplier in mastering L3 vocabulary. Typology is the dominant factor in L3 acquisition. In addition, other factors, such as L2 status, working memory, and memory, influence the role of L1 and L2 but are less dominant than typology.

Keywords: third language acquisition; cross-linguistic influence; language backgrounds; multilingualism

Introduction

In education, the theories of language acquisition are important to explain strategies for learning languages (Hamid, 2011). Students' knowledge and proficiency of the first language (L1) and the second language (L2) affect third language acquisition

(TLA). Cenoz (2001) stated that TLA is more complex than second language acquisition (SLA). In SLA, there is only L1 as the source language, but in TLA, the relationship can be between L1↔L3, L2↔L3, or L1 and L2↔L3 (Alonso et al., 2020). In addition, the process that occurs in TLA can adhere to several principles: (a) language sources can come from L1/L2; (b) L1 and L2 have different qualitative characteristics; (c) the process possesses a holistic nature; and (d) aspects in L3 can be mastered all at once or repeatedly.

L1 is assumed to be the first language in childhood with the acquisition of linguistic abilities at a certain level. L2 is assumed to be the language acquired after L1 as the source language. In chronological order, L3 is assumed to be the language acquired after L1 and L2, either sequentially or simultaneously (Hammarberg, 2014). The term L3 was used by language acquisition experts along with the emergence of studies examining cross-linguistic influences in language acquisition. Rothman et al. (2013) said that L3 is a language that is acquired after at least two other languages have been acquired. Thus, chronologically, L3 can actually be a fourth, fifth, or any number of languages (L_n) acquired after the first two. A language can also be considered as an L3 if the L2 consists of more than one language, or L_{2n} (Hammarberg, 2018).

There has been considerable interest in third language acquisition (TLA) studies over the last decades (Bardel & Sánchez, 2020; Cenoz, 2001; De Angelis, 2007; Hammarberg, 2001). TLA research involves psycholinguistic and sociolinguistic perspectives. From the sociolinguistic aspect, TLA can improve language acquisition skills, which can be used for educational and social development in multilingual individuals. TLA research also have bi/multilingual acquisition ability characteristics compared to monolingual individuals (Cenoz et al., 2001).

TLA examines several phenomena, including transfer, interference, language avoidance, borrowing, and the elimination of previous languages (Smith & Kellerman, 1986). TLA can also be studied from 1) linguistic aspects (language transfer, aspects of phonology, morphology and syntax, minimum pairs); 2) sociological aspects (language negotiation); 3) psychological aspects (metalinguistic awareness, speaker heritage); 4) educational aspects (CLIL); and 5) cognitive aspects (competence of multilingual speakers) (Amaro et. al, 2012; Ding & Ding, 2021).

TLA research is most appropriate in Indonesia to investigate students who are studying Bahasa Indonesia as a foreign language, for instance, in the programme *Bahasa Indonesia bagi Penutur Asing* (BIPA). BIPA students, on average, master more than two languages before learning Bahasa Indonesia. One of the observations that have been made in the acquisition of Bahasa Indonesia is the occurrence of lexical transfer from L1/L2, suggesting that the students' L1 and L2 play a vital role in the process (Kholiq & Luthfiyati, 2020).

This study analyses the role of L1 and L2 in the acquisition of Bahasa Indonesia as L3. The objectives of the study are: 1) to identify the role of L1 and L2 in articulation of Bahasa Indonesia as L3; and 2) to determine the role of L1 and L2 as a vocabulary supplier in the acquisition of Bahasa Indonesia as L3.

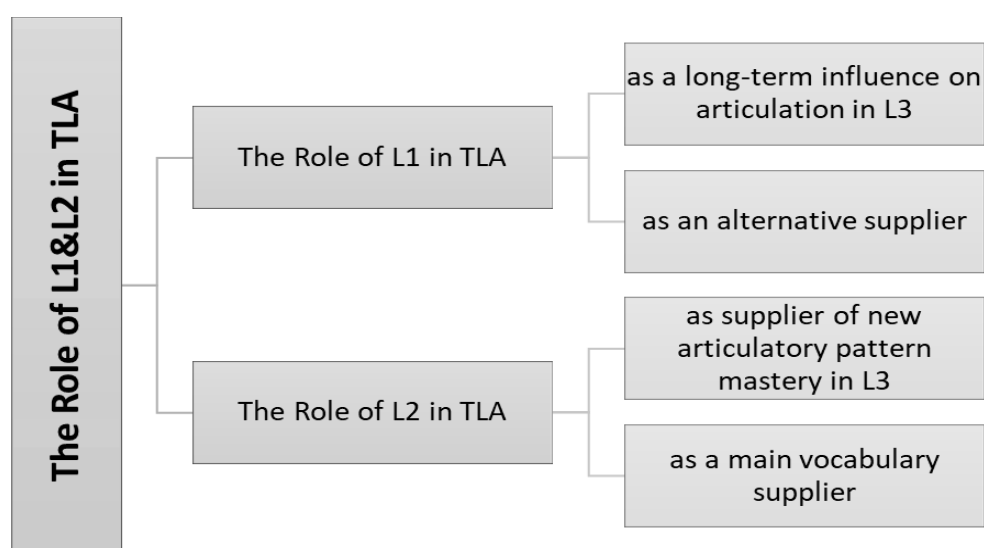
Theoretical Framework

Language background in TLA is very important for learners (Mahdun et al., 2022; Williams & Hammarberg, 1998). The learners' L1 and L2 are the primary capital for their L3 acquisition. The role of L1 and L2 can be seen in articulation and vocabulary suppliers in L3 acquisition. The effect of L1 is also seen in the articulation of powerful L3 learners. Hammarberg (2001) stated that L1 has a long-term influence on articulation in L3. This can be seen in several L1 sounds that affect the L3 articulation. L1 functions as an alternative supplier when L3 learners cannot associate a word with L2. Jin (2009) corroborates that the influence of L1 cannot be eliminated as a source of direct transfer of TLA, even after learners have obtained a typologically closer L2.

Kulundary and Gabriele (2012) found that L2 has a role in the grammatical and lexical mastery of L3. In addition, working memory also affects TLA, which indirectly has a vital role in L2 word mastery in L3 learners (Shekari & Schwieter, 2019). The role of L1 and L2 in TLA is illustrated in Figure 1.

Figure 1

Theoretical Framework for the Role of L1 and L2 in L3 Acquisition



Method

This study uses a qualitative approach by analysing the roles of L1 and L2 in TLA. The language performance of participants in interviews and when they produced sentences in response to given stimuli. The spoken data from the interviews were used to determine the role of L1 and L2 in TLA articulation. Meanwhile, to determine the role that L1 and L2 play as vocabulary suppliers in L3, the words, phrases, clauses, or sentences that are used by the participants in L3 were analysed.

The participants of this study were three BIPA students at the Universitas Negeri Surabaya (Unesa). The selection criteria were students who were studying Bahasa Indonesia as an L3, and started to acquire Bahasa Indonesia at the same time. The participants of this study were:

- 1) S-1 from Thailand with L1: Pattani Malay, L2: Thai and English, and L3: Bahasa Indonesia;
- 2) S-2 from Madagascar with L1: Malagasy, L2: French and English, and L3: Bahasa Indonesia; and
- 3) S-3 from Madagascar with L1: Malagasy, L2: French and English, and L3: Bahasa Indonesia.

Data were collected using elicitation techniques. Elicitation is used for participants to show their language performance by combining knowledge, perception, and language skills (Gass & Mackey, 2007). In this study, interviews and picture-based sentence production were used to elicit the participant's language performance.

Interviews were conducted using Bahasa Indonesia as L3. If they could not speak Bahasa Indonesia, they could use L1/L2. Participants were asked several questions on various topics, such as family profiles, Bahasa Indonesia learning process, comparison of Indonesia's country and origin, and plans after studying in Indonesia. The data focused on linguistic performance, not the contents of the answers. Sounds, words, phrases, clauses, or sentences that were transferred to L1/L2 became the data of this study to analyse the roles of L1 and L2 in the participants' TLA.

In addition to the interviews, participants were also asked to produce sentences based on pictures. One hundred pictures were shown to the participants as stimuli to make sentences. The images were related to the participants' environment. The data collected at this stage were the same as the data in the interview, namely, sounds, words, phrases, clauses, or sentences that were transferred to L1/L2. Figure 2 shows some examples of pictures provided to the participants.

Figure 2


Some Pictures Provided to the Participants





Data analysis in this study included 1) phonetic transcription; 2) identification and classification; and 3) data analysis. Phonetic transcription was conducted for the recordings of the participants' pronunciation when they discussed and produced sentences based on pictures. Identification and classification were carried out by specifying sentences that contained L1/L2 language elements. These elements can be phonemes and words. Sentences containing phonemes in L1/L2 were categorised as data used to analyse the role of L1/L2 in articulation. Meanwhile, sentences containing words in L1/L2 were categorised as data used to analyse the role of L1/L2 as vocabulary suppliers. Data analysis was carried out by examining the results of identification and classification with the roles of L1 and L2 in Bahasa Indonesia acquisition as L3. The data collection and analysis process are shown in Table 1.

Table 1
Research Procedure

Topic/Picture	Data Collection		Analysis Process		
	Questions/Keyword from Picture	Answer/Sentences Production	Phonetic Transcription	Identification and Classification	Data Analysis
Interview Process					
Family profiles	<i>Berapakah umur Saudaramu?</i>	<i>Adik yang <u>bosu</u> tiga belas tahun, namanya Lukman.</i> (S-1)	[Adl?] [yaŋ] [bosu] [tiga] [bəlah] [tahUŋ], [namaŋ] [Lukman].	Articulated/pronounced [bəlah] in Malay (L1), it should be [bəlah] in Bahasa Indonesia	Phonological shift [s] to [h] in L1
				Articulated/pronounced [namaŋ] in Malay (L1), it should be [namaña] in Bahasa Indonesia	Phonological shift [a] to [o] in L1
				Used <i>bosu</i> (L1), not <i>bungsu</i> (L3)	L1 supplied the word to be expressed in L3
Produce Sentences Based The Pictures					
	<i>Bersembunyi</i>	<i>Anak-anak bermain <u>akiafina</u></i> (S-2)	[ana?] [ana?] [bərmæn] [akiafina]	Articulated/pronounced [bərmæn]. Sound [ə] does not occur in L1	L2 supplied the sound [ə] that does not occur in L1
				Used <i>akiafina</i> (L1), not <i>bersembunyi</i> (L3)	L1 supplied the word when L2 could not

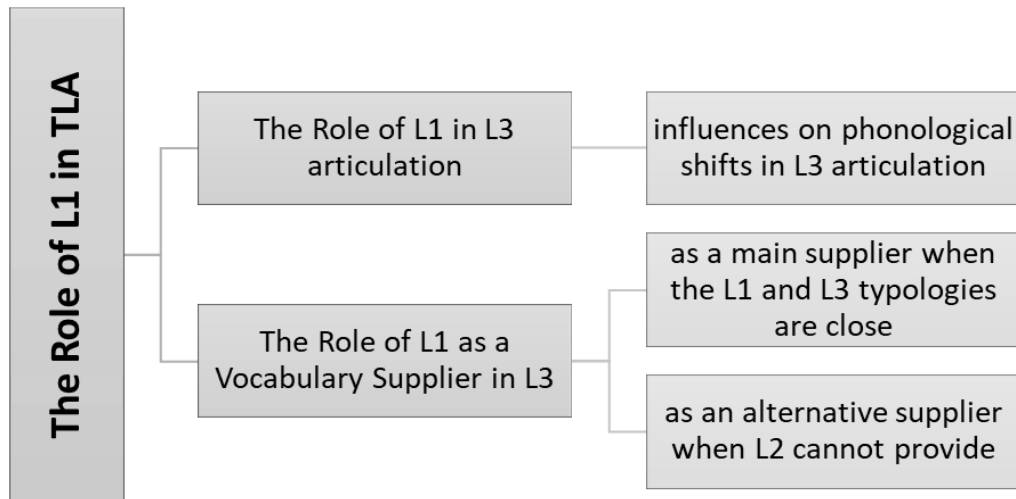
Result

The Roles of L1 in the Acquisition of Bahasa Indonesia as L3

The results showed that L1 influences L3 articulation as illustrated in Figure 3.

Figure 3

The Role of L1 on L3 Acquisition



The role of L1 in articulation can be observed in the phonological shift from L1 to L3. This is influenced by the close typology of L1 and L3. In addition, the typology also influences the role of L1 as the main supplier.

The Role of L1 in L3 Articulation

The results are presented based on the participants' L1, as the phonological characteristics of the two L1s in this study (Malay and Malagasy) are different.

Malay S-1's L1 brought about several phonological shifts. The phonological shifts showed the following changes: 1) changing vowels [a] to [ə]/[o]; 2) glottalisation of stop consonants ([t], [d], & [p] → [ʔ]); 3) assimilation ([s] → [h]); 4) deletion ([r] & [l] → [ʔ]), and 5) changing nasal features ([-un] → [-Uŋ]). The phonological shifts from the Malay L1 are described in Table 2.

Table 2*Phonological Shift from Bahasa Indonesia to Malay Sounds*

Sounds in Bahasa Indonesia	Position	Phonological Shift	Example
[a]	at the end of the words	→ [ə] / [o]	→ [sama] → [samo] [saya] → [sayə]
[t], [d], and [p]	stop consonants at the end of the words	→ [ʔ] (glottic)	→ [sangat] → [sangaʔ] [murid] → [muriʔ] [cukup] → [cukuʔ]
[s]	at the end of the words	→ [h]	→ [tulis] → [tulih] [gelas] → [gelah] [belajar] →
[r] and [l]	at the end of the words	→ Deleted	→ [belaja] [futsal] → [futso] [kebun] →
[-un]	at the end of the words	→ [-Uŋ]	→ [kebun] [tahun] → [tahuŋ]

From Table 2, it can be seen that phonological shifts occur in sounds at the end of the words due to the influence of Malay Pattani sounds. This shows that the speaker was strongly influenced by the L1 when pronouncing Bahasa Indonesia sounds. More specific examples can be seen in the following sentences.

(1) *Saya jadi orang yang menjaga dan wakilan dari club itu.*

[saya] [jadi] [oran] [yan] [mənjagə] [dan] [wakilan] [klUb] [itu].

(2) *Sama saja.*

[Samo] [sajə].

In sentence (1), the word *menjaga* was pronounced [mənjagə], not [mənjaga]. In sentence (2), the lexical *samo* and *saja* were pronounced [samo] and [sajə] instead of [sama] and [saja]. It shows how Malay dialect still influences S-1 in terms of the sound shift [a] to [ə] and [o] at the end of the words.

S-1 pronounced the stop sounds [t], [d], and [p] at the end of the words to become [ʔ] in many words. This does not match the sound in Bahasa Indonesia, the target L3. The following sentences demonstrate the shift.

(3) *Tidak ada teman dekat sangat.*

[tidaʔ] [ada] [təman] [dəkaʔ] [sangaʔ].

- (4) *Kalau orang yang tidak boros itu tidak cukup.*
[aman] [oraŋ] [yaŋ] [tidaʔ] [boroh] [itu] [tidaʔ] [cukUʔ].

The words *dekat* and *sangat* in sentence (3) were pronounced [dəkaʔ] and [saŋaʔ]. In sentence (4), it is *cukup* to pronounce [cukUʔ].

S-1 also changed the sound [s] at the end of several words to [h]. These words were pronounced by S-1 spontaneously, which could be why S-1 did not match the pronunciation in Bahasa Indonesia. It can be seen in the following sentences.

- (5) *Adik yang bosu tiga belas tahun, amanya Lukman.*
[Adiʔ] [yaŋ] [bosu] [tiga] [bəlah] [tahUŋ], [namaŋ] [Lukman].
- (6) *Itu tad untuk letak gelas.*
[itu] [tad] [untuk] [lətaʔ] [gəlah].

In sentence (5), S-1 uttered the lexical *belas*, which should be pronounced [bəlas], not [bəlah]. The sound [s] at the end of the sentence was changed to [h] in *gelas* 'glass' in sentences (6) into [gəlah] instead [gəlas]. It shows that S-1 was phonologically affected by L1, which typically uses the sound [h] for words ending with the sound [s]. However, in other words, S-1 did not change [s] to [h].

In pronouncing Bahasa Indonesia words, S-1 also removed the sounds [r] and [l] at the end of words. The omission corresponds to the phonological sounds in the L1. The omission of the sounds [r] and [l] at the end of the words is illustrated in the following examples.

- (7) *Saudaranya belajar.*
[Saudaraŋa] [bəlaja].
- (8) *Bola, futsal, voli yang sering itu*
[bola], [futso], [voli] [yaŋ] [səriŋ] [itu].

In sentence (7), the word *belajar* "learn" was pronounced [bəlaja] by S-1 instead of [bəlajar] in bahasa Indonesia. In sentence (8), the word *futsal* was pronounced [futso] by S-1. The word *futsal* is an example where the final sound [l] is omitted. the sound [l] is also omitted by S-1 in its pronunciation. It shows that S-1 is also affected by phonological shifts regarding the omission of [r] and [l] at the end of the pronunciation of Bahasa Indonesia words.

In pronouncing Bahasa Indonesia words, S-1 also pronounces [-un] at the final position as [-Uŋ]. This is shown in the following examples.

- (9) *Ibunya biasanya menjadi anak kebun sendiri.*
[ibuŋa] [biasaŋa] [menjadi] [anaʔ] [kebUŋ] [səndiri].

- (10) *Pendidikan itu lima tahun.*
[pəndidikan] [itu] [lima] [tahUŋ].

The word *tahun* “year” is pronounced [tahUŋ] instead of [tahun]. The same change also happened to the word *kebun* “garden”, pronounced by S-1 as [kəbUŋ] instead of [kebun]. The two terms were repeated in different sentences. This means that the change of pronunciation from [-un] to [-Uŋ] in the final position of the word was only found in the pronunciation of the words *tahun* and *kebun*.

From the data, it can be seen that S-1 was affected by the articulation of L1. The effect of this articulation can be seen in the changing of several sounds that follow the phonological shift in the Pattani dialect of Malay as its L1. Even though for certain words, S-1’s pronunciation followed Bahasa Indonesia, the pronunciation of most of the terms produced by S-1 showed the phonological shift of L1, thus it can be said that L1 plays a significant role in S-1’s articulation in the acquisition of Bahasa Indonesia as L3.

In Malagasy, there are no [ə], [ç], [ç], [w], and [x] sounds. The participants in this study revealed that S-2 and S-3 appeared not to be able to use the sound [ə] in the pronunciation of Bahasa Indonesia. This is consistent with the phonology of the Madagascar language, which does not recognise the vowel sound [ə] and tends change this sound to [e].

S-2 and S-3 pronounced the sound [ə] to [e] in some words containing the sound [ə], as shown in the following examples.

- (11) *Saya anak pertama.*
[saya] [ana?] [pertama].

- (12) *Bekerja di ambassador. Prancis atau Indonesia.*
[bekerja] [di] [ambassador] [Prancis] [atau] [Indonesia].

In some of the sentences above, it is shown that *pertama* “first” word in sentence (11) was pronounced [first], not [pərtama]. In sentence (12), *bekerja* “work” word was pronounced as [bekerja] instead of [bəkərja]. It can be seen that in all forms of words with the sound [ə], the sound [e] was used. It indicates the effect of L1 from S-2 and S-3, which does not recognise the sound [ə].

From these data, S-2 and S-3 were affected by the absence of the sound [ə], which was converted into [e]. The sound changes were verbalised by S-2 and S-3 spontaneously as S-2 and S-3 did not focus on the pronounced sounds but on the choice of vocabulary to convey the meaning. S-2 and S-3 pronounced the sound [ə] to [e] in every word form. It shows that the role of the Malagasy appears in the S-2 and S-3 articulations, at least in this particular sound.

The Role of L1 as a Vocabulary Supplier in L3 Acquisition

Malay as L1 of S-1 has a very close typology with Bahasa Indonesia, so S-1 used Malay to switch vocabulary in Bahasa Indonesia without having to understand the words in Bahasa Indonesia. It can be seen in many exact Malay and Bahasa Indonesia words. The closeness of the language can be seen in the use of pronominal words, affix forms (*me-, ber-, ter-, -i, -kan*), aspect words (*sedang, akan, telah, harus*), and root words.

If S-1 does not know the word in Bahasa Indonesia, S-1 tends to match it into Malay, as shown in the following examples.

(13) *Saya selalu mengaji bahasa Indonesia.*

(14) *Di Thailand Selatan itu ada tembak dan kabom juga.*

S-1 used Malay as the main provider to substitute for Bahasa Indonesia words. In sentence (13), S-1 already understood the word *belajar* “learn” in Bahasa Indonesia because in Malay, the same word exists. Nonetheless, when S-1 was about to say the word “learn” in Bahasa Indonesia, he probably forgot this, so he chose *mengaji* “recitation”, which in Malay can replace the phrase *belajar*. However, the context of using *mengaji* and *belajar* differs in Bahasa Indonesia.

In sentence (14), the word *kabom* was used by S-1 to match the phrase *bom* “bomb” in Bahasa Indonesia. The word *bom* was previously unknown to S-1 in Bahasa Indonesia, so S-1 transferred it from Malay to become *kabom*, which is closely related in form. This shows that S-1 relied on L1 as the main provider or the first alternative to speak words that are not mastered.

In contrast, S-1 who had Malay as L1, S-2 and S-3 used their Malagasy L1 as an alternative supplier for words. S-2 and S-3 tended to use Malagasy because they could not find the equivalent words in Bahasa Indonesia, English, or French.

(15) *Nenek mampatory cucunya.*

(16) *Anak-anak bermain akiafina.*

In sentence (15), S-2 used the word *mampatory* to express *tidur*, most probably due to the participant’s lack of knowledge (or recall) of what *sleep* is in Bahasa Indonesia, French, or English. As a final alternative, the word *mampatory* (from Malagasy) was used by S-2. Meanwhile, in sentence (16), *akiafina* – meaning *hide* – plays the same role.

The findings suggested that L1 plays a role in the acquisition of L3 in terms of articulation and as a provider. The role of L1 in articulation is shown in the phonological shift and its phonological structure. If L1 is close to L3 and a phonological shift occurs, the phonological shift in L3 articulation will be affected. If in L1 there is no known sound as the one in L3, the articulation in L3 tends to avoid the absent sound or be replaced with another sound.

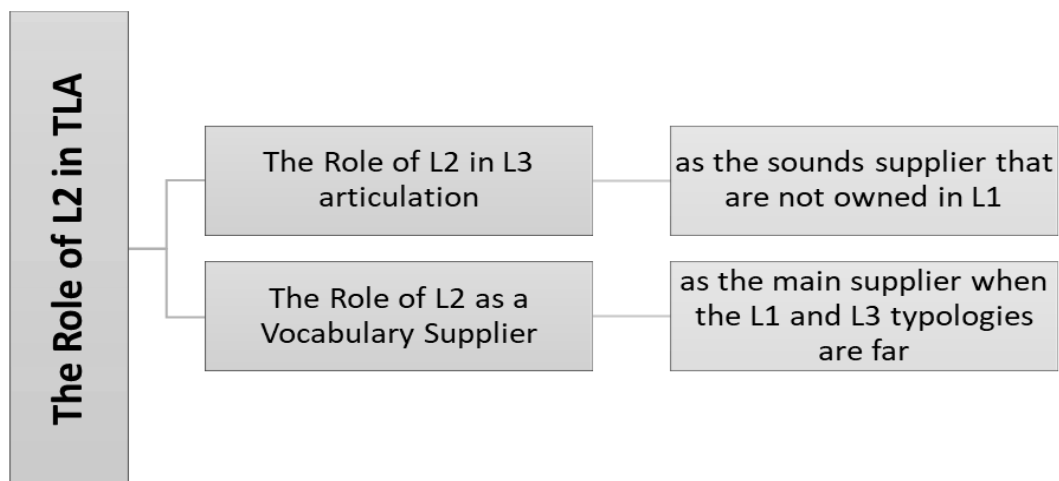
The role of L1 as a word provider is indicated in the typologies of the L1 and L2. If L1 and L3 are close, L1 tends to be TLA's main vocabulary supplier. The main vocabulary supplier is intended as the language used to understand words/phrases/other elements in the L3. If the typology of L1 and L3 is far or considered far by the L3 acquirer, L1 tends to be used as the last provider of vocabulary in TLA.

The Role of L2 in the Acquisition of Bahasa Indonesia as L3

The results of this study showed that L2 also plays the role as sound and vocabulary supplier, as illustrated in Figure 4.

Figure 4

The Role of L2 in Third Language Acquisition



The Role of L2 on Articulation in L3 Acquisition

The results showed that L2 is a sound enhancer for sounds that are available in L1. This can serve to support L3 pronunciation abilities. The L2 in this study were French and English from S-2 and S-3 respectively.

S-2 and S-3's L1 do not contain the sounds [ə], [c], [x], [q], and [w], while their L2 contains [ə], [c], [x], [q], and [w]. Because the sounds [ə], [c], [x], [q], and [w] are available in their L2 (French), this language can assist with the mastery of sounds that are not present in L1 for the learners to pronounce words in L3 (Bahasa Indonesia). This is illustrated in (17).

- (17) *Kesulitan saya bahasa Indonesia di kata-kata sedikit and vocabulary.*
 [kəsulitan] [saya] [bahasa] [Indonesia] [di] [vokabulari].

In (17), S-2 pronounced the word *kesulitan* and the word *vocabulary* with the pronunciation of [kəsulitan] and [vokabulari], which indicates that S-2 already recognised the sounds [ə] and [c]. Words in Bahasa Indonesia containing [ə], [c], [x], [q], and [w] were also pronounced correctly by S-2 and S-3, as shown in (18) and (19).

(18) *Saya mencoba makan honey.*
[saya] [mencoba] [makan] [hanie].

(19) *Ibu saya membeli plat berwarna putih.*
[ibu] [saya] [məmbəli] [plat] [berwarna] [putih].

In (18), S-3 spoke the word *mencoba* with the pronunciation [mencoba], which means that S-3 already recognised the sound [c] in the articulation of Bahasa Indonesia. This is possibly because of the additional mastery of sounds from the speakers' L2, French and English. The words *membeli* and *berwarna* were pronounced [məmbəli] and [berwarna] by S-2, which showed that S-2 was familiar with the use of the sounds [ə] and [w], but sometimes still used the sound [e] in *berwarna*, in (19). This suggests that in the mastery of consonant sounds, S-2 and S-3 already knew the sounds [ə], [c], [q], [x], and [w] through their unknown L2 in their L1.

The Role of L2 as a Vocabulary Supplier in L3 Acquisition

The role of L2 as a vocabulary provider is analysed based on three different L2s available in this study. First, the role of English (L2₂) as a vocabulary provider. Second, the role of French (L2₁) of S-2 and S-3 as a vocabulary provider, and third, the role of Thai (L2₁) from S-1 as a vocabulary provider.

English as L2₂ played the role of a vocabulary supplier when participants did not know the terms in Bahasa Indonesia. The following examples illustrate the use of English words as replacements:

(20) *Kalau dosen mau marah pada saya itu saya harus care.*

(21) *Nanti announcement lewat online.*

In sentence (20), S-1 used the word *care* to express the word *peduli*. The provision of the word *care* for the *peduli* in S-1's mind suggested that English was used to supply vocabulary when using L3. S-1 used the word *announcement* in sentence (21) to replace the word *pengumuman*. The word *announcement* was chosen by S-1 because he did not know or recall the word *pengumuman* in Bahasa Indonesia and Malay.

French as the L2₁ of S-2 and S-3 serves as a second vocabulary provider for S-2 and S-3 after English. The findings showed that when the two participants did not

manage to find English words, they resorted to French. Examples (22) and (23) illustrated this choice:

(22) *Anaknya menyusu dengan biberon.*

(23) *Kamar tidur saya ada tv dan nunurs.*

In sentence (22), S-2 and S-3 used the word *biberon* in French to replace the phrase *botal bayi* “baby bottle” in Bahasa Indonesia. In sentence (23), the term *nunurs* are used to replace the word *boneka* “doll”.

For S-1, Thai appeared to serve as the last resort vocabulary supplier. Thai, as S-1’s L2₁ was utilised when S-1 could not find the required word in Bahasa Indonesia, Malay, or English.

(24) *Taliseb itu bagus.*

The word *taliseb* is used by S-1 to replace the phrase *danau* in Bahasa Indonesia in sentence (24). The term *taliseb* was most probably used because S-1 have not mastered the word *danau* “lake” in Bahasa Indonesia, Malay, or English.

The roles that L2 plays in the acquisition of Bahasa Indonesia varied depending on the language background of the L3 learners. In general, the roles can be perceived in two parts: One, to assist in mastering the sounds of the L3, especially if the learner’s L1 does not contain the same phonemes, and two, as an additional vocabulary supplier.

Discussion

The Role of L1 and L2 in the Articulation of L3

From the results, it can be seen that L1 influences articulation, indicated by a phonological shifting in the L3 articulation to L1. This happens when the L1 typology is close to the L3 typology, such as the case with Malay (L1) and Bahasa Indonesia (L3) in the current study. If the L1 and L3 typologies are far, such as Malagasy and Bahasa Indonesia, the phonological shift of L3 to L1 articulation occurs in sounds that do not belong to L1, as shown in examples (11) and (12). The pronunciation of [ə] is pronounced as [e] because there is no [ə] sound in the speaker’s L1, that is, Malagasy.

In the case of Pattani Malay as L1, the phonological shifts (listed in Table 2) that occurred included changing vowels, glottalisation of stop consonants, assimilation, deletion, and changing nasal features. It follows Chapakiya (2020), who stated that the phonological changes in Pattani Malay include assimilation, nasalisation, deletion, glottalisation, and changing vowels. The main factor of this phonological shift is the Pattani Malay typology (L1), which is close to the Bahasa Indonesia typology (L3). These results support Hammarberg (2001), who stated that L1 has a long-term influence on

L3's articulation, influenced by typology, L2 status as a source language, proficiency, and recency factors.

If L1's typology is dissimilar with L3, L2 status can dominate L3 articulation. In Malagasy, there is no [ə], [c], [x], [q], and [w] phones, but in French and English as L2₁ and L2₂, the phones exist. Hence, French and English became the suppliers for the vocal mastery for S-2 and S-3's L3. This finding is in line with the research results by Llama et al. (2010) who stated that L2 status and recency have dominant influence on L3 articulation. Typology, however, is more dominant than L2 status and recency. It can be seen in the case of L1 Melayu Pattani, where typology has an important influence on the L3 articulation of S-3. Because S-2 and S-3 do not have a language background whose typology is close to L3, L2 status and recency become essential factors in L3 articulation.

In terms of articulation, L2 plays a role as the sound supplier when L1 does not have the specific required sounds. In this study, the participant whose L1 was Malagasy and L2 were English and French, the sounds that do not exist in Malagasy, namely, [ə], [c], [x], [q], and [w], were supplied with sounds from English and French. Fernandes and Brito (2007) suggested that L2 plays a role in constructing new words for L3 acquisition and helps learners deal with new L3 articulation. According to Wrembel (2010), sporadic phonological transfers of L2 occur in the acquisition of L3, showing that L2 is used to provide sounds that L1 does not have for L3 articulation.

As a summary, the role of L1 and L2 in L3 articulation can be viewed from two parts: the influence of phonological shifts in L3 articulation and the supply of sounds that L1 does not have for L3 articulation. The phonological shift occurs in L3 learners whose L1 typology is adjacent to the L3 typology. In other words, L1's sounds are similar to L3, therefore L1 influences L3's articulation. On the other hand, L2 will play a role as a sound supplier when the L1 does not contain the required sounds. This occurs when the L1 typology is far from the L3 typology.

The Role of L1 and L2 as Vocabulary Suppliers in Bahasa Indonesia Acquisition as L3

From the results, the role of L1 and L2 in vocabulary supplier can be seen from the lexical transfers performed by the participants. Participants made lexical transfers from L1 when the typology is adjacent to L3. When the typology of L1 is far from L3 but the typology of L2 is closer, the participants used L2 instead.

When the participants did not know Bahasa Indonesia, English, which was their L2₂, provided the vocabulary supply. This showed that Bahasa Indonesia was understood by using English as a vocabulary supplement. When S-2 and S-3 faced difficulties in using Bahasa Indonesia, following English, the participants resorted to French as L2₁ to function as a vocabulary source. This transfer to French occurred when participants were unable to find English replacements or believed that the English words that they know will not effectively replace the Bahasa Indonesia expression, and Malagasy served as the final source of vocabulary when French could not fulfil this role. For S-1, when a

word cannot be registered in Bahasa Indonesia, Malay, or English, Thai (L2₁) was utilised as the last source of vocabulary.

From the results, an L1 with a similar typology to L3 appeared to influence vocabulary mastery in L3, such as Pattani Malay (L1) - Bahasa Indonesia (L3). The close typology between L1 and L3 turned L1 into the source language in mastering L3 vocabulary. It is in line with the concept of a third language acquisition analysis which does not only look at the relationship between L2 → L3, but also L1 → L3 (Alonso et al., 2020; Cenoz, 2001). In addition, this finding also supports Falk and Lindqvist (2019), who found that English (L2) in Swedish language acquisition (L3) did not act as the main provider but German (L1) did. When the L1 typology is close to the L2 typology, L1 will dominate L3 acquisition regarding articulation and vocabulary. Jin (2009) stated that L1 could be the source language in TLA. It can be seen in the results of the current research in the case of the Pattani Malay L1.

That said, L2 plays the role as a vocabulary supplier when the L1 typology is far from the L3 (Hammarberg, 2001). It suggests that when learners feel that the L1 typology does not play a role in L3 acquisition, L2 then becomes the dominant supplier in vocabulary mastery. It is influenced by L2 status and working memory in L3 students. They use L2 as the main provider because of several factors, namely, typology and working memory (Cenoz, 2001; Shekari & Schwieter, 2019). L2 status assists in mastering L3, both in articulation and vocabulary.

L2 is also more dominant in L3 learners' working memory because the mastery is more recent than L1. It can be seen in the dominance of English as a vocabulary supplier in acquiring Bahasa Indonesia as L3. Following Tay and Cheung (2019), English as L2 in the acquisition of Bahasa Indonesia became the dominant language as a source language because the learners of Bahasa Indonesia in this study had studied English and were frequently exposed to the English language.

Conclusion

From this study, it can be concluded that in the acquisition of Bahasa Indonesia as L3, the roles of L1 and L2 are in articulation, and they function as a vocabulary supplier. In articulation, L1 influences the L1 phonological shift in L3, when the L1 typology is close to the L3 typology. In addition, L2 plays a role as an enhancer of L3 sound mastery for sounds that do not exist in the L1, when the L1 typology is dissimilar to L3.

As a vocabulary supplier, the results suggested that L1 that has a close typology to L3 plays a dominant role. However, L2 acts as the main supplier in the acquisition of L3 when L1 is typologically far from L3. Typology becomes the dominant factor in UNCLEAR MEANING, PLEASE REWRITE L3 acquisition. In addition, other factors, such as L2 status, working memory, and memory, influence the role of L1 and L2 but are less dominant than typologies. This study is limited to participants who have limited language background. Further research needs to be conducted on participants who

have more complex language background to obtain more findings pertaining to L3 acquisition.

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Ethical Approval Statement

This study was carried out according to the guidelines and has been approved by Pascasarjana Unesa (Approval ID: B/64347/UN38.8/PP.10.00/2022), approval date: 14 Oktober 2022.

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