

## PHONOLOGICAL CHALLENGES IN INDONESIAN SYLLABIFICATION: INSIGHT FROM KOREAN LEARNERS

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### Abstract

This study is aimed at finding out how the differences in sound inventory and syllable structures between Indonesian and Korean influence the phoneme realization of Korean learners studying Indonesian. It involves 14 Korean learners and data for this study was obtained through documentation. The syllabification analysis showed that there were several processes occurring in speech production, such as simplification of the syllable structure, the addition and deletion of sound, and the change of sound segments. The simplification of the syllable was shown in the pronunciation of the consonant cluster, which was pronounced as two separate syllables. The addition of sound was obvious in some words, which was observable at the final position of the first syllable. The deletion of sound was found in the word ending in /r/, in which the sound was dropped. The sound change was overtly seen in the pronunciation of consonants /v/ and /r/. These processes might result from the different sound inventory and syllable structures between Korean and Indonesian. Some of those issues need to be addressed significantly since phonological errors might seriously interfere with understanding.

**Keywords:** *Indonesian for foreign speakers; BIPA; Indonesian language; Korean learners; Syllabification.*

### 1. Introduction

The phonological contrast with the first language (L1) is likely to cause problems for those who are learning a new language. Even when the first and second language (L2), or the third language (L3) and so on, have the same phonemes, those phonemes might not be identical. There is a possibility that language learners will produce slightly different sounds of the phoneme (Pennington, 2014).

Pronunciation of L2 learners reflects the phonetic features of their L1 (Lewis et al., 2022; Reed & Levis, 2015; Sewell, 2016; Katz & Assmann, 2019). The interference might either be segmental or suprasegmental, or both. One of the reasons is the sounds that are allophones of one phoneme in L1 may appear to be different phonemes in L2 (Cook, 2016; Zhou & Dmitrieva, 2022; Colantoni & Escudero, 2015). The problem with Korean learners contrasting Indonesian /r/ and /l/ phonemes, for example, embarks from the fact that those two sounds are allophones of one single liquid phoneme in Korean. Korean has 19

consonants and two glides (Azizah, 2021; Brown & Yeon, 2015), while unlike Korean, Indonesian does not consider glides as a separate group of consonants. The language has 22 consonants, including two glides, /w/ and /j/ (Chaer, 2020; Shei & Li, 2022).

Another problem is the syllable structures, which are different across languages. Overcoming the problem of L2 pronunciation, learners oftentimes make use of universal processes familiar to all learners. One of those is the simplification of L2 consonant clusters. The use of CV syllable structure or open syllable type is commonly done by L2 learners regardless of learners' L1 (Erdogan & Wei, 2019; Flynn et al., 2014; Yasufuku & Doyle, 2021). A single word having one syllable may be perceived as having multiple syllables by speakers of other languages. The case also happens for Korean learners studying Indonesian, in which syllable structures are more complex than those of Korean. The language has eight syllables structures: V, GV, CV, CGV, VG, GVC, CVC, CGVC (Qian, 2018), while Indonesian has 11: V, CV, VC, CVC, CCV, CCVC, CVCC, CCCV, CCVCC, CCCVC, and VCC (Chaer, 2020). With these differences, an Indonesian word might be phonologically produced with more numbers of syllable by Korean learners.

Despite the growing number of studies that have been done on the phonological interference of Korean as the first language, the studies on the influence of Korean sound inventory and syllable structure on the L2 Indonesian on different levels of proficiency are not many to be found. This study fills the gap by examining the comparison of the phonological processes experienced by the advanced and elementary Korean learners of Indonesian. It is expected that the result of the study may add to the information on the issue and might be useful in L2 Indonesian pronunciation study by addressing the following research questions.

1. What processes are observable in Korean learners' pronunciation of Indonesian words?
2. How do differences in syllable structures between those languages influence these processes?

## 2. Literature Review

This study is concerned with the syllabification, which is significant in phonological awareness, particularly for L2 learners. It means the process of dividing a word into syllables (Crystal & Yu, 2008).

Previous studies conducted on the L2 learners' phonology reveal that the L2 phonological awareness helps the learners' speech comprehensibility and fluency (Kennedy & Trofimovich, 2010; Venkatagiri & Levis, 2007; Derwing, 2017) and there is a positive effect of such awareness on the pronunciation of the target sound in foreign language classroom settings (Saito, 2019; Pennington, 2021). There are studies indicating that language learners who are more aware of their L2 pronunciation and possess high L2 phonological awareness demonstrate more accurate L2 speech perception and production (Carlet & Rato, 2015; Baker & Trofimovich, 2006).

In addition to the positive influence of high L2 phonological awareness on L2 speech perception and production, there is a phenomenon called L1 interference. The case of interference also exists for Korean learners studying Indonesian as a foreign language. Although the two languages have similar sounds, their different places of articulation may lead to different sound qualities. Sounds with similar phonetic descriptions in both languages may appear in different syllable structures, which, in turn, lead to a different

realization of the Indonesian sounds like the L2. In other words, the L1-L2 similarity is not necessarily advantageous for L2 production (Chang, 2019; Ellis, 2015).

The different realization of the L2 sounds by L2 learners displays the phonetic features of their L1 (Swan & Smith, 2001; Suzukida, 2021; Piske, 2008). The phenomenon also emerges in the L2 and L3 pair, in which the similarity between L2 and L3 is one factor that plays a role in such cases (Kopečková et al., 2023; Rothman et al., 2019). Previous studies on Korean learners studying Indonesian as L3 show that Korean learners modify the syllable structures, delete, and change segmental features (Prihartono, 2012; Naufalia et al., 2021; Laksman-Huntley & Mubin, 2021). The learners produce the syllables phonologically different from the Indonesian standard pronunciation. For example, the word *bungkus* (to wrap) is pronounced as three syllables instead of two, with the addition of a schwa as the coda of the third syllable. They delete the sound segment that appears in the final position of the syllable, such as /h/ in *rupiah*. Another process is the change of the sound segment, which is found when it comes to the phonemes /r/ and /l/. The realization for *rupiah* (Indonesian currency), for example, is [lup.pi.ja], instead of [ru.pi.jah].

### 3. Research Method

The study was carried out in two Indonesian-as-a-foreign-language classrooms in Seoul, South Korea. It involved 14 undergraduate Korean learners of Indonesian, eight are at the elementary level and the rest are at their advanced level. The elementary learners, who were in their 19-20 years of age, have been learning the language for about four months; and their advanced-level counterparts, aged 22-24, had been acquainted with the language for a minimum of three years. Both groups were gender-balanced, with almost half of them female and the rest are male. It should be mentioned that one of the advanced learners had resided in Indonesia and had just moved to Korea when he started college. All participants learn Indonesian as their L3. Their L2 is English.

| Level      | n | Age range | Period of learning<br>Indonesian | L2      |
|------------|---|-----------|----------------------------------|---------|
| Elementary | 8 | 19-20     | 4 months                         | English |
| Advanced   | 6 | 22-24     | >= 3 years                       | English |

Table 1. Participants' profile

The documentation technique is used to collect the audio data, which was then transcribed. The participants were asked to utter a couple of sentences about their activity, using some target words. All the target words are delivered within carrier sentences. The transcript contained 332 tokens, 179 from advanced group and 153 from the elementary groups. The advanced group has more tokens than the elementary does and presents them in longer sentences than the elementary group does.

The phonological processes such as syllabification, sound change, and addition or omission of sound segments are observed. The syllabification analysis was conducted by comparing the target words in the token based on the Indonesian phonotactics. It refers to the Indonesian syllable structures, namely V, CV, VC, CVC, CCV, CCVC, CVCC, CCCV, CCVCC, CCCVC, and VCC (Chaer, 2020).

## 4. Results and Discussion

The extracted data is shown in Table 2. It contains the mispronounced words and the processes undergone in the pronunciation.

| No | Words               | Standard pronunciation | Korean learners' realization | Interlanguage                                  |
|----|---------------------|------------------------|------------------------------|------------------------------------------------|
| 1  | <i>menjamur</i>     | [mən.dʒa.mur]          | [mən.dʒa.mu]                 | Deletion of /r/                                |
| 2  | <i>karakter</i>     | [ka.rak.tər]           | [kæ.ræk.tə]                  | Change of sound /a/ into /æ/                   |
| 3  | <i>diet</i>         | [diət]                 | [daɪ.et]                     | Change of sound /ɪ/ into aɪ/                   |
| 4  | <i>slang</i>        | [slæŋ]                 | [sə.læŋ]                     | Addition of /ə/                                |
| 5  | <i>aplikasi</i>     | [ap.li.ka.si]          | [a.pə.li.ka.si]              | Addition of /ə/                                |
| 6  | <i>menemukan</i>    | [mə.nə.mu.kan]         | [mə.nu.mu.kan]               | Change of sound /ə/ into /u/                   |
| 7  | <i>sepeda</i>       | [sə.pe.da]             | [sə.pə.da]                   | Change of sound /e/ into /ə/                   |
| 8  | <i>klik</i>         | [klik]                 | [kæ.lɪk]                     | Addition of /ə/                                |
| 9  | <i>produk</i>       | [pro.duk]              | [pə.ro.dak]                  | Change of sound /u/ into /a/, addition of /ə/  |
| 10 | <i>pilih</i>        | [pɪ.lih]               | [pɪl.lih]                    | Addition of /l/                                |
| 11 | <i>Olive Young</i>  | [o.lɪv.jaŋ]            | [o.lɪ.pə.jɔŋ]                | Change of sound /v/ into /p/, and /a/ into /ɔ/ |
| 12 | <i>memberitahu</i>  | [məm.bə.ri.ta.hu]      | [məm.bə.li.ta.hu]            | Change of sound /r/ into /l/                   |
| 13 | <i>Alor</i>         | [a.lər]                | [a.lɔ]                       | Deletion of /r/                                |
| 14 | <i>film</i>         | [fɪlm]                 | [pɪ.ləm]                     | Change of sound /f/ into /p/, addition of /ə/  |
| 15 | <i>Kuala Lumpur</i> | [ku.a.la.lum.pur]      | [ku.a.la.lum.pu]             | Deletion of /r/                                |
| 16 | <i>menyebutkan</i>  | [mə.ŋə.but.kan]        | [mə.ŋə.bu.tə.kan]            | Addition of /ə/                                |
| 17 | <i>jalan-jalan</i>  | [dʒa.lan.dʒa.lan]      | [dʒal.lan.dʒal.lan]          | Addition of /l/                                |
| 18 | <i>jus</i>          | [dʒus]                 | [dʒus.sə]                    | Addition of /s/ and /ə/                        |

Table 2. Mispronounced words and undergone processes

As aforementioned, the elementary learners used the common processes when pronouncing their L2 token. The word *jus* (juice), for example, that has one syllable, was pronounced as two syllables by adding the schwa sound after the /s/ on the second syllable. It is in line with studies done by Erdogan & Wei (2019), Flynn et al., (2014), and Yasufuku & Doyle (2021).

The syllabification phenomenon found in the data is illustrated in Figure 1 below.

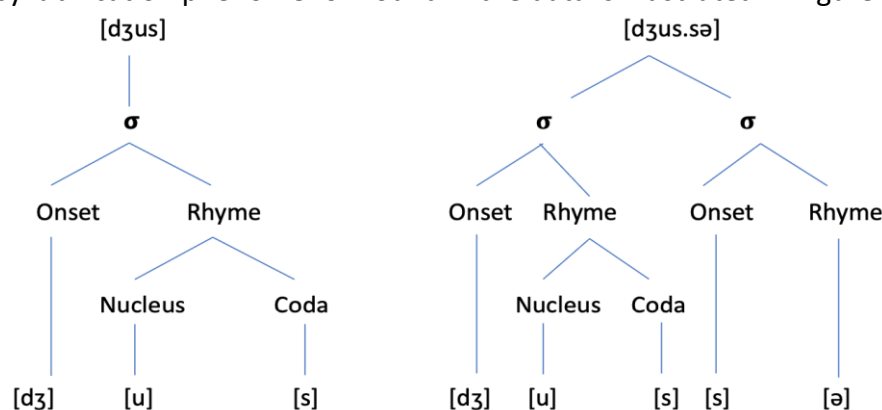


Figure 1. Change on internal syllable structure on *jus*

The simplification process was also found in the word *aplikasi* and *slang*, which were adopted from English *application* and *slang*. The insertion of schwa sound segment also emerged in the pronunciation of syllables having a consonant /t/, such as *menyebutkan* (to mention), which was pronounced as [mə.ŋə.bu.tə.kan] instead of [mə.ŋə.but.kan].

There were cases where a participant dropped the sound segment, which most possibly functioned as the coda of a syllable. The words *Kuala Lumpur* and *Alor* (name of places) and *menjamur* (being myriad), for example, were pronounced without the final /r/.

The internal structure of the syllable was also changed in the form of sound addition. The /l/ phoneme, which should be the onset of the second syllable in *pilih* (to choose) was also added as the coda of the first syllable. Instead of [pɪ.lɪh], it was pronounced as [pɪl.lɪh].

Some other phoneme replacements were found in the data. First, the phoneme /r/ was replaced by /l/, such as found in *memberi* (to give). Instead of pronouncing it as [məm.bə.ri], elementary learners pronounced it as [məm.bə.li], which means 'to buy'. Second, phonemes /f/ or /v/ was altered into /p/ segment, such as in *Olive* and *film*. It is an understandable approach since Korean does not have those consonants (Shei & Li, 2022). Another replacement was found in the word *cara* (method, way), in which the first phoneme was pronounced as /k/ instead of /tʃ/.

Another case was the pronunciation of Indonesian words whose counterparts were also found in English, such as *produk* (product), *karakter* (character), and *diet* (diet), which were produced with English pronunciation. This L2-L3 pair interference speaks the same finding as those discussed in the studies done by Kopečková et al. (2023) and Rothman et al. (2019).

Elementary learners often sometimes avoid consonant clusters and simplify the syllable structure and it results in a greater number of syllables. As noted, vowels constitute the nucleus of a syllable and the more the syllables are found in the target words, the more the vocalic intervals are realized during the production of the token. The use of CV structure is a universal strategy for foreign language learners to deal with consonant clusters (Cook, 2016; Yasufuku & Doyle, 2021). In the case of Korean learners of Indonesian, Indonesian words are produced in more numbers of syllables than they should be.

Besides the sound changes found in the data, addition and deletion are caused by different patterns in both languages. Deletion, for example, such as the h-dropping in some cases, is likely caused by the fact that the /h/ sound is never found in Korean words (Shin et al., 2009).

## 5. Conclusion

There are processes of syllabification done by Korean learners that are mostly performed by elementary groups of learners, including the addition and deletion of sound segments and the replacement of sound segment are possibly transferred from L1. In addition, there are changes of sound that might be influenced by English in L2. For Koreans, Indonesian is the L3, which is learnt after they are acquainted with English as their L2 in formal schools since childhood. This situation makes it possible for Korean learners to pronounce Indonesian words which have counterparts in English with English pronunciation.

The similarity between English and Indonesian is one of the factors that plays a role in such a process. In this case, the similarity is found in the lexis tier and the phonemes, but not in the pronunciation of the words as a whole entity. This leads to a negative transfer

from L2 to L3. With L1 and L2 repertoires, L3 learners have more advantages than their monolingual counterparts studying L2. Phonemes /f/ and /v/, for example, exist in both English (L2) and Indonesian (L3). Positive transfer is when mastering the pronunciation of those sounds in English might help learners produce the same phonemes in Indonesian.

It is important to note some limitations of the study that might be addressed for future research. First, both elementary and advanced groups with a learning duration within the range of reasonable time, without any outliers, might yield a more reliable result. It is mentioned in the previous part of the paper that one of the advanced learners had stayed in Indonesia for more than a decade. Second, balancing the number of participants and tokens across groups could be considered as methodological improvement for future studies.

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## References

- Azizah, A. (2021). A contrastive analysis of korean-indonesian phonological structures. *Journal of Korean Applied Linguistics*, 1(2), 71–90. <https://doi.org/https://doi.org/10.17509/jokal.v1i2>
- Baker, W., & Trofimovich, P. (2006). Perceptual paths to accurate production of L2 vowels: The role of individual differences. *IRAL - International Review of Applied Linguistics in Language Teaching*, 44(3), 231–250. <https://doi.org/10.1515/IRAL.2006.010>
- Brown, L., & Yeon, J. (2015). *The Handbook of Korean Linguistics*. Hoboken, NJ: John Wiley & Sons, Inc.
- Carlet, A., & Rato, A. (2015). Non-native perception of English voiceless stops. In E. Babatsouli & D. Ingram (Eds.), *Proceedings of the International Symposium on Monolingual and Bilingual Speech 2015* (pp. 57–67). [https://www.researchgate.net/publication/318214555\\_Non-native\\_perception\\_of\\_English\\_voiceless\\_stops](https://www.researchgate.net/publication/318214555_Non-native_perception_of_English_voiceless_stops)
- Chaer, A. (2020). *Fonologi Bahasa Indonesia*. Jakarta: Rineka Cipta.
- Chang, C. B. (2019). The phonetics of second language learning and bilingualism. In W. F. Katz & P. F. Assman (Eds.), *The Routledge Handbook of Phonetics*. Abingdon, Oxon: Routledge.
- Colantoni, T. M., & Escudero, P. (2015). *Second language speech*. Cambridge: Cambridge University Press.
- Cook, V. (2016). *Second language learning and language teaching*. New York: Routledge.
- Crystal, D., & Yu, A. C. L. (2008). *A dictionary of linguistics and phonetics*. Hoboken, NJ: John Wiley & Sons.
- Derwing, T. M. (2017). The role of phonological awareness in language learning. In P. Garret & J. Cots (Eds.), *The Routledge Handbook of Language Awareness*. New York: Routledge.
- Ellis, R. (2015). *Understanding second language acquisition. 2nd edition*. Oxford: Oxford University Press.
- Erdogan, N., & Wei, M. (2019). *Applied linguistics for teachers of culturally and linguistically diverse learners*. Hersey, PA: IGI Global.

- Flynn, S., Martohardjono, G., & O'Neil, W. (2014). *The generative study of second language acquisition*. New York: Psychology Press.
- Katz, W., & Assmann, P. (2019). *The routledge handbook of phonetics*. Abingdon, Oxon: Routledge.
- Kennedy, S., & Trofimovich, P. (2010). Language awareness and second language pronunciation: A classroom study. *Language Awareness*, 19(3), 171–185. <https://doi.org/10.1080/09658416.2010.486439>
- Kopečková, R., Gut, U., Wrembel, M., & Balas, A. (2023). Phonological cross-linguistic influence at the initial stages of L3 acquisition. *Second Language Research*, 39(4). <https://doi.org/10.1177/02676583221123994>
- Laksman-Huntley, M., & Mubin IS. (2021). Intonasi tuturan deklaratif dan interogatif bahasa indonesia oleh pemelajar korea. *Jurnal Ilmu Budaya: Bahasa, Sastra, Seni, dan Budaya*, 9(2), 43–62. <https://doi.org/https://doi.org/10.34050/jib.v9i2.14391>
- Lewis, J., Derwing, T., & Sonsaat-Hegelheimer, S. (2022). *second language pronunciation bridging the gap between research and teaching*. Hoboken, NJ: John Wiley & Son.
- Naufalia, A., Sitaresmi, N., & Rahma, R. (2021). Analisis kesalahan fonetik artikulatoris pada pelafalan pemelajar bipa korea dan pemanfataannya sebagai bahan ajar bipa dasar. *Artikulasi*, 1(2), 103–110. <https://doi.org/https://doi.org/10.17509/artikulasi.v1i2.38994>
- Pennington, M. C. (2014). *Phonology in english language teaching*. Abingdon, Oxon: Routledge.
- Pennington, M. C. (2021). Teaching pronunciation: The State of the art 2021. *RELC Journal*, 52(1), 3–21. <https://doi.org/10.1177/00336882211002283>
- Piske, T. (2008). Phonetic awareness, phonetic sensitivity and the second language learner. In N.H. Hornberger. *Encyclopedia of Language and Education* (pp. 155–166). Boston, MA: Springer. [https://doi.org/10.1007/978-0-387-30424-3\\_146](https://doi.org/10.1007/978-0-387-30424-3_146)
- Prihartono. (2012). Sound change and syllabification: The interference of Korean speakers studying Indonesian. *Prosiding KOLITA (Konferensi Linguistik Tahunan) Ke 10*, 181–185.
- Qian, Y. (2018). *A study of sino-korean phonology*. Abingdon, Oxon: Routledge.
- Reed, M., & Levis, J. (2015). *The handbook of english pronunciation*. Hoboken, NJ: John Wiley & Sons, Inc.
- Rothman, J., Alonso, J. G., & Puig-Mayenco, E. (2019). *Third language acquisition and linguistic transfer*. Cambridge: Cambridge University Press.
- Saito, K. (2019). Individual differences in second language speech learning in classroom settings: Roles of awareness in the longitudinal development of Japanese learners' English /ɹ/ pronunciation. *Second Language Research*, 35(2), 149–172. <https://doi.org/10.1177/0267658318768342>
- Sewell, A. (2016). *English pronunciation models in a globalized world*. Abingdon, Oxon: Routledge.
- Shei, C., & Li, S. (2022). *The routledge handbook of asian linguistics*. Abingdon, Oxon: Routledge.
- Shin, J., Kiaer, J., & Cha, J. (2009). The sounds of korean. In *The Sounds of Korean*. Cambridge: Cambridge University Press.

- Suzukida, Y. (2021). The contribution of individual differences to L2 pronunciation learning: Insights from research and pedagogical implications. *RELC Journal*, 52(1), 48–61. <https://doi.org/10.1177/0033688220987655>
- Swan, M., & Smith, B. (2001). *Learner english (2nd ed.)*. Cambridge: Cambridge University Press.
- Venkatagiri, H. S., & Levis, J. M. (2007). Phonological awareness and speech comprehensibility: An exploratory study. *Language Awareness*, 16(4), 263–277. <https://doi.org/10.2167/la417.0>
- Yasufuku, K., & Doyle, G. (2021). Echoes of L1 syllable structure in L2 phoneme recognition. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.515237>
- Zhou, A. N., & Dmitrieva, O. (2022). The perception of english vowels by native korean and mandarin speakers. *The Journal of the Acoustical Society of America*, 152(4\_Supplement). <https://doi.org/10.1121/10.0016221>