Article

An acoustic study of Jonglish Community: Javanese-accented speech

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Abstract: People who speak English with a Javanese accent are referred to as Jonglish (Jowo-English) speakers. They end their sentences in a high tone, therefore, the aims of this study were to compare the intensity and pitch of Javanese accent speakers (specifically from Pekalongan, Semarang, and Pati) with native speakers. The focus was on investigating whether the high tone at the end of sentences affects the engaging nature of the conversation. It employed descriptive qualitative design and included data collection, acoustic analysis, perception analysis, linguistic analysis, and interpretation. The data were collected by audio recording in the form of sentences. Praat, a voice analysis, was utilized to analyze the data. The findings demonstrated that Pekalongan and Semarang speakers had higher pitch than native speaker (232.25 Hz and 206.27 Hz). Meanwhile, the pitch score for Pati was lower than native; 192.04 Hz. On the other hand, the intensity from those regions were lower than native speaker; 69.58 dB, 61.51 dB, and 68.203 dB, while the of native speaker was 71.306 dB. The fact that the Jonglish includes a tendency to end sentences with a high tone suggests a particular intonation pattern. Despite these variations, effective communication often relies on contextual cues and the listeners ability to adapt to different speech patterns. The study has the potential to make meaningful contributions to English pronunciation instruction, cultural awareness, and effective cross-cultural communication. The outcomes of the research can inform pedagogical practices and support the broader goal of promoting linguistic diversity in English language education.

Keywords: Javanese accent; Jowo-English, intensity, pitch, Praat

1. Introduction

Since English has become a more widely used language, speakers from various cultures and languages who do not speak the same first language frequently use English (Sung, 2014). According to Guntzman (2000), Non-native English speakers (Hereafter NNSs) account for 80% of all verbal interactions where English is used as a foreign or second language. Because there are more NNSs than NSs (Native English Speakers) (Crystal, 2003), the English language is no longer solely the domain of native English speakers (Norton, 1997; Peirce, 1995; Widdowson, 2002). Therefore, English has now established itself as the global lingua franca.

In the age of globalization and internationalization, English is rapidly becoming a lingua franca. Lingua franca is comprising essential phonological, morphosyntactic, and pragmatic characteristics of ELF (hereafter English as Lingua Franca). Further, ELF can be defined as the act of communicating in English among speakers of various first languages (Nagy, 2017; Seidlhofer, 2011; Ur, 2010). In terms of functions, English is intended for international communication in the outer circle; native speakers are frequently absent in the inner circle (Li, 2006). Furthermore, previous studies...
established the understanding of ELF as a dynamic process of learning English and remind fluid to be utilized (Kirkpatrick, 2012; Chen et al., 2020). The principal aim of ELF study today is to explain some of the forms of ELF interaction that happen in individual cultures, but in particular to illustrate the pragmatic strategies utilized by speakers while engaging in conversation (Cogo, 2012). It also relates to the varieties of English accents. This accent when speaking English is highlighted because it is still in line with pronunciation.

In spite of English being a lingua franca, there is still a lot of debate about which appropriate English accent to use for English as a Foreign Language (EFL) students. It has been widely studied the subject as one of the prominent variables in learners’ language acquisition with two opposing views: pursuing a native-like accent or prioritizing intelligibility. Pronunciation research literature clearly shows that making suprasegmental features a center of pronunciation instruction enhances comprehensibility and fluency more than segmental features (Derwing and Rossiter, 2003; Kang et al., 2010). Despite English being a lingua franca, there is still an ongoing debate concerning which English accent is acceptable for EFL students. It has been intensively investigated as one of the prominent variables in learners’ language acquisition, with two opposed viewpoints: pursuing a native-like accent or prioritizing intelligibility.

On the other hand, some studies demonstrate that developing a native-like accent is counterproductive. The reality that only a few were able to do so denoted that achieving a native-like accent throughout the Second Language Acquisition (SLA) process is impossible (Ardini et al., 2022; Senowarsito and Ardini, 2019; Wang, 2013). Even along the process of language acquisition, EFL students often find a lot of struggles to acquire a native-like accent. To address these issues, EFL teachers should convince their students that the goal of pronunciation is to enable them to pronounce correctly enough to be easily and comfortably understood by other speakers instead of to gain a native accent (Ur, 1984). It has been pointed out that instructional publications and teaching-learning resources are still strictly based on course accents of English, which was an unrealistic target for most English students in the expanding circle (Cook, 1999). It is further backed by the notion of varied discourse in English; it is illogical to expect students to follow native-speaker norms and habits, given that native English speaker varieties are not always the most comprehensible (Kaur, 2018). Moreover, Rost (2014) observed that even among native speakers, most misunderstandings occur at a segmental level, even though higher-level schematic effects may also be at play. Anecdotally, previous studies, notice that teachers felt that in the new school, the native speaker paradigm was no longer important and did not think that the changing points of view of pronunciation teaching had influenced their teaching (Andersson, 2020).

At the same time, not all native speakers employ the same English variety (Li, 2006). The struggle of acquiring a native-like accent in learning English is also found in Indonesia. Indonesia is a large country with many ethnic groups and regional local languages dispersed throughout the country. Aside from Bahasa Indonesia as the national language, the majority of Indonesian talk in their native language with a regional accent. It has an impact on them as they learn English. This impact cannot be avoided, and they frequently speak English with a regional accent more than Bahasa.
Indonesia itself. The way Javanese people speak English with a Javanese accent is called Jonglish. Jo from the word Jowo (in Javanese), and -nglish from the word ‘English’. Javanese accent refers to a special way of speaking or saying words that is characteristic of the Javanese language, especially spoken, on the island of Java in Indonesia. It is important to note that Javanese is a separate language, and the Javanese accent refers to the way Javanese speakers pronounce Indonesian words in English. The Javanese accent in English refers to the way English is spoken by native speakers of Javanese, the language primarily spoken on the island of Java in Indonesia. It is important to note that accents can vary widely between individuals, so not all Javanese speakers have the same accent in English. Accents are influenced by a variety of factors, including an individual’s native language, exposure to English, and personal speech patterns. Accents are a natural part of linguistic diversity and should be embraced and respected.

Some common features are often associated with a Javanese accent, namely; vowel pronunciation, consonant pronunciation, syllable stress, and intonation patterns. Javanese speakers may have a different way of pronouncing certain English vowels. For example, an /e/ sound might be pronounced like [uh] or [oh], and an /o/ sound might be pronounced more like an [a] or [oh]. Meanwhile, certain consonant sounds can be changed in Javanese-accented English, for example, a /ð/ sound could be pronounced [d] or [t], and a /v/ sound could be pronounced [b] or [f]. Then, Javanese speakers may stress different syllables compared to standard English. This can cause variations in rhythm and emphasis in words and sentences. In addition, English with a Javanese accent may have a different intonation pattern than other British accents. It can affect the rise and fall of pitch in speech and the overall melody of a sentence. However, the different accent between English and Javanese accents which is hard to erase raises another issue. It makes a lot of people not feel confident to learn and practice English on a daily basis. They are afraid that they would be humiliated if they speak in an accent. Moreover, English pronunciation cannot be simply instilled in a learner’s mind (Laroy, 1995). According to prior research, a native-like accent or suprasegmental features did not affect a person’s clarity while speaking English. As long as they pronounce the words with correct segmental features, other people will still understand what they want to convey. For instance, from real-life experience, Javanese EFL students mispronounced fur [fɜː] they say [fu], clever [ˈklevə(r)] they say [ˈkliʌvə(r)], or ‘thought’ /θɑːt/ often mispronounced as /tɔug/. These inaccuracies in segmental features frequently cause confusion, especially when the interlocutors are unfamiliar with the context of the sentence. It is a linguistic phenomenon where speakers pronounce words based on their spelling rather than their actual phonetic sounds. It is indeed common among English as a Foreign Language (EFL) learners, and acknowledging it can be crucial for understanding and addressing pronunciation challenges. Bringing attention to this issue in language learning materials or discussions can certainly help learners recognize and correct their pronunciation habits. Discussing it in a language learning context, emphasizing its significance could be quite valuable.

The term “English accent” refers to the way English is spoken in the different regions of England, its place of origin. English itself has a number of regional dialects, each with particular patterns of pronunciation, intonation, and vocabulary. The most
well-known English accent is Received Pronunciation (hereafter RP), sometimes known as “BBC English” or “Queen’s English”. RP is generally linked with the upper class and is marked by its clear articulation, lack of regional accents, and uniform pronunciation. This dialect is commonly taught to foreign speakers as a model of British English. Each dialect bears its unique features, reflecting the history, culture, and diversity of its region of origin, which are influenced by factors such as socioeconomic class, age, and individual speaking patterns. Accents can also change over time due to social and language shifts. It is crucial to note that accents can differ even within these locations, as individuals have their unique speech patterns and pronunciation.

Furthermore, Javanese has several dialects. The accents found in each Javanese dialect are also different. For example, Pekalongan dialect, the utterance at the end of sentences is usually in a high tone, even though it is not a question sentence. In contrast to the Javanese dialects, in Surakarta and Yogyakarta, both interrogative sentences use a high tone at the end of the sentence. It is different from the Banyumas dialect which is known as the Ngapak Javanese language. In their speech, the Banyumas language tends to put stress on the last sentence, especially the last syllable (Sunarya, et al., 2019). In addition, another issue is the difficult-to-erase difference in accent between English and Javanese. It makes many people hesitant to learn and practice English on a daily basis. Especially for Javanese community that has characteristics in their dialect. Accents can also change over time due to social and language shifts. It is crucial to note that accents can differ even within these locations, as individuals have their unique speech patterns and pronunciation (Ayesa and Aziza, 2016). On the other hand, those previous studies did not discuss about the characteristic and dialect produced by Jonglish community but the particular sound of Javanese language. Therefore, the aims of this study were to compare the intensity and pitch of Javanese accent speakers (specifically from Pekalongan, Semarang, and Pati) with native speakers. The specific areas were chosen since Javanese speakers from these regions end their sentences in a high tone when speaking English, and the researchers wanted to give contribution in teaching English Pronunciation whether this phenomena affects understandability or not. By investigating Javanese-accented speech in Jonglish community, this study has the potential to make meaningful contributions to English pronunciation instruction, cultural awareness, and effective cross-cultural communication. The outcomes of the research can inform pedagogical practices and support the broader goal of promoting linguistic diversity in English language education.

2. Materials and methods

This current study was done in June 2022. It is also included collecting the respondents’ recording. It was held in Universitas PGRI Semarang, Central Java, Indonesia. The study employed descriptive qualitative design. Qualitative is an approach to exploring human phenomena (Creswell, 2019). The sixth-semester students from a variety regency from Central Java, Indonesia; specifically, Pekalongan, Semarang, and Pati whose Javanese as their mother tongue, served as the respondents. They were 60 respondents consisting of 20 respondents from each entity.
For the NS data and measurements, the researchers retrieved from the website mmmenglish.com which was taken at the same time of the local respondents. In attempt to collect the data, the researchers used instruments, including test and interview guideline. The oral test was composed of one lengthy sentence using academic vocabulary; “I mean, you’ve been doing this for real, for so much longer than anyone who’s just come out from this university.” The words were considered academic vocabulary since they were using grammatical and degree of difficulty for Second Language Acquisition (SLA) were adequate. Then, they were recorded. Since the present study compared those three Javanese accents, spoken by Jonglish Community, and native accent, therefore, the comparison was gained by the result of Praat Software of pitch and intensity analysis. After they were analyzed using Praat Software, the researchers display the data including data collection, acoustic analysis, perception analysis, linguistic analysis, and interpretation (see Figure 1). Acoustic and linguistic analysis refers to the study and examination of both the acoustic properties and linguistic features of speech. It involves analysing the physical properties of speech sounds and the linguistic structures and patterns with spoken language (Ogden, 2009; Verschueren, 2022). Meanwhile, perception analysis is a research methodology used to understand and account for the process of perception and how individuals make sense of their perceptions and experiences (Petrina, 2017).

3. Results and discussion

The current research aims to compare the intensity and pitch of Javanese accent speakers (specifically from Pati Semarang, and Pekalongan) with native speakers. The focus is on investigating whether the high tone at the end of sentences affects the engaging nature of the conversation. Additionally, it attempts to determine if Javanese speakers from these regions end their sentences in a high tone when speaking English, and if this affects understandability. Therefore, the following is the excerpt data displayed the acoustic and linguistic analysis of Javanese speakers coming from each entity; Pekalongan, Semarang, and Pati, then, followed by the native speakers.

Figures 2–5 presented the analysis of the sentence “I mean, you’ve been doing this for real, for so much longer than anyone who’s just come out from this university”. From these figures, it can be seen that Pekalongan got the highest pitch and intensity among all. Almost all words were pronounced with fully stressed by Pekalongan participants. Indeed, despite the similarity in pitch range between the Pekalongan group and the native speakers, the Pekalongan group exhibited higher mean pitch and
intensity values compared to the native speakers. This suggests that while the pitch range may overlap, there are still notable differences in the average pitch and intensity levels between the two groups. These differences could be attributed to various factors such as regional dialects, speech habits, cultural influences, or individual variations among speakers. For instance, speakers from Pekalongan may have a tendency to use higher pitch and intensity levels in their speech compared to the general native speaker population. Understanding these nuances in pronunciation characteristics among different speaker groups can provide valuable insights for language learners and educators, helping them to develop more accurate and culturally appropriate pronunciation skills.

Figure 2. Analysis of pitch and intensity of Pekalongan.

Figure 3. Analysis of pitch and intensity of Semarang.

Figure 4. Analysis of pitch and intensity of Pati.

Figure 5. Analysis of pitch and intensity of Native.

In attempt to help the findings become more understandable, the researchers used tables that displayed numbers representing the minimum, maximum, and mean of pitch and intensity from both native speakers and Javanese speakers (see Table 1...
below). Each entity got three parameters mentioned; minimum, maximum, and mean for the pitch and intensity. Pitch is measured in Hertz (Hz), while intensity is measured in decibels (dB).

### Table 1. Result of Pitch and Intensity of each entity.

<table>
<thead>
<tr>
<th>Entity</th>
<th>Pitch</th>
<th>Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>Pekalongan</td>
<td>86.47 Hz</td>
<td>315.48 Hz</td>
</tr>
<tr>
<td>Semarang</td>
<td>75.17 Hz</td>
<td>283.06 Hz</td>
</tr>
<tr>
<td>Pati</td>
<td>75.55 Hz</td>
<td>491.008 Hz</td>
</tr>
<tr>
<td>Native</td>
<td>133.22 Hz</td>
<td>320.04 Hz</td>
</tr>
</tbody>
</table>

The findings show that the minimum, maximum, and mean of the pitch range coming from Pekalongan speakers was 86.47 Hz, 315.48 Hz, and 232.25 Hz, as shown in Figure 2 and Table 1 above. Furthermore, the intensity ranged from a minimum to maximum was 41.16 dB to 80.53 dB, with a mean of 69.85 dB. Meanwhile, Figure 3 and Table 1 presents Semarang has a pitch range from 75.17 Hz to 283.06 Hz, with a mean pitch of 206.27 Hz. The intensity ranges from 34.22 dB to 70.21 dB, with a mean intensity of 61.51 dB. Further, Figure 4 and Table 1 display the pitch range from Pati; minimum 75.55 Hz; maximum 491.008 Hz; mean 192.04 Hz, whereas the intensity range of the minimum, maximum, and mean were 46.76 dB, 76.61 dB, and 68.203 dB, respectively.

In order to compare those three entities from the native, the researchers also provided similar analysis. It was seen from Figure 5 and Table 1 which revealed the native category has a pitch range from 133.22 Hz to 320.04 Hz, with a mean pitch of 203.94 Hz. The intensity ranges from 33.21 dB to 80.48 dB, with a mean intensity of 71.306 dB.

After obtaining the results of the pitch and intensity, the researchers attempted to determine the major conclusion by displaying the graph as follows.

Based on Figure 6, it is evident that speakers from Pekalongan and Semarang exhibit higher pitch compared to the native speaker. Specifically, Pekalongan speakers show an increase of 232.25 Hz in pitch, while Semarang speakers demonstrate a rise of 206.27 Hz. In contrast, speakers from Pati have a lower pitch than the native speaker, registering at 192.04 Hz.

**Figure 6.** The pitch and intensity of Pekalongan, Semarang, and Pati compared to Native.
Conversely, the intensity levels of Pekalongan, Semarang, and Pati speakers are lower than those of the native speaker, as indicated in Figure 6. Pekalongan speakers exhibit an intensity of 69.58 dB, Semarang speakers register 61.51 dB, and Pati speakers record 68.203 dB. In comparison, the native speaker maintains an intensity level of 71.306 dB.

According to Sunarya et al. (2019), Pekalongan speakers tend to conclude sentences with a high pitch, even when the sentences are not questioning. This observation aligns with the pitch analysis, illustrating that both Pekalongan and Semarang speakers consistently produce higher pitch than the native speakers. This pitch pattern is recognized as a characteristic of Pekalongan speakers, evident in both their everyday conversations and English speech.

Apart from the high and low levels of pronunciation in certain parts, the problem of accents in certain phonemes also colors several Javanese dialects. The pronunciation of burst consonants such as /b/ and /d/ in Javanese has more accent than other consonants. Based on research, this kind of stress or accent affects the pronunciation of other languages, such as Indonesian or English. From the findings, there is a difference in duration between native speakers and foreign speakers which cause differences in variations in the /d/ burst sound (Ayesa and Aziza, 2016). On several occasions, people whose mother tongue is Javanese still sound the letter /d/ in Javanese in other languages, such as Indonesian or English (Chun, 2002). Smith (2008) also stated that adults who learn a foreign language are still influenced by their mother tongue, especially regarding the accent of their language. This results from phonemic and allophonic variations from the mother tongue to the foreign language, forms of foreign language phonemes that do not exist in the mother tongue.

The struggle of learning English pronunciation is also found in Indonesia. Indonesia is a large country with a lot of ethnic and regional local languages spread all around the country. Aside from Bahasa Indonesia as its national language, most Indonesian has the local language as their mother tongue and speak with a regional accent. It influences them when they are learning English. For the largest tribe in Indonesia itself, Javanese often speak with their regional accent. The way Javanese speak English with an accent is called Jonglish as an abbreviation of Jowo (Javanese) and English. The different accent between English and Javanese accents which is hard to be erased brings up another issue. The emergence of this phenomenon should have made us normalize English with an accent invariably Jonglish.

4. Conclusion

This research is to compare the intensity and pitch of Javanese accent and native speaker, then the comparison was to investigate whether the high tone-ended affect the engaging conversation or not. It is to prove whether or not Javanese accent for Pati, Semarang, and Pekalongan speakers end the sentence in high tone when they are speaking English. In this present study, it can be inferred that Semarang and Pekalongan people have high tone in the end of their sentence when they are speaking even though it is not the interrogative sentences. It presents that Jonglish accent have their own characteristics in their speaking. Even though NNs end the sentences with high tone, it is still understandable.
The findings of the study suggest that there are variations in final utterance pitch levels among speakers, which can have implications for pronunciation instruction. Here are some suggestions based on the data:

1) Awareness of pitch variation: Pronunciation instruction should include awareness of pitch variation in spoken language. Learners should be made aware that pitch can convey different meanings and intentions in speech.

2) Modeling: Provide learners with models of natural speech patterns that include variations in pitch. Exposing learners to authentic speech samples can help them internalize these patterns and improve their own pronunciation.

3) Practice activities: Design pronunciation practice activities that specifically target pitch variation. These activities could include mimicking pitch patterns, practicing intonation in different contexts, and recording and analyzing one’s own speech to identify areas for improvement.

4) Feedback and correction: Offer feedback and correction on pitch accuracy during pronunciation practice. Encourage learners to listen critically to their own speech and make adjustments as needed to match native-like pitch patterns.

5) Contextualization: Help learners understand how pitch variation relates to the overall meaning and communicative effectiveness of their speech. Provide examples of how pitch changes can convey emphasis, emotion, or sentence structure in different contexts.

By incorporating these suggestions into pronunciation instruction, learners can develop a better understanding of pitch variation and improve their overall spoken language proficiency.

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