Research Article

The Prosodic Aspects of Politeness in Instructional Interactions of Elementary School Teachers in Surabaya

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Abstract. This study aimed to describe the prosodic aspects of politeness in the instructional interactions of elementary school teachers in Surabaya. These prosodic aspects describe the sound intensity, duration, speed and tone. The data were collected using observations at four elementary schools in Surabaya. Data analysis was performed by using Praat acoustic analysis devices and a computer software package for the scientific analysis of speech in phonetics. Based on the results, it can be concluded that the intensity, the speed of sound, and the tone of the prosodic aspects of politeness in the declarative mode of speech had lower averages than the prosodic aspects of politeness in the interrogative and imperative modes of speech. This may be because the declarative mode does not contain the illocutionary directive, while the interrogative and imperative modes do, which affects their use in response to threatening acts.

Keywords: prosody characteristics, politeness, teacher instructional interactions

1. INTRODUCTION

Instructional interactions are an interactions between teachers and learners in the learning process in the classroom. In doing the interactions, teachers are expected to use polite language to foster a conducive learning atmosphere.

A teacher’s polite language will not threaten the faces of learners so they feel comfortable in the classroom. A teacher’s polite language can also be used as a model by learners. Thus, the teacher indirectly simultaneously instills the value of the courteous character to learners. Courtesy is one of the character values that the government proclaimed to be implanted to learners [1]. According to Lickona (1992), one of the
strategies that must be done in instilling character values is through exemplary/modeling [2].

However, in reality there are still many teachers who are authoritarian and do repressive acts in schools. Furthermore, some even think that violent acts both physically and verbally are still considered effective to apply discipline in schools. Such conditions will certainly make the world of education be not humanist and undemocratic. From the perspectives of politeness theories, verbal violence violates the principles of politeness because such actions would essentially threaten the interacting face so as to cause disharmony [3,4]. Therefore, research on the language of teachers in instructional interactions, especially at elementary education level, needs to be done so that model of language-based teacher pronunciation in instructional interactions of elementary school teachers in Surabaya can be constructed.

With regard to language politeness, Watts (2003) distinguishes verbal forms that indicate politeness, i.e. formulaic speech, ritual utterances, and semiformal utterances [5]. Watts then specifies the linguistic forms that a speaker uses in expressing the following language modesty. (1) Form of greeting which includes (a) name of self, (b) honorary title, and (c) academic degree; (2) The form of speech used to express gratitude and apology; (3) Speech form used as a parting ritual; (4) hedges with its various expressions; (5) Forms of solidarity markers; (6) Linguistic form that serves to encourage the continuity of speech acts, for example, of course, he explained; and (7) The modalities used in a particular expression, for example, can, as a tool to express the continuity of an utterance [5].

In the discourse of interpersonal interaction, various forms of verbal politeness are manifested in sentence structure with imperative, interrogative, and declarative modes. Sentences with these three modes can realize directive, assertive, expressive, commissive, and declarative speech acts depending on the contexts of speech.

Mode is a grammatical category in the form of verbs expressing the psychological atmosphere of action according to the speaker’s interpretation or the speaker’s attitude about what he is saying [6]. Syntactically, the mode of a sentence is marked by its name, which contains the new point of information about the topic of the sentence [7]. It is further explained by Halim that the sentence has declarative, narrative, optative, negative, imperative, interrogative, and other modes. Of the various types of sentence modes, Halim limits his study to three types of modes: declarative, interrogative, and imperative. What Halim did was in line with Fairclough’s views. Fairclough (1989) states
that out of various types of modes there are three modes that are considered major, namely declarative, interrogative, and imperative [8].

In addition to aspects of verbal forms, language politeness has other aspects, namely nonverbal aspects, especially prosody. Couper-Kuhlen divides the prosodic components into three dimensions, namely (1) articulatory dimension, (2) acoustic dimension, and (3) auditory dimension [9]. Amran Halim (1984) divides the prosodic components into three, namely (1) tone, (2) time span, and (3) intensity [7]. Tone height is the auditory correlate of the fundamental frequency of vibration of the vocal cords that can be marked by "cycles per second" or Hertz (Hz). Initial, peak, and final tone heights vary to form a series of tones that can be formulated according to its minimum point (lowest tone) and maximum point (highest pitch) [7].

The span of time by Halim (1984) is defined as the length of time required to pronounce a sound of language [7]. The time span is marked by the beginning and end of occurrence. The time range is measured in centisecond (ss) or millisecond (ms). Intensity is the loudness of the language sounds associated with the loudness of the sound that precedes and/or follows it. Intensity is measured by decibels (dB).

Prosodic aspects are very important to be a part of speech analysis on the grounds that no speech can be spoken without prosody. Speech and prosody are two things that cannot be separated [9,10]. According to Stadler (2006), prosodies do not only make speech meaningful but also relate to the setting and management of interactions [9]. In a conversation, prosody plays an important role in speech change, topic change, and status information. Prosody also indicates the limits of the speech units and the place of speech switching. In addition, prosodies also provide important information regarding the emotions and attitudes of the speaker in an interaction. By demonstrating emotional qualities through intonation, speaker can convey his attitude or in other words prosodic cues indicate how a speaker feels about what he says [6]. Furthermore, Nygaard, Herold, and Namy (2008) emphasize that research on prosodic characteristics in an utterance is focused on two problems, namely (1) speech process and speechlessness of speech structure and (2) prosodic role as an indication of emotion or attitude of a speaker's statement [11].

In relation to politeness it can be argued that language politeness can be expressed through linguistic and nonlinguistic means, through prosodic and kinesic strategies. The prosodic in relevance with language courtesy is based on the following reasons. Firstly, a prosodic strategy can be used to express the difference in the degree of speech
impediment. The degree of sustainability has a close relationship with perceptions of politeness [4,12]. Wennerstrom also asserted that prosodies can show politeness as regards the parameters of the continuity of an utterance [9].

Secondly, prosody strategies can be used to express the emotions and attitudes of Pn [9]. A wide range of intonations signifies an expression of empathy, such as attraction, attention, pleasure, worry; whereas a narrow range of intonations expresses no empathy, such as disinterest and boredom. Gussenhoven suggests that the high or low tone of an utterance in the context of power in discourse is influenced by social and psychological factors [13]. High tone has a social association with disobedience, irreverence, disrespect, and femininity, while a low tone of voice expresses authority, firmness, and masculinity. The emotion and attitude of speaker’s are one of the parameters of the positive politeness strategy developed by Brown and Levinson (1987) [12].

Third, prosody strategies can be used to express the formalities of an utterance. The results of Mika Ito’s research (1998) on *Japanese Politeness and Suprasegmentals - a Study based on Natural Speech Materials*, showed that the use of honorific forms and the increase in the fundamental frequency (F0) or speech rate is the dominant factor in determining the level of formality [13]. In the study of politeness formalities speech is closely related to social distance parameters (D) and power (P). These parameters are closely related to the selection of politeness strategies [12].

This research focused on the prosodic aspects of language politeness in instructional interactions of elementary school teachers in Surabaya, which includes the characteristics of prosody of declarative, interrogative, and imperative speech. Prosodic aspect is very important as part of the analysis of politeness on the grounds there is no speech that can be spoken without prosody. Speech and prosody are two things that cannot be separated [9,10]. This study aims to describe the characteristics of proselytizing language modality in instructional interactions of elementary school teachers in Surabaya, in particular the prosody of language politeness in declarative mode speech, language politeness in interrogative mode speech, and language politeness in imperative mode speech. By studying this aspect of prosody, it is hoped that it can be described in terms of the language politeness in instructional interactions of elementary school teachers in Surabaya.
2. METHODOLOGY/ MATERIALS

This is a descriptive research that aims to describe the prosody of language politeness in instructional interactions of elementary school teachers in Surabaya. The data of this research are nonverbal aspects in the form of the speech utterances of elementary school teachers in instructional interactions that describes the sound intensity, duration and speed of sound, tone, and final intonation of speech. The data were collected by the researcher's being an observer of the informant's language and not being involved directly in conversation with the recording technique [14]. The data source of this research is the instructional discourse in learning at the four elementary schools in Surabaya. The four schools are (1) SDN Dukuh Menanggal Surabaya, (2) SDN Menanggal 601 Surabaya, (3) SDN Kutisari 1 Surabaya, and (4) SDN Tenggilis Mejoyo 1 Surabaya.

The steps taken in collecting data for this research are as follows. (1) recording the teaching practices of eight primary school teachers in the four selected primary schools 2 times each with different lessons, (2) transcription of recording results, (3) comprehensive identification and classification of data based on predetermined research problems, (4) data aggregation by observing the adjacency pairs and speech context for obtaining data extract, and (5) conversion of data extract from audiovisual form into audio using adobe audition program.

The analysis of the prosody of politeness was done by using acoustic analysis with PRAAT devices [15,16]. With such devices, the sound intensity, duration, and speed of sound, tone and final intonation of speech utterances in declarative, interrogative, and imperative modes can be described.

3. RESULTS AND DISCUSSIONS

3.1. RESULTS

1) Prosodic Features of Language Politeness in Declarative Mode Speech in Instructional Interactions of Elementary Teachers in Surabaya

Several examples of acoustic analysis results of prosodic aspects of language politeness in declarative mode speech in the instructional interactions of elementary school teachers in Surabaya can be seen in the following spectrograph.

1. Anak kelas dua hebat.
(The second graders are great.)

In Data (1), the analyzed utterance is *Anak kelas dua hebat*. (The second-graders are great). Based on The Praat analysis, the sound intensity is 70.42 dB; 3.10 seconds of duration; 0.323/sec of voice speed; tone of 211.2 Hz with final intonation decreasing. In Data (2), the analyzed words are *Anak-anak nanti dilanjutkan lagi Bu Sri nanti setelah istirahat*. (Children, Mrs. Sri will continue later after the break). Based on PRAAT analysis, the sound intensity is 78.42 dB; 6.10 seconds of duration; voice speed was 0.164/sec; tone was 268.7 Hz with flat final intonation.

Based on the result of acoustic analysis on 88 selected speeches, the features of language politeness in declarative mode speech in the instructional interactions of elementary school teachers in Surabaya were intensity: average 75.58 dB; lowest 67.76 dB; highest 80.14 dB. Duration: average 4.79 seconds; lowest 1.1 seconds; highest 9.8 seconds. Speed of sound: 0.28/second average; lowest 0.102/sec; highest 0.902/sec. Tone: average 250.50 Hz; lowest 165.3 Hz; highest 365.3 Hz. The final intonation decreased by 43 (49%), the final intonation increased by 30 (34%), the horizontal intonation 15 (17%).

2) Prosodic Aspects of language Politeness in Interrogative Mode Speech in Instructional Interactions of Elementary School Teachers in Surabaya

Some examples of acoustic analysis results of prosodic aspects of language politeness in interrogative mode speech in the instruction of elementary school teachers in Surabaya can be seen in the following spectrograph.

1. *Air hujan itu apakah hanya mengalir ke sungai saja?*
(Does rainwater flow into the river only?)

In Data (3), the analyzed utterance is *Air hujan itu apakah hanya mengalir ke sungai saja?* (Does rainwater flow into the river only?) Based on the praat analysis, the sound intensity was 79.25 db; 3.65 seconds of duration; 0.274/sec of voice speed; tone was 383.7 hz with the final falling intonation. In Data (4), the analyzed speech is *Aldi mana bukunya Aldi?* (Aldi, where is your book?). Based on the praat analysis, the sound intensity was 78.25 db; 2.19 seconds of duration; 0.457/sec was voice speed; tone was 249.1 hz with horizontal intonation.

Based on the result of acoustic analysis on 139 selected speeches, the features of prosodic aspects of language politeness in interrogative mode speech in the instructional interactions of the elementary school teachers in Surabaya was intensity: mean of 76.84 db; lowest was 69.7 db; highest was 80.82 db. aspect of duration: 3.22 sec on average; lowest was 0.68 seconds; highest was 9.63 seconds. Sound speed: 0.44/sec on average; lowest is 0.104/sec; highest is 1.464/sec. tone: average of 247.26 hz; lowest is 147.8 hz; highest is 440.7 hz. the final intonation decreased by 91 (65%), the final intonation increased by 30 (22%), the flat intonation was 18 (13%).

### 1. Prosodic Aspects of Language Politeness in Imperative Mode Speech in Instructional Interactions of Elementary School Teachers in Surabaya

Some examples of acoustic analysis results of language politeness in imperative mode speech in the instruction of teachers in the elementary schools in Surabaya can be seen in the following spectrograph.
1. Ayo dengarkan dulu ya yang dibaca Rizki!

(Let’s listen to what Rizki is reading first, OK?)

![Audio waveform]

1. Anti... Gilang... kipasnya itu dimasukkan ya!

(Anti... Gilang... put away your hand fans!)

![Audio waveform]

Data (5), the analyzed words are Ayo dengarkan dulu ya yang dibaca Rizki!(Let’s listen to what Rizki is reading first, OK?) Based on the praat analysis, the sound intensity was 77.54 dB; 3.10 seconds of duration; 0.323/sec voice speed; tone of 267.9 Hz with the decreasing final intonation. In the data (6), the analyzed utterances are Anti... Gilang... kipasnya itu dimasukkan ya! (Anti ... Gilang ... put away your hand fans!) Based on the praat analysis, the sound intensity was 80.08 dB; 3.95 seconds of duration; 0.253/sec of voice speed; tone of 267.6 Hz with flat intonation.

Based on the result of acoustic analysis on 133 selected speeches, the features of prosodic aspects of language politeness in imperative mode speech in the instructional interactions of the elementary school teachers in Surabaya was intensity: average 77.06 dB; lowest 67.41 dB; highest 81.44 dB. Aspect of Duration: 3.52 seconds on average; lowest is 0.61 seconds; highest is 9.01 seconds. Speed of sound: 0.42/sec averages; lowest 0.111/sec; highest of 1.637/sec. Tone: 267.96 Hz on average; lowest is 162.6 Hz; highest is 405.7 Hz. The final intonation decreased by 79 (60%), the final intonation increased by 34 (25%), the final intonation leveled off by 20 (15%).
3.2. DISCUSSION

The prosodic aspect is very important to be part of speech analysis on the grounds that no speech can be spoken without prosody. Speech and prosody are two things that cannot be separated [9,10]. A detailed study of the prosodic aspects of Indonesian language was begun by Amran Halim (1969) in his dissertation entitled *Intonation in Relation to Syntax in Indonesia*. Amran Halim’s dissertation was then translated into Indonesian and published by Djambatan Publisher in 1984. In his research, Halim (1984) examined the intonation of declarative, interrogative and imperative declarative sentences [7].

Soderberg (2001) in the International Conference of Teaching BIPA IV in Denpasar offered the use of modern tools to examine the patterns of Indonesian intonation [17]. In his paper entitled *Using Modern Tools to Research Indonesian Intonation Pattern* he recommended the use of the Speech Analyzer program to determine the pattern of Indonesian intonation. Similar to Amran Halim, Soderberg (2001) also used the three types of sentences, namely declarative, interrogative, and imperative as samples of analysis.

In contrast to the previous research using short utterances and taken apart from the context of speech. In this study, the characteristic features of language politeness is derived from a Praat analysis using natural data. The characteristics of the prosody of language politeness are determined by the intensity, duration and speed of sound, and tone (with final intonation as additional information).

Based on the data analysis using the Praat analysis, the features of prosodic aspects of language politeness in declarative mode speech in the instructional interactions of the elementary school teachers in Surabaya is intensity: average 75.58 dB on average; lowest 67.76 dB; highest 80.14 dB. Duration: 4.79 seconds; lowest 1.1 seconds; highest 9.8 seconds. Speed of sound: 0.28/second average; lowest 0.102/ sec; highest 0.902/ sec. Tone: average 250.50 Hz; lowest 165.3 Hz; highest 365.3 Hz. The final intonation decreased 43 (49%), the final intonation increased by 30 (34%), the horizontal intonation is 15 (17%).

The prosodic features of language politeness in interrogative mode speech in the instructional interactions of the elementary school teachers in Surabaya are intensity: mean of 76.84 dB; lowest is 69.7 dB; highest is 80.82 dB. Aspect duration: 3.22 sec on average; lowest of 0.68 seconds; highest of 9.63 seconds. Sound speed: 0.44/sec on average; lowest is 0.104/sec; highest is 1.464/sec. Tone: average 247.26 Hz; lowest 147.8
Hz; highest 440.7 Hz. The final intonation decreased by 91 (65%), the final intonation increased by 30 (22%), the horizontal intonation was 18 (13%).

The prosodic features of language politeness in imperative mode speech in the instructional interactions of the elementary school teachers in Surabaya are intensity: average is 77.06 dB; lowest is 67.41 dB; highest is 81.44 dB. Aspect of Duration: 3.52 seconds on average; lowest is 0.61 seconds; highest is 9.01 seconds. Speed of sound: 0.42/sec on average; lowest 0.111/sec; highest of 1.637/sec. Tone: average of 267.96 Hz; lowest is 162.6 Hz; highest is 405.7 Hz. The final intonation decreased by 79 (60%), the final intonation increased by 34 (25%), the final intonation leveled off 20 (15%).

From the results, the prosody of language politeness in instructional interactions of the elementary school teachers in Surabaya can be seen that language politeness in declarative mode speech for intensity, voice speed, and tone have mean lower than language politeness in interrogative mode speech and language politeness in imperative mode speech. This may be possible because language politeness in declarative mode speech does not contain direct directive illocution, while language politeness in interrogative mode speech and language politeness in imperative mode speech contain directive illocutions. This supports Leech’s (1993) view that the directive illusion is competitive in order to have the power to perform face-threatening acts [4].

The results of the final intonation of declarative, interrogative, and imperative speeches are inconsistent with the results of Halim (1984) and Soderberg (2001) research that the declarative, interrogative, and imperative sentences in Indonesian have the final decreasing intonation [7,18]. In this study it was found out that not all final intonations in the three speech modes had end-down intonations. In language politeness in declarative mode speech it revealed that 30 utterances or 34% had final rising intonations (↑), 15 utterances or 17% had a flat final intonation (→). In language politeness in interrogative mode speech found 30 utterances or 22% have a final rising intonation (↑) and 18 utterances or 18% have a flat final intonation (→). In language politeness in imperative mode speech, it was found that 34 utterances or 26% had final rising intonation (↑) and 20 utterances or 15% have a flat final intonation (→). Thus it can be proved that not all declarative, interrogative, and imperative declarative sentences have final falling intonations.

The results of this study support the results of Stadler (2006) and Nygaard, Herold, and Namy (2008) studies that the speech utterance provides important information about the quality of speaker’s emotions, attitudes and feelings towards what is said[9,11].
Table 1: Prosodic Features of Instructional Interactions of Elementary School Teachers in Surabaya

<table>
<thead>
<tr>
<th>No</th>
<th>Kinds of Speech</th>
<th>Intensity</th>
<th>Duration</th>
<th>Sound Speed</th>
<th>Tone</th>
<th>Final Intonation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>H</td>
<td>L</td>
<td>RN</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>1</td>
<td>Declarative</td>
<td>80.14</td>
<td>67.76</td>
<td>75.58</td>
<td>9.80</td>
<td>1.10</td>
</tr>
<tr>
<td>2</td>
<td>Interrogative</td>
<td>80.82</td>
<td>69.70</td>
<td>76.84</td>
<td>9.63</td>
<td>0.68</td>
</tr>
<tr>
<td>3</td>
<td>Imperative</td>
<td>81.44</td>
<td>67.41</td>
<td>77.06</td>
<td>9.01</td>
<td>0.61</td>
</tr>
</tbody>
</table>
In relation to the high-low tones, the results of this study also support Guessenhoven’s findings that high notes have associations with disobedience, irreverence, and insult[13].

The prosodic aspects of language politeness described above can be used as a hallmark of the prosody of Indonesian politeness. This is based on the consideration that this study uses natural data based on actual situational and social contexts so as to describe the real situation and condition of Indonesian language usage, in contrast to Halim’s (1984) and Soderberg (2001) research which uses artificial data free from the context of usage [7,18].

Viewed from Bioacoustics (Gabriel, 1996), in particular the intensity of speech and speech tone it can be argued that the mean of speech intensity language politeness in declarative mode speech, in language politeness in interrogative mode speech and language politeness in imperative mode speech falls into the strong category, which is 61-80 dB and is below the noise tolerance limit, i.e. 85 dB [18]. This means that the teachers in instructional interactionss in the primary schools tend to use loud noises. This is certainly inseparable from the context of classroom learning. Teachers want what is delivered can be accepted by learners well.

Viewed from the tone of voice, in language politeness in declarative mode speech, in language politeness in interrogative mode speech and language politeness in imperative mode speech, the tone of voice is within the limits of the sound frequency that can be heard by humans (20-20,000 Hz) and is within the limits of the human-generated sound frequency of 64-2,048 Hz [19]. The use of high-pitched sounds, as Guessenhoven’s (Braga and Marques, 2003) suggest will show disobedience, irreverence, and injury [13].

The result of the final intonation of speech in the instructional interactions of the elementary school teachers in Surabaya can be used to revise the intonation character of the declarative, interrogative, and imperative Indonesian speech endorsed by Amran Halim (1984 ). According to Amran Halim in Indonesian the declarative, interrogative, and imperative speech has a final falling intonation[7]. In contrast to the results of Amran Halim (1984), the findings of this study show that declarative, interrogative, and imperative decoding meanings have a falling, flat, and rising intonation.
4. CONCLUSION AND RECOMMENDATION

The conclusion of the research is presented briefly, narrative, non-bulleted, and conceptual. The research impact must be stated.

Based on the acoustic analysis with PRAAT device, it is concluded that the prosodic characteristics of language politeness in declarative mode speech: intensity: average 75.58 dB; lowest 67.76 dB; highest 80.14 dB. Duration: 4.79 seconds on average; lowest is 1.1 seconds; highest is 9.8 seconds. Speed of sound: 0.28/second on average; lowest 0.102/sec; highest 0.902/sec. Tone: average of 250.50 Hz; lowest is 165.3 Hz; highest is 365.3 Hz. Most utterances have falling final intonation (49% ↓).

The prosodic features of in language politeness in interrogative mode speech, intensity: average 76.84 dB; lowest 69.7 dB; highest 80.82 dB. Aspect duration: 3.22 sec average; lowest 0.68 seconds; highest 9.63 seconds. Sound speed: 0.44/sec on average; lowest is 0.104/sec; highest 1.464/sec. Tone: average 247.26 Hz; lowest 147.8 Hz; highest 440.7 Hz. Mostly they have falling final intonation (65% ↓).

Characteristics of language politeness in imperative mode speech prosody include intensity: 77.06 dB on average; lowest is 67.41 dB; highest is 81.44 dB. Aspect of Duration: 3.52 seconds on average; lowest is 0.61 seconds; highest is 9.01 seconds. Speed of sound: 0.42/sec on average; lowest 0.111/sec; highest of 1.637/sec. Tone: 267.96 Hz on average; lowest is 162.6 Hz; highest is 405.7 Hz. Most utterances had final falling intonation (60% ↓).

Based on the characteristics of prosody of language politeness in instructional interactions of the elementary school teachers in Surabaya it can be concluded that for the intensity, speed of voice, and tone of language politeness in declarative mode speech have lower mean compared to language politeness in interrogative mode speech and language politeness in imperative mode speech. This may be possible because language politeness in declarative mode speech does not contain direct directive illocution, while language politeness in interrogative mode speech and language politeness in imperative mode speech contain directive illocution so that it has the power to perform the face-threatening act.

The study of language politeness cannot only be done on the verbal aspects, but it also can be done on nonverbal aspects. One of them is the study of the prosodic characteristics of language politeness. Based on the result of this research, it is suggested
to perform the politeness of Indonesian especially the language politeness in teachers’ instructional interactions in schools.

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