

CHAPTER IV

FINDINGS AND DISCUSSION

This chapter presents research findings and research discussion which have been collected during the research. The first part, the research findings show the data result. The second part, the research discussion concluded the finding data into classification of phonological interference, moreover concluded explained phonological factors resulted on the phonological interference. The data were taken from students' speech performance in speaking class. The data were collected through audio-recording while students performed speech for debate.

4.1 Research Findings

During four weeks of March 2017, the researcher has joined speaking class in fourth semester to collect the data. During the time, the researcher has been recorded students' performing in speech into audio-recording which will be analyzed then. This audio-recording will be analyzed to find phonological interference on students' speaking.

Before analyzing audio-recorded files which have been gathered from the fourth semester students, the researcher selected the valid data by considering the language background of the subject and the data itself. In this study, the valid data should be spoken by Javanese speakers who use Surabaya dialect. Moreover, the audio-recording should be having good quality to be analyzed easier. After conducting those steps, the researcher analyzed audio-recorded files to identify the presence of phonological interference on students' speaking ability.

Table 4.1

Transcription of students' utterance and the correct pronunciation

Word	Students' pronunciation	Correct pronunciation	Information
Foreign	/forəŋ/	/'fɔr.ən/	/ɒ/ is interfered by /o/
Generation	/genəreisen/	/,dʒen.ə'rei.ʃən/	/dʒ/ is interfered by /g/
Fact	/fekt/	/fækt/	/æ/ is interfered by /e/
Thank	/teŋ/	/θæŋk/	/θ/ and /æ/ is interfered by /t/ and /e/
Passion	/pesən/	/'pæʃ.ən/	/æ/ is interfered by /e/
Traveling	/trevəliŋ/	/'træv.əl.ɪŋ/	/æ/ is interfered by /e/
Young	/yoŋ/	/jʌŋ/	/ʌ/ is interfered by /o/
Knowledge	/knoulej/	/'nɒl.ɪdʒ/	/ɒ/ and /dʒ/ is interfered by /o/ and /j/
Because	/bikos/	/br'kɔz/	/ɒ/ is interfered by /o/
Student	/studəŋ/	/'stju:.d.ənt/	/d/ is interfered by /d/
Cause	/kɔs/	/kɔ:z/	/z/ is interfered by /s/
Better	/bettə/	/'bet.ər/	/t/ is interfered by /tt/
Support	/səppɔrt/	/sə'pɔ:t/	/p/ is interfered by /pp/
Addition	/əddisen/	/ə'dɪʃ.ən/	/d/ is interfered by /dd/
Lose	/ləus/	/lu:z/	/z/ is interfered by /s/
Then	/den/	/ðen/	/ð/ is interfered by /d/
Their	/deir/	/ðeər/	/ð/ is interfered by /d/
Them	/dem/	/ðem/	/ð/ is interfered by /d/

Table 4.1 presents students' utterance transcription and correct pronunciation. Those utterances or those words are randomly taken from several audio-recorded made by the students performing speech in class of 'Speaking for Formal Setting'. After comparing students' pronunciation with the correct pronunciation on Cambridge dictionary, it shows several words were mispronounced by the students. Those mentioned words are example represented of mispronunciation English words made by Javanese speaker of fourth semester students, and the complete students' transcription is provided on appendix.

In the table 4.1, the word **foreign** is pronounced as /forəŋ/, while according to Cambridge dictionary the correct pronunciation of the word **foreign** is /'fɔr.ən/. From this word, there is mispronunciation of the sound /ɒ/. The students tend to use /o/ to pronounce /ɒ/. From those examples, the researcher indicates that there is a presence of phonological interference. This condition could be happened because the students who are Javanese speakers, they do not recognize the sound /ɒ/ in their language system; therefore they may replace that sound with sound /o/.

Other examples, the word **generation** is pronounced as /genəreisen/ while according to Cambridge dictionary, the correct pronunciation of the word **generation** is /,dʒen.ə'rei.ʃ ə n/. From this word, both /dʒ/ in the initial pronounced as /g/. From those examples, the researcher indicates that there is a presence of phonological interference. This condition could be happened because the students who are Javanese speakers, they do not recognize the sound /dʒ/ in their language system; therefore they may replace that sound with sound /g/.

The other condition, **fact** is pronounced as /fekt / while according to Cambridge dictionary, the correct pronunciation of the word **fact** as /fækt/. From this word, it is also found that there is mispronounce of English sound /æ/. The students tend to use /e/ to pronounce /æ/. Other example the word **thank** is

pronounced as /teŋ/, while according to Cambridge dictionary, the correct pronunciation of the word **thank** is /θæŋk/. And word **passion** is pronounced /pəsən/, while according to Cambridge dictionary, the correct pronunciation of the word **passion** is /'pæʃ. ə n/. From this word, there is mispronunciation of the sound /æ/. The students tend to use /e/ to pronounce /æ/. And the word **traveling** is pronounced /trevəlɪŋ/, while according to Cambridge dictionary, the correct pronunciation is /'træv. ə l.ɪŋ/. To this case, the researcher indicates that there is the presence of phonological interference on students; they tend to use similar sound /e/ to produce /æ/ which is not recognized in their language system, which then result on error production.

Moreover, the word **that** is pronounced as /ðæʔ/, while according to Cambridge dictionary the correct pronunciation is /ðæt/. Other findings, the word **young** is pronounced as /yoŋ/ while according to Cambridge dictionary, the correct pronunciation of the word **young** is /jʌŋ/. From this word, it is also found that there is mispronounce of English sound /ʌ/ replaced by /o/.

The researcher found that some students mispronounce English sound /v/replaced by /o/. For instances, the word **because** is pronounced as /bikos/, while according to Cambridge dictionary, the correct pronunciation is /br'kɔz/. The word **knowledge** is pronounced as /knoulej/, while according to Cambridge dictionary the correct pronunciation is /'nɒl.ɪdʒ/. This case is resulted by the omitting presence of /v/ in Javanese language system; the students may replace that sound with the similar sound /o/.

Other findings, the word **student** is pronounced as /stuɖən/ while according to Cambridge dictionary, the correct pronunciation of the word **student** is /'stju:.d ə nt/. Specifically, from this word, it is found that there is sound which is mispronounced by the student; the sound is /d/. The students tend to pronounce /d/ with /ɖ/ which only find in Javanese system, while the correct pronunciation is /d/. This condition is kind of habitual attitude from their mother tongue system then results on error production in target language.

The word **better** is pronounced as /bettər/ while according to Cambridge dictionary, the correct pronunciation of the word **better** is /betər/. Moreover, the word **support** is pronounced as /səppɔrt/ while according to Cambridge dictionary, the correct pronunciation of the word **support** is /sə'pɔ:t/. The word **addition** is pronounced as /əddisen/ while according to Cambridge dictionary, the correct pronunciation is /ə'dɪʃ. ə n/. Sometimes, the students still pronounce the word as same as the way it is written. This condition is kind of their habitual when producing the Javanese word. Those four examples show the students' attitude pronouncing the word as same as the way it is written. This kind of habitual attitude may result on error productions.

Other findings, the students often substitute their language sounds to produce English sounds. For instance, the word **lose** is pronounced as /ləus/ while according to Cambridge dictionary, the correct pronunciation of the word **lose** is /lu:z/. From those words, it can be said that the students tend to pronounce those words as those are written. It means that, they pronounce those English words as the way they pronounce those words in Javanese. The students still use the rule of their mother tongue to pronounce English word; they tend to transfer their phonological system in producing English word. The students may substitute the sounds /z/ of Javanese system to produce English sound /s/.

Other findings, the researcher found that some students mispronounce English sound /ð/ replaced by /d/. For instances, the word **then** is pronounced as /dən/ while according to Cambridge dictionary, the correct pronunciation of the word **then** is /ðən/. The word **their** is pronounced as /deɪr/ while according to Cambridge dictionary, the correct pronunciation of the word **their** is /ðeəɪr/. The word **them** is pronounced as /ðem/ while according to Cambridge dictionary, the correct pronunciation of the word **them** is /ðem/. From those three examples, the students tend to use /d/ to reproduce all the English sound /ð/. This error production made by the students because they do not recognize the sound /ð/ in their language system, therefore, they may use the similar sound to produce that sound.

4.2 Discussion

This research discussion presents the researcher's analysis on data result. The discussion is divided into two parts; the first part explains the data result analysis as in classification of phonological interference and the second part explain the phonological factors resulting on phonological interference in students' speaking performance.

The phenomenon that has get from Javanese speaker in speaking in speaking class. Base on result from the questionnaire all of the students is Javanese speaker. From 18 questions the students answered that description they are from the Javanese language background.

4.2.1 Phonological Interference on students' speaking performance

After listening the recording of students' speech performance, then transcribing the data result, selecting students' mispronunciation words, the last the researcher tries to classify the data result into four kinds of phonological interference defined by Weinrich. As effort to find further information on how far the presence of phonological interference in students' speaking performance, the theory has been chosen.

Table 4.2

Classification of students' phonological interference

Types of phonology interference				
	Under-differentiation	Over-differentiation	Reinterpretation	Actual phonic substitution
Word	/forəŋ/ /genəreisen/ /fekt/ /teŋ/ /pesən/	/ðæʔ/ /studən/	/bettə/ /səpport/ /əddisen/	/ləus/ /kəs/

/trevəliŋ/			
/yoŋ/			
/knoulej/			
/bikos/			
/den/			
/deir/			
/dem/			

It is already mentioned in the literature review that Weinrich defined four kinds of phonological interference; they are under- differentiation of phonemes, over- differentiation of phonemes, reinterpretation of distinction, and actual phonic substitution.

4.2.1.1 Under-differentiation of phonemes

Table 4.3

Under-differentiation of phonemes

Word	Students' pronunciation	Correct pronunciation	Information	Types
Foreign	/forəŋ/	/'fɔɪr.əŋ/	/ɒ/ is interfered by /o/	Under-differentiation
Generation	/genərəisen/	/,dʒen.ə'rei.ʃən/	/dʒ/ is interfered by /g/	Under-differentiation
Fact	/fekt/	/fækt/	/æ/ is interfered by /e/	Under-differentiation
Thank	/teŋ/	/θæŋk/	/θ/ and /æ/ is interfered by /t/ and /e/	Under-differentiation
Passion	/pesən/	/'pæʃ.ən/	/æ/ is interfered by /e/	Under-differentiation
Traveling	/trevəliŋ/	/'træv.əl.ɪŋ/	/æ/ is interfered by /e/	Under-differentiation
Knowledge	/knoulej/	/'nɒl.ɪdʒ/	/ɒ/ and /dʒ/ is interfered by /o/ and /j/	Under-differentiation
Because	/bikos/	/bɪ'kɒz/	/ɒ/ is interfered by /o/	Under-differentiation

Then	/den/	/ðen/	/ð/ is interfered by /d/	Under-differentiation
Their	/deir/	/ðeə r /	/ð/ is interfered by /d/	Under-differentiation
Them	/dem/	/ðem/	/ð/ is interfered by /d/	Under-differentiation

Under-differentiation of phonemes occurs when two sounds on L2 are confused by bilingual because there is no distinction in their L1 (Weinrich:18). It means that Javanese speaker may have difficulty in producing some English sounds which are not distinguished in Javanese phonological system. From table 4.3, several examples of under-differentiation of phonemes are foreign, generation, fact, thank, passion, traveling, knowledge, because, their, then and that. Those words mispronounce by the students because their mother tongue does not distinguish the sounds as in target language. From the table 4.3, the researcher is able to describe the common error pattern of this first type made by fourth semester students not distinguish the sounds as in target language. From the table 4.3, the researcher is able to describe the common error pattern of this first type made by fourth semester students.

4.2.1.1.1 Distinction between /o/ and /ɒ/

The students tend to pronounce the word foreign as /forəŋ/ while according to Cambridge dictionary, the correct pronunciation is /'fɔːr.ən/. The word knowledge as /knoulej/ while according to Cambridge dictionary, the correct pronunciation of the word knowledge is /'nɒl.ɪdʒ/. And pronounce the word because as /bikos/ while according to Cambridge dictionary, the correct pronunciation is /bɪ'kɒz/. In this case, the Javanese speakers tend to pronounce /ɒ/ as /o/. They do not recognize /ɒ/ in their mother tongue system; therefore they use similar sound which is /o/ to replace that sound. This condition results on mispronunciation of English word because the fact that English language differ the usage of both sounds.

4.2.1.1.2 Distinction between /g/ and /dʒ/

The students pronounce the word generation as /genəreɪsən/ while according to Cambridge dictionary, the correct pronunciation is /ˌdʒen.ə'reɪ.ʃən/. In this case, the Javanese speakers tend to pronounce /dʒ/ as /g/. They do not recognize /dʒ/ in their mother tongue system; therefore they use similar sound which is /g/ to replace that sound. This condition results on mispronunciation of English word because the fact that English language differ the usage of both sounds.

4.2.1.1.3 Distinction between /e/ and /æ/

The students pronounce the word fact as /fekt/ while according to Cambridge dictionary, the correct pronunciation is /fækt/. The word passion pronounced as /pesən/ while according to Cambridge dictionary the correct pronunciation is /'pæʃ.ən/. The word traveling pronounced as /trɛvəlɪŋ/ while according to Cambridge dictionary, the correct pronunciation is /'træv.əlɪŋ/. In this case, the Javanese speakers tend to pronounce /æ/ as /e/. They do not recognize /æ/ in their mother tongue system; therefore they use similar sound which is /e/ to replace that sound. This condition results on mispronunciation of English word because the fact that English language differ the usage of both sounds.

4.2.1.1.4 Distinction between /t/ and /θ/

The students pronounced the word thank as /teŋ/ while according to Cambridge dictionary, the correct pronunciation is /θæŋk/. In this case, the Javanese speakers tend to pronounce /θ/ as /t/. They do not recognize /θ/ in their mother tongue system; therefore they use similar sound which is /t/ to replace that sound. This condition results on mispronunciation of English word because the fact that English language differ the usage of both sounds.

4.2.1.1.5 Distinction between /j/ and /dʒ/

The students pronounced the word knowledge as /knoulej/ while according to Cambridge dictionary, the correct pronunciation is /'nɒl.ɪdʒ/. In this case, the

Javanese speakers tend to pronounce /dʒ/ as /j/. They do not recognize /dʒ/ in their mother tongue system; therefore they use similar sound which is /j/ to replace that sound. This condition results on mispronunciation of English word because the fact that English language differ the usage of both sounds.

4.2.1.1.6 Distinction between /d/ and /ð/

The students tend to pronounce the word them as /dəm/ while according to Cambridge dictionary, the correct pronunciation of the word them is /ðem/. The word then pronounced as /den/ while according to Cambridge the correct pronunciation is /ðen/. The word their pronounced as /deir/ while according to Cambridge dictionary is /ðeə r/. In this case, the Javanese speakers tend to pronounce /ð/ as /d/. They do not recognize /ð/ in their mother tongue system; therefore they use similar sound which is /d/ to replace that sound. This condition results on mispronunciation of English word because the fact that English language differ the usage of both sounds.

Those are the common error pattern made by Javanese speakers. Javanese speaker often confused of those sounds because they do not recognize and distinguish the sounds. They may replace the sounds by the similar sounds which existed in mother tongue system.

4.2.1.2 Over-differentiation of phonemes

Table 4.4

Over-differentiation of phonemes

Word	Students' pronunciation	Correct pronunciation	Information	Types
That	/ðæʔ/	/ðæt/	/t/ is interfered by /ʔ/	Over-differentiation of phonemes
Student	/studəʔn/	/'stju:.d ə nt/	/d/ is interfered by /d/	Over-differentiation of phonemes

Over-differentiation of phonemes occurs when the distinction of phonemic system in L1 is not required on producing L2 (Weinrich:18). It means that, Javanese speaker may mispronounce some English sounds because they transfer their phonological system in producing those sounds. From table 4.4, several examples of over-differentiation of phonemes are that and student. Those words are mispronounced by the students because they transfer their phonological system to produce those English words.

Javanese speakers recognize and distinguish between /k/ and /ʔ/, /d/ and /dʲ/, while English speakers are not. This may result on mispronouncing some identical English sounds if they use their phonological system.

4.2.1.2.1 Distinction between /k/ and /ʔ/

The students often pronounce the word that as /deʔ/ while according to Cambridge dictionary, the correct pronunciation of the word that is /ðæt/. /ʔ/ is common found in Javanese word, specifically to pronounce /k/ in the end of word, for instance the word bebek or duck is pronounced as /bebeʔ/. In fact, the researcher find that this condition occurred to the word that whereas the last sound of this word is /t/. This word often pronounced as /deʔ/ by the students. Moreover, this error has become the habitual and established attitude on students.

4.2.1.2.2 Distinction between /d/ and /dʲ/

The researcher found that there is student who pronounces the word student as /stuḍən/ while according to Cambridge dictionary, the correct pronunciation of the word student is /stju:dənt/. /dʲ/ is common found in Javanese word, for instance the word adus or takes a bath is pronounced as /adhʊs/. English language does not recognize the /dʲ/; therefore this condition may produce mispronunciation of English word.

4.2.1.3 Reinterpretation of distinction

Table 4.5

Reinterpretation of distinction

Word	Students' pronunciation	Correct pronunciation	Information	Types
Better	/bettə/	/'bet.ə r /	/t/ is interfered by /tt/	Reinterpretation of distinction
Support	/səppɔrt/	/sə'pɔ:t/	/p/ is interfered by /pp/	Reinterpretation of distinction
Addition	/əddisen/	/ə'dɪʃ. ə n/	/d/ is interfered by /dd/	Reinterpretation of distinction

Reinterpretation of distinctions occurs when bilingual distinguishes phonemes of the secondary system by features which in that system are merely concomitant or redundant, but which are relevant in his primary system (Weinrich:18). This simply means to Javanese speaker's error interpretation in stressing some English words. For instance, the word better is sometimes pronounced as /bettə/ while the correct pronunciation of the word better is /'bet.ə r /. This attitude is common found in Javanese word due to stressing the geminate phoneme, however this is rarely found in English system. The students tend to transfer their language system in producing English word which may result then on error production.

4.2.1.4 Actual phonic substitution

Table 4.6

Actual phonic substitution

Word	Students' pronunciation	Correct pronunciation	Information	Types

Cause	/kɔs/	/kɔ:z/	/z/ is interfered by /s/	Actual phonic substitution
Lose	/lɔus/	/lu:z/	/z/ is interfered by /s/	Actual phonic substitution

Actual phone substitution: occurs when two sounds of two languages is considered alike by multilingualism but the fact that the pronunciation is different (Weinrich:18). It means that Javanese speaker may mispronounce English word because they produce identical sounds to target language which is the fact that the pronunciation is different. From table 4.6 several examples of actual phonic substitution are lose and cause.

4.2.1.4.1 Substitution between sounds /s/ and /z/

The students tend to pronounce the word cause as /kɔs/, while the correct pronunciation of the word cause according to Cambridge dictionary is /kɔ:z/. Using /s/ to pronounce /z/ is rarely happened to Javanese language, they still use the /s/ to pronounce the /kɔ:z/. Hence, the students who transfer this language knowledge will make error production to pronounce English word.

Four types of phonological interference include under-differentiation of phonemes, over-differentiation of phonemes, reinterpretation of distinctions and actual phone substitution has been described above. This result proves that there is a presence of those four types on fourth semester students' speaking ability. The students may mispronounce some English words because they transfer their language phonological system to produce the target language. From those four phonological interference types, under-differentiation of phonemes is the most common types made by the fourth semester students.

4.2.2 Phonological factors resulting on phonological interference on students' speaking performance

The finding result shows that there is different phonological system between Javanese language and English language. The researcher has analyzed the phonological system on both language and found that there are several sounds which do not recognized in Javanese such as /ə/, /ð/, and /dʒ/ for consonant sounds and /æ/and /ɒ/ for vowel sounds. This different may result on Javanese speakers having difficulty on producing those sounds. In this case, Javanese speakers tend to use the similar sounds in their language system to produce the missing sounds. In contrary, there also found that there are some sounds which are not recognized by English language such as /d/, /ʔ/, for consonant sounds. The students may create error production due to transferring those sounds to produce some English sounds. To this discussion reference to Weinrich theory, specific phonological factors causing phonological interference was formulated.

Weinrich has already mentioned that there are four phonological factors resulting on phonological interference include absence of corresponding distinctions in primary language, presence of distinction (only) in primary language, different phonemic system, and different pronunciation of equivalent phoneme (Weinrich:64). The description of each factor will be explained follow.

4.2.2.1 Absence of corresponding distinction in primary language

Absence of corresponding distinctions in primary language, it means that sometimes there is no distinction of identical phonemes in L1, however we found this attitude in the target language. In English language, there are several distinction of identical sounds which is experience confusion by Javanese speakers, they are the distinction between /t/ and /θ/; the word thank as /teŋ/ while according to Cambridge dictionary, the correct pronunciation is /θæŋk/,

distinction between /o/ and /ɒ/; the word foreign as /forəŋ/ while according to Cambridge dictionary, the correct pronunciation is /'fɔr.ən/, distinction between e/ and /æ/, distinction between /j/ and /dʒ/; the word knowledge as /knoulej/ while according to Cambridge dictionary the correct pronunciation is /'nɒl.ɪdʒ/, distinction between /d/ and /ð/; the word them as /dəm/ while according to Cambridge dictionary the correct pronunciation of the word them is /ðem/.

Those distinctions are not recognized by the Javanese speakers. They tend to use similar sound to produce the missing sounds in their language system; this condition may result on the phonological interference on their speaking performance. For this factor, the possibly condition may result on under-differentiation of phonemes type due to the presence of distinction only on the target language.

4.2.2.2 Presence of distinction (only) in primary language

Presence of distinction (only) in primary language, it opposites to the point one where there is distinction of two sounds which no existence on L2. Javanese language distinguishes several sounds include d/ and /d/, /k/ and /ʔ/ For instance, /d/ to pronounce /dadɪ/ 'become', /d/ to pronounce /adʊs/ 'take a bath'; /k/ to pronounce /kasɔr/ 'bed', /ʔ/ is common to pronounce /k/ which is in the end position /ɛɛʔ/ 'ugly'.

The presence of those distinctions may transfer to produce English word regard to the habitual attitude of using those distinctions when learning the first language. Moreover, this factor may result on over-differentiation of phonemes type if the speakers allow the presence of that transferring process.

4.2.2.3 Different phonemic system

Different phonemic system, it means sometimes there is different phonological system of L1 and L2 on producing sounds from having different number of sounds, different manner of articulation and place of producing the sounds. This factor seems to result on four types of phonological interference. Javanese speaker may produce /j/ to pronounce /dʒ/; the word

knowledge as /knoulej/ while according to Cambridge dictionary the correct pronunciation is /'nɒl.ɪdʒ/.

Those are the four factors defined by Weinrich which result on phonological interference phenomenon. The four factors mentioned has explained how the phonological interference influences students' speaking production.