THE COMPARISON OF PHONEME PRONUNCIATION PHONOLOGICAL INTERFERENCE OF ق [Q] IN SUNDANESE AND JAVANESE SPEAKERS

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Abstract
The study analyses the phonological interference of phoneme pronunciation [q] by Sundanese and Javanese speakers compared with Arabic speakers. The researchers used a descriptive comparative qualitative method. The researchers listened, took notes, and documented the voice recordings of male students from the Sundanese and Javanese ethnic groups when reading the Qur'an to collect research data and analyse it using Praat software version 6.2.13. From the results of the recordings, Sundanese-speaking students and Javanese speakers would then be compared with reference speakers, namely Syekh Sa'ad Al-ghamidi, who has the capability of reciting verses from the Qur'an. The research results indicated phonological interference in the phoneme [q] when Sundanese and Javanese male students read the Qur'an. The factor contributing to the occurrence of pronunciation errors in the phoneme [q] was the transfer of SL and JL elements when using AL. Errors occurred due to deviations from the proper language rules. The research is expected to have positive implications, minimizing interference and increasing fluency in reading the Qur'an.

Keywords: interference; phonemes [q]; phonology

1. Introduction
In daily communication, people use language as a tool to interact with other people. Many ethnicities in Indonesia result in language diversity. Indonesian people also use regional languages in informal situations besides the Indonesian language. The Indonesian people have used their local language from an early age, even when they start learning to speak. Regional language elements influence the occurrence of language contact in the community, so language is an important element of a country (Wahyuningsih, 2019).

Pritiwi & Indrawati (2022) explain that the community uses language to express thoughts. The number of languages spoken in Indonesia causes language contact. Language contact occurs due to the languages being used simultaneously. It results in speakers using more than one language to form a bilingual society. From this explanation, language is people's use of sounds to communicate with or interact with others.

With regard to languages in Indonesia, Arabic language (AL) is one of the foreign languages that most people learn. There are many factors behind the Indonesian people
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studying AL. These factors include religious, academic, ideological, or economic factors. However, in theory, there are differences in linguistics, such as phonology, morphology, syntax, and semantics that will make it difficult for Indonesian people to master AL. Moreover, pronunciation differences between regional languages and AL will create difficulties in learning AL (Harimi, 2022).

Pritiwi and Indrawati, who first used the term interference, suggested that there is a need for certain language systems to change due to the switching to another language by a bilingual language teacher. In this case, AL students will experience mistakes that should be corrected when used in regional languages. Wahyuningsih’s research says that Indonesian people often include elements of the Sundanese language (SL) and Javanese language (JL) when using the Arabic language (AL). So, these factors influence the occurrence of errors in the proper language rules or interference. Interference is a deviation by carrying over the habit of using regional language expressions in other languages, including sound and grammar. So the existence of language interference will affect pronunciation (Pritiwi & Indrawati, 2022; Wahyuningsih, 2019).

Regarding pronunciation, Amrullah explained that phonology is a branch of linguistics that studies sound, especially utterances. Meanwhile, the pronunciation accuracy of a word is very important because it affects the listener's understanding of the words conveyed by the interlocutor or audience. Studying phonology is the first step to learning to pronounce words correctly and minimize errors. The sound element is very important to learn to ease someone's reading of various texts that use hijaiyah letters. The mispronunciations of letters will affect their semantic meaning (Amrullah et al., 2022; Hidayat, 2019).

One of the common phonological errors is when someone reads the Qur'an. The phonological errors that occur include discrepancies in terms of makhārij al-ḥurūf. Someone often reads the text of the Qur'an word by word, so there is a mismatch in the intonation of the letter sound. In addition, distinguishing the sound of a letter from other similar letters is often difficult. At the same time, pronunciation accuracy is very important because it will affect the listener's meaning. When someone learns a foreign language, mistakes are one of the usual steps in a learning process. Therefore, phonological errors are one of the many mistakes when someone recites the Al-Qur'an because the letters in the Al-Qur'an have similarities (Amalia & Asbarin, 2022; Maulana & Sanusi, 2020; Zulfa, 2022).

According to Ekayanti, when someone recites the Qur'an, the letters spoken must follow the place where the letters come out, or the makhārij al-ḥurūf. Makhārij al-ḥurūf is where the letters come out, pronouncing the letter. Mahdali explains that makhārij al-ḥurūf will produce different pronunciations based on the characteristics of the letters. There are five classifications for the source of letters that sound out, namely: al-ḥalq (throat), al-lisān (tongue), asy-syafatain (lips), al-jauf (mouth), and al-khaisyum (based on the nose). Each makhārij al-ḥurūf has different pronunciation characters, and mistakes may occur when pronouncing these letters (Ekayanti & Ulum, 2019; Mahdali, 2020).

2. Literature Review

Phonological interference is a deviation that occurs due to the habit of using SL and JL expressions in pronouncing AL. Then, it may cause phonological errors. Phonological errors are deviations that naturally occur when someone learns a foreign language. Phonological errors in learning languages become commonplace and unavoidable (Lathifah, Syihabuddin & Al Farisi, 2017; Rahmatia, Darwis, & Lukman, 2021).
Phonology in AL has 34 phonemes, consisting of 28 consonants, three short vowels, and three long vowels. In studying AL, Sundanese and Javanese speakers can make mistakes due to phonological interference. This phonological interference occurs in letters with different characteristics or opposite to AL; one of the phonemes is [q]. Then, Sundanese speakers have various characteristics, such as when speaking, every word sounds swinging. It is even opposite to the characteristics of the phoneme [q], which are explosive consonants that must be pronounced loudly and clearly. Whereas Javanese speakers have a habit of pronouncing that is firm and clear, there are still some difficulties when pronouncing the phonemes [dˁ], [ʕ], [ʃ], [zˁ], [ɣ], as well as mistakes in pronunciation of the phonemes [ɣ], [dˁ], [q], [z], [zˁ]. The language interference between JL and AL caused an error. Nevertheless, reading the Qur’an must pay attention to conformity with its basic rules so there are no mistakes in reciting the verse (Ali & Faturrahman & Astari, 2020; Alwan & Maulani, 2023; Amalia & Asbarin, 2022; Harimi, 2022; Marlina, 2019).

From previous studies regarding students’ pronunciation for Sundanese and Javanese speakers, different phonological errors occur when students read verses from Qur’an. After exploring the published platform, the researchers found some literature that was used as a reference in this study. This is a new research, and it can be said that not many studies have been conducted in terms of analysing phonological interference. Previous research, which is the reference for the researchers, is a research entitled "Analysis of Phonological Errors in Arabic Text Reading Skills for Class V MI Baiquniyyah Students" by Asih in 2020. In Asih’s research, there are two causes of phonological errors: the internal factors in the form of a lack of interest and enthusiasm among students and the external factors, which include physiological factors, intellectual factors, and environmental factors. Then the research entitled "Phonological interference from Javanese Banyumas dialect into Arabic," conducted by Harimi in 2022, shows that negative transfers between the JL Banyumas dialect and the AL language cause interference errors (Asih, Miftahuddin & Elmubarok, 2020; Harimi, 2022).

Based on the researchers’ study through the published platform, they did not find any literature that examined the phonological interference of the phoneme pronunciation of [q] by Sundanese and Javanese. The researcher needs to conduct research to discover phonological interference errors in phoneme pronunciation [q] in Sundanese and Javanese speakers. This research focuses on the phonemic field, namely the phoneme [q], to determine the phonological interference that occurs in Sundanese and Javanese speakers when reading the Qur’an. Furthermore, the researcher conducted a study on a 10th-grade male student at SMK Daarut Tauhiid Boarding School Bandung. Based on the description above, the researchers point out the urgency of comparing phonological interference to phonemes [q] on Sundanese and Javanese speakers compared to reference speakers when reading the Qur’an.

The analysis process carried out in this study is error analysis. The researcher divides the error analysis into two parts, namely, sounds (phonemic) and sounds (phonetic). So the researchers can analyze the language as a communication and interaction tool both internally and externally. The researcher conducts an internal study on the phonological, morphological, or syntactic structures. The researcher performs an external study based on factors outside the language (Wahyuningsih, 2019; Zulfa, 2022).
3. Research Method

3.1 Research method

In this study, the researchers used a comparative descriptive qualitative method. The research design used was a content analysis design. The data used were the pronunciation of male students from the Sundanese and Javanese ethnicities in reading the Qur'an.

The research was conducted through listening, note-taking, and documenting techniques. In the listening technique, the researchers observed the pronunciation when male students from the Sundanese and Javanese ethnicities read the Qur'an. Then, using the note-taking technique, the researchers recorded some information to find out the realization of the phoneme. The last was the documentation technique. In this documentation technique, the researchers recorded sound using Praat software version 6.2.13 to process data. This software supported the study and measured the accuracy of the existing data. The status of this documentation technique was that it was a complementary research technique. The researcher used another method, such as the comparative method. In this case, the researchers compared the data obtained from Sundanese and Javanese speakers with that of reference speakers, namely Syekh Sa’ad Al-ghamidi, who could recite verses from the Qur'an.

3.2 Participants Characteristics

The researchers used a purposive sampling technique as sampling technique. It meant that the researchers determined the subject based on its characteristics. Respondents in this study were two 10th-grade male SMK Daarut Tauhiid Boarding School Bandung students. The table below describes the participants' characteristics.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnic Background</td>
<td></td>
</tr>
<tr>
<td>Sundanese</td>
<td>1</td>
</tr>
<tr>
<td>Javanese</td>
<td>1</td>
</tr>
<tr>
<td>School Background</td>
<td></td>
</tr>
<tr>
<td>Madrasah Tsanawiyah</td>
<td>1</td>
</tr>
<tr>
<td>Boarding school</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 1. Participants characteristics

4. Results and Discussion

4.1 Research Finding Indicators

Researchers took data by using listening, note-taking, and documentation techniques. Table 2 shows a description of the research findings indicators.

<table>
<thead>
<tr>
<th>Name of respondent</th>
<th>Ethnic background</th>
<th>School background</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAA</td>
<td>Java</td>
<td>Madrasah Tsanawiyah</td>
<td>Man</td>
</tr>
<tr>
<td>AAY</td>
<td>Sunda</td>
<td>Boarding school</td>
<td>Man</td>
</tr>
</tbody>
</table>

Table 2. Indicators of research findings

4.2 The Classification of Pronunciation Errors

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Furthermore, the researchers obtained several phonological study indicators from the listening technique. Researchers analyzed the data using Praat software version 6.2.13 to study and measure the accuracy of makhārij al-hurūf, especially makhrāj [q] (Lathifah, Syihabuddin, & Al Farisi, 2017). The researchers included several verses in chapter An-Naba, which contain words with the phoneme [q] to be analyzed. The following table presents the categories of makhārij al-hurūf [q] in chapter An-Naba based on the words to be analyzed.

<table>
<thead>
<tr>
<th>Shakal category</th>
<th>Vocals</th>
<th>Chapter/verse</th>
<th>Words with analyzed letters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatah</td>
<td>[a] An-Naba/12</td>
<td>َفَوْقَكُمْْ</td>
<td></td>
</tr>
<tr>
<td>Kasrah</td>
<td>[i] An-Naba/31</td>
<td>َلِلْمُتَّقِينِ</td>
<td></td>
</tr>
<tr>
<td>Damah</td>
<td>[u] An-Naba/30</td>
<td>َفَذُوْقُوْافَالْنِ</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Category of makhārij al-hurūf based on shakal in chapter An-Naba

4.3 Phoneme Pronunciation[q] by Sundanese and Javanese Speakers

The phoneme [q] was a waqfiyyah halqiyyah mahmūs consonant or a voiceless dorso-ovular stop. The way to pronounce it is when the base of the tongue touches the soft palate. Phoneme [q] had the sound property of voice sound, which was a sound that was strong in nature, did not hiss, and held a breath so that the sound that came out was clearer. The phoneme [q] is uttered in the middle, so the context in the pronunciation must be thick. Phoneme description [q] should be thin after vocal [i] and bold after vocals [a] or [u], both long and short (Abdul & Masyithoh, 2023; Amalia & Asbarin, 2022).

The properties contained in the phoneme [q] are voice sound, strong, opening, lifting or rising, and bouncing. Voice sound is the condition of the strong pressure of letters at the place where the letters come out (makhrāj). Strong is the state of being confined to a strong letter when turned off. The opening is the state of opening the letters (sounds) between the middle of the tongue and below, thus opening the airway for breath from the throat. Lifting or elevating is the state of the base of the tongue pointing to the roof of the mouth, tense so that the sound pressure becomes higher, thicker, and heavier. Then, bouncing is the pronunciation of the sukun letters accompanied by sound vibrations at the makhrāj so that a strong sound is heard (Hidayat, 2022).

Based on the division of the types of waves, the phoneme [q] is included as a consonant with a popping sound that the researcher categorizes as transient. Very short durations characterize transient sounds that regularly become difficult to identify (Sholihin, 2020). The following will display a visualization form of phoneme utterance [q] in vocals [u], [a], and [i] to find out more clearly about the sound waves spoken by Sundanese and Javanese speakers. Then, the researchers compare the pronunciation with that of the reference speaker, the AL speaker, as a reference for the truth for the respondents. The spectrogram presents the analysis results.

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Figure 1. Visualization of the pronunciation annotation of the phoneme [q] in the vocal [a] in the word فوّظكم by reference speaker

Figure 1 shows that the phoneme [q] sound waves are short. It is because the phoneme [q] is a transient or explosive sound wave. The pronunciation of this reference speaker becomes a reference for Sundanese and Javanese speakers when pronouncing the phoneme [q]. The analysis of the data obtained by the researcher shows that the pronunciation of the phoneme [q] by Sundanese and Javanese speakers does not have the correct pronunciation or is slightly close to the correct pronunciation in the reference speaker. The phoneme [q] pronunciation error lies in the articulation, which is thick and difficult to pronounce. So from the articulation, the phoneme [q] has a special characteristic, namely a voice sound. The analysis results obtained by the researchers in the pronunciation of the phoneme [q] The next spectrogram will present the Sundanese and Javanese speakers (Lathifah, Syihabuddin, & Al Farisi, 2017; Marlina, 2019).

Figure 2. Visualization of annotation for the pronunciation of the phoneme [q] by Sundanese speaker

Figure 2 Wave annotation of phoneme pronunciation speech [q] by the Sundanese speaker following the nature of the phoneme [q], namely voice sound. As seen in the picture, the sound waves and explosions pronounced by the Sundanese speaker are slightly close to those produced by reference speaker.

Figure 3. Visualization of annotation for the pronunciation of the phoneme [q] by Javanese speaker

The researchers annotate phoneme pronunciation speech waves [q] by a Javanese speaker in Figure 3. Javanese speakers read the phoneme [q] thin. So, the resulting waves and explosions are short. It is opposite to one of the properties of the phoneme [q], i.e., the strong and proper pronunciation of the phoneme [q] in this vocal [i] condition is always read in bold, both long and short (Marlina, 2019). This pronunciation error will impact the word’s...
meaning, or even make the word meaningless. If the word *fauqakum* means "above you," then the phoneme [q] changes to [k], and the pronunciation becomes *faokakum*, then the word has no meaning. In this way, it is very clear that the Javanese speaker made a phonological error by changing the phoneme [q] to the phoneme [k], resulting in the word having no meaning in AL.

![Figure 4](image)

**Figure 4. Visualization of the pronunciation annotation of the phoneme [q] in the vocal [u] in the word فذوقوا by reference speaker**

Figure 4 shows that the sound waves in the phoneme [q] are pronounced by the reference speaker. It aligns with the phoneme description [q], whose pronunciation should be bold when vocal [u], both long and short (Marlina, 2019). The next spectrogram will present the results of the analysis of the phoneme pronunciation [q] by Sundanese and Javanese speakers.

![Figure 5](image)

**Figure 5. Visualization of annotations for the pronunciation of the phoneme [q] by Sundanese speaker**

Figure 5 shows that the Sundanese speaker pronounces the phoneme [q] with a thinner explosion than the reference speaker. This wave shows that Sundanese speakers change the pronunciation of the phoneme [q] to the phoneme [k]. It is opposite to the nature of the phoneme [q], namely voice sound and lifting or rising. Meanwhile, the phoneme pronunciation [q] changed to the phoneme [k]. It has a low characteristic, so the resulting sound is thin and low (Lathifah, Syihabuddin, & Al Farisi, 2017). This pronunciation error will impact the meaning, or even make the word meaningless. The word *fażūqū* means "feel it," then the phoneme [q] is changed to [k], and the pronunciation becomes *fażūkū* then the word has no meaning. Therefore, it is obvious that the Sundanese speaker made a phonological error by changing the phoneme [q] to the phoneme /k/, resulting in the word having no meaning in AL.
Figure 6. The visualization of phoneme pronunciation annotation [q] by Javanese speaker

Figure 6 shows that Javanese speakers pronounce the phoneme [q] with slight bursts compared to the reference speaker. This wave shows that Javanese speakers also change the phoneme [q] pronunciation to the phoneme [k]. Because the articulation of the phoneme [k] is relatively light compared to the phoneme [q], the pronunciation of Javanese speakers changes to the phoneme [k] (Marlina, 2019). Where the word fażūqū means "feel it," then the phoneme [q] is changed to [k], and the pronunciation becomes fażūkū then the word has no meaning. The Sundanese and Javanese speakers make phonological errors by changing the phoneme [q] to the phoneme [k], resulting in the word having no meaning.

Figure 7. Visualization of phoneme pronunciation annotation [q] in the vocal [i] in the word لِلْمُتَّقِي َْْْ by reference speaker

Figure 7 shows that the sound waves in the phoneme [q] are pronounced by the reference speaker. Phoneme pronunciation [q] in vocal [i] condition must thin-read, either long or short, so the explosion is thin-pronounced (Marlina, 2019). The next spectrogram will present the results of the analysis of the pronunciation of the phoneme [q] by Sundanese and Javanese speakers.
Figure 8. Visualization of phoneme pronunciation annotation [q] by Sundanese speaker

Figure 8 shows that Sundanese speakers pronounce the phoneme [q] thicker than the reference speaker. Meanwhile, this phoneme pronunciation [q] should be read thinly when reading vocal [i] (Marlina, 2019). This case shows that Sundanese speakers change the pronunciation of phoneme [q] to the phoneme [k]. Meanwhile, the phoneme [q] pronunciation differs from [k]. So, the sound waves produced between the phoneme [q] will differ from the phoneme [k]. The errors that occur in pronunciation impact a shift in meaning in the word *lilmuttaqīna*, which initially means "pious people" to "those who are empowered." In this way, it is very clear that the Sundanese speaker made a phonological error by changing the phoneme [q] to the phoneme [k], which resulted in a change in the meaning of the AL.

Figure 9. Visualization of phoneme pronunciation annotation [q] by Javanese speaker

Figure 9 annotation of phoneme pronunciation speech waves [q] by a Javanese speaker according to the nature of the phoneme [q]. As seen in the picture, the sound waves and explosions pronounced by the Javanese speaker approach the sound waves and explosions produced by the reference speaker.

4.4 Mispronunciation of Phoneme [q] by Sundanese and Javanese Speakers

Based on the analysis results, the researcher found a factor in the occurrence of phonological errors in Sundanese and Javanese speakers. Pronunciation errors in the phoneme [q] are due to the transfer of SL and JL elements when using AL. So, the errors occur due to deviations from the proper language rules. This rule error is called interference. The analysis of phoneme pronunciation [q] obtained by researchers on Sundanese and Javanese speakers has different errors. Sundanese speakers show that errors occur when the phoneme [q] is pronounced in the vocals [a] and [u]. It is because Sundanese speakers have the characteristic of swinging words when pronouncing something. So the readers should
read the phoneme [q] in bold sounds, but they read it in thin (Ali, Faturrahman, & Astari, 2020; Wahyuningsih, 2019).

The analysis results of Javanese speakers show that errors occur when the phoneme [q] is pronounced in vocal [u] and [i] conditions. It is due to the phoneme pronunciation [q] followed by the vocal [u], which should be read in bold, contrary to the characteristics of Javanese speakers who have difficulty with some hijaiah letters. Phoneme [q], which is followed by the vocal [i], must be pronounced thinly to resemble the letter "k" in Javanese speakers so that the speaker is more inclined to pronounce it similarly to the letter "k" (Harimi, 2022).

In this case, the pronunciation of the phoneme [q] must be considered because when someone pronounces the phoneme [q] that is not following its nature and meaning, it can change the meaning or make the word meaningless (Hidayat, R., 2022).

5. Conclusion

Based on the results of this analysis, the pronunciation of the phoneme [q], which Sundanese and Javanese speakers speak, has phonological errors caused by SL and JL interference into AL. The phonological errors in Sundanese speakers happen when the speaker utters every word swayed. Phonological errors in Javanese speakers occur due to negative transfers (language interference) between SL and JL with AL and mistakes in phoneme pronunciation [q]. So, the phonological errors that occur in Sundanese speakers and Javanese speakers are opposite to the phoneme [q] characteristic. The consonant should be explosive and pronounced loudly and clearly.

The researchers expect the research findings can add scientific knowledge and positive implications in Arabic, especially in the phonological field. The expected solution for the future pronunciation of makhārij al-ḥurūf, especially on phoneme [q], can be pronounced properly and correctly. Then, this research can be a starting point to study more deeply about phonological interference.

References


