CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

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

A. Research Findings

During four weeks of June 2016, the researcher has joined four classes of speaking for formal setting 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 performance.

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 35 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'	Correct	Information
	pronunciation	pronunciation	
Thank	/teŋ/	/eæŋk/	/æ/ and is interfered by /e/
Cancer	/kencər/	/kænsər/	/æ/ and is interfered by /e/
Advantages	/edventejəs/	/ædvæntidʒiz/	/æ/ and is interfered by /e/
Anesthesia	/anestəsai/	/ænɪsəɪːziə/	/æ/ is interfered by /a/
Fasting	/fastɪŋ/	/fæstɪŋ/	/æ/ is interfered by /a/
Morality	/mɔralıtı/	/mərælıti/	/æ/ is interfered by /a/
Job	/job/	/dzpb/	/dʒ/ is interfered by /j/
Advantages	/edventejəs/	/ædvæntɪdʒɪz/	/dʒ/ is interfered by /j/
Knowledge	/knoulej/	/nplidz/	/dʒ/ is interfered by /j/
Surgery	/surgəri/	/sɜːrʤəri/	/dʒ/ is interfered by /g/
Digestive	/digestif/	/daidzestiv/	/dʒ/ is interfered by /g/
Better	/bettər/	/betər/	/t/ is interfered by /tt/
Addicted	/add1ktəd/	/ədɪktɪd/	/d/ is interfered by /dd/
Apply	/əpplɪ/	/əplaɪ/	/p/ is interfered by /pp/
Pleasure	/plesər/	/pleʒər/	/ʒ/ is interfered by /s/
Them	/dəm/	/ðəm/	/ð/ is interfered by /d/
Their	/deir/	/ðeər/	/ð/ is interfered by /d/
Without	/widot/	/wiðaut/	/ð/ is interfered by /d/
Above	/əbov/	/əb∆v/	$/\Lambda$ / is interfered by /o/
Young	/yoŋ/	/jAŋ/	$/\Lambda$ / is interfered by /o/
Knowledge	/knoulej/	/nplidʒ/	/p/ is interfered by /o/
Often	/ofdən/	/ɒfən/	/p/ is interfered by /o/
Challenges	/celenj/	/fælindz/	/ʧ/ is interfered by /c/
Teaches	/ticis/	/tiːʧɪz/	/ʧ/ is interfered by /c/
Speech	/spic/	/spi:tʃ/	/ʧ/ is interfered by /c/
Thank	/teŋ/	/eæŋk/	/e/ is interfered by /t/
Anesthesia	/anestəsai/	/ænɪsəɪːziə/	/θ/ is interfered by /t/
Cloth	/klɔt/	/klve	/θ/ is interfered by /t/
Protect	/protek/	/prətekt/	/t/ is interfered by /t/
Students	/studən/	/stju:dənt/	/d/ is interfered by /d/

That	/de?/	/ðæt/	/t/ is interfered by /?/
Distinguish	/distinuish/	/distingwif/	English /ŋ/ is interfered by
			Javanese /ŋ/
Diseases	/dɪsəs/	/dɪzɪːz/	/z/ is interfered by /s/

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 Collins 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 will be provided on appendix.

In the table 4.1, the word *thank* is pronounced as /teŋ/, while according to Collins dictionary, the correct pronunciation of the word *thank* is /eæŋk/. From this word, there is mispronunciation of the sound /æ/. The students tend to use /e/ to pronounce /æ/. Other example, the students pronounce the word *cancer* as /kencər/, while according to Collins dictionary, the correct pronunciation of the word *cancer* is /kænsər/. This condition also shows that the students mispronounce /æ/ replaced by /e/. Moreover, the word *advantages* is pronounced as /edventejəs/ while according to Collins dictionary, the correct pronunciation of the word *advantages* is /ædvæntɪdʒɪz/. From this word, both /æ/ in the initial and middle position pronounced as /e/. 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 /æ/ in their language system; therefore they may replace that sound with the similar sound /e/.

The other condition, anesthesia is pronounced as /anestəsai/ while according to Collins dictionary, the correct pronunciation of the word anesthesia is /ænɪsəɪːziə/. From this word, it is also found that there is mispronounce of English sound /æ/. The students tend to use /a/ to pronounce /æ/. Other example, the word fasting is pronounced as /fastin/ while according to Collins dictionary, the correct pronunciation of the word fasting is /fæstin/. From this word, it is also found that there is mispronounce of English sound /æ/ replaced by /a/. Moreover, the word morality is pronounced as /moraliti/ while according to Collins dictionary, the correct pronunciation to pronounce the word *morality* is /mərælıti/. From this word, it is also found that there is mispronounce of English sound /æ/ replaced by /a/. From those examples, the students not only use /e/ to produce /æ/ but also they use the sound /a/ to reproduce English sound /æ/. Those examples show the students mispronounce the sound /æ/ replaced by /a/ both in initial or middle position. To this case, the researcher indicates that there is the presence of phonological interference on students; they tend to use similar sound /a/ to produce /æ/ which is not recognized in their language system, which then result on error production.

Other findings, the researcher found that some students mispronounce English sound /dʒ/ replaced by /j/. For instances, the word *job* is pronounced as /jɔb/

while according to Collins dictionary, the correct pronunciation of the word *job* is /dʒpb/. The word *advantages* is pronounced as /edventejes/ while according to Collins dictionary, the correct pronunciation of the word *advantages* is /ædvæntɪdʒɪz/. Moreover, the word *knowledge* is pronounced as /knɔulej/ while according to Collins dictionary, the correct pronunciation of the word *knowledge* is /nɒlɪdʒ/. From those three examples, it shows that the students mispronounce all of the English sound /dʒ/ from the initial, middle and the end position of the word. They tend to use /j/ to reproduce all of the sound /dʒ/. This case is resulted by the omitting presence of /dʒ/ in Javanese language system; the students may replace that sound with the similar sound /j/.

However, some students may replace /dʒ/ with /g/ in some English words. The word *surgery* is pronounced as /surgeri/ while according to Collins dictionary, the correct pronunciation of the word *surgery* is /sɜːrdʒəri/. Another example, the word *digestive* is pronounced as /dɪgestɪf/ while according to Collins dictionary, the correct pronunciation of the word *digestive* is /dardʒestɪv/. From those examples, it shows that some students mispronounce the English sound /dʒ/ replaced by /g/.

The word *better* is pronounced as /better/ while according to Collins dictionary, the correct pronunciation of the word *better* is /beter/. Moreover, the word *addicted* is pronounced as /addikted/ while according to Collins dictionary, the correct pronunciation of the word *addicted* is /ediktid/. The word *apply* is pronounced as /eppli/ while according to Collins dictionary, the correct

pronunciation of the word *apply* is /əplaɪ/. 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 three 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 word *pleasure* is pronounced as /plesər/ while according to Collins dictionary, the correct pronunciation of the word pleasure is /pleʒər/. Specifically, from this word, it is found that there is sound which is mispronounced by the student; the sound is /ʒ/. The students tend to use /s/ while the correct pronunciation is /ʒ/. To this case, the students may result on error production because they do not recognize /ʒ/ in their Javanese language system; therefore, they tend to use similar sound /s/ to reproduce English sound /ʒ/.

Other findings, the researcher found that some students mispronounce English sound /ð/ replaced by /d/. For instances, the word *them* is pronounced as /dəm/ while according to Collins dictionary, the correct pronunciation of the word *them* is /ðəm/. The word *their* is pronounced as /deɪr/ while according to Collins dictionary, the correct pronunciation of the word *their* is /ðeər/. The word *without* is pronounced as /widət/ while according to Collins dictionary, the correct pronunciation of the word *without* is /wiðaot/. From those three examples, the students tend to use /d/ to reproduce all the English sound /ð/ both in the initial and in the middle position. 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.

Other findings, the researcher found that some students mispronounce English sound $/\Lambda$ / replaced by $/\sigma$ /. For instances, the word *above* is pronounced as $/\sigma b\sigma v$ / while according to Collins dictionary, the correct pronunciation of the word *above* is $/\sigma b\Lambda v$ /. Another example, the word *young* is pronounced as $/\sigma v$ / while according to the correct pronunciation of the word *young* is $/\sigma v$ / or $/\sigma v$ /. From those two examples, the students tend to use $/\sigma v$ to reproduce the English sound $/\sigma v$ /. This error production made by the students because they do not recognize the sound $/\sigma v$ / in their language system, therefore, they may use the similar sound to produce that sound.

Another case, the researcher found that some students mispronounce English sound /p/ replaced by /o/. For instances, the word knowledge is pronounced as /knoulej/ while according to Collins dictionary, the word knowledge is pronounced /nplɪdʒ/. The word *often* is pronounced as /ofdən/ while according to Collins dictionary, the correct pronunciation of the word *often* is /pfən/. From those two examples, the students tend to use /o/ to reproduce the English sound /p/. This error production made by the students because they do not recognize the sound /p/ in their language system, therefore, they may use the similar sound to produce that sound.

Other findings, the researcher found that some students mispronounce English sound /tf/ replaced by /c/. For instances, the word *challenge* is pronounced as

/celenj/ while according to Collins dictionary, the correct pronunciation of the word *challenge* is /fælɪndʒ/. The word *teaches* is pronounced as /tɪcɪs/ while according to Collins dictionary the correct pronunciation of the word *teaches* is /tiːfʃɪz/. Moreover, the word *speech* is pronounced as /spɪc/ while according to Collins dictionary, the correct pronunciation of the word *speech* is /spiːfʃ/. From those three examples, it shows that the students mispronounce all of the English sound /tʃ/ from the initial, middle and the end position of the word. They tend to use /c/ to reproduce all of the sound /tʃ/. This case is resulted by the omitting presence of /tʃ/ in Javanese language system; the students may replace that sound with the similar sound /c/.

Other findings, the researcher found that some students mispronounce English sound /ø/ replaced by /t/. For instances, the word *thank* is pronounced as /teŋ/ while according to Collins dictionary, the correct pronunciation of the word *thank* is /øæŋk/. The word *anesthesia* is pronounced as /anestəsai/ while according to Collins dictionary, the correct pronunciation of the word *anesthesia* is /ænɪsəɪːziə/. Moreover, the word *cloth* is pronounced as /klɔt/ while according to Collins dictionary, the correct pronunciation of the word *cloth* is /klɒə/. From those three examples, it shows that the students mispronounce all of the English sound /ø/ from the initial, middle and the end position of the word. They tend to use /t/ to reproduce all of the sound /ø/. This case is resulted by the omitting presence of /ø/ in Javanese language system; the students may replace that sound with the similar sound /t/.

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

The word student is pronounced as /studen/ while according to Collins dictionary, the correct pronunciation of the word student is /stju:dent/. 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 /d/ 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 *that* is pronounced as /de?/ while according to Collins dictionary, the correct pronunciation of the word *that* is /ðæt/. Specifically, from this word, it is found that there is sound which is mispronounced by the student; the sound is /t/. The students tend to pronounce /?/ with /t/ which only find in Javanese system, while the correct pronunciation is /t/. This condition is kind of habitual attitude from their mother tongue system then results on error production in target language.

Other findings, the students often substitute their language sounds to produce English sounds. For instance, the word *distinguish* is pronounced as /distinguish/ while according to Collins dictionary, the correct pronunciation of the word *distinguish* is /distingwish/. The other substitution, the word disease is pronounced as /diseas/ while according to Collins dictionary, the correct pronunciation is /diziz/. From those two mentioned 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 /ŋ/ of Javanese system to produce English sound /ŋ/ and the students may substitute the sound /z/ with the sound /s/.

B. Research Discussion

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

1. Phonological interference on students' speaking performance

After listening to thirty five recording of students' speech performance, then transcribing the data result, selecting students'

mispronunciation words, the last the researcher will try 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 phonological interference					
	Under-	Over-	Reinterpretation	Actual phonic		
	differentiation	differentiation	of distinction	substitution		
	of phonemes	of phonemes				
	/teŋ/	/de?/	/bettər/	/citizən/		
	/kencər/	/studən/	/add1ktəd/	/yɔŋər/		
Word	/edventejəs/	/protek/	/əpplɪ/	/fɪŋər/		
4	/anestəsai/			/distinuish/		
	/fastin/			/stroŋər/		
	/mɔralıtı/			/cos/		
	/job/			/dɪsəs/		
	/knoulej/			/prisens/		
	/surgəri/			/eksempəl/		
	/digestif/			/res/		
	/plesər/					
	/dəm/					
	/deɪr/					
	/widot/					
	/əbov/					
	/yoŋ/					
	/ofdən/					
	/celenj/					
	/ticis/					
	/spic/					
	/klɔt/					

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.

a. Under- differentiation of phonemes

Table 4.3
Under-differentiation of phonemes

Word	Students' pronunciati on	Correct pronunciation	Information	Types
Advantages	/edventejəs/	/ædvæntidʒiz/	/æ/ and /ɪ/ is interfered by /e/, /dʒ/ is interfered by /j/, and /z/ is interfered by /s/	Under differentiati on of phoneme
Anesthesia	/anestəsai/	/ænisəi:ziə/	/æ/ is interfered by /a/, /e/ is interfered by /t/, and /z/ is interfered by /s/.	Under differentiati on of phoneme
Pleasure	/plesər/	/pleʒər/	/ʒ/ is interfered by /s/.	Under differentiati on of phoneme
Them	/dəm/	/ðəm/	/ð/ is interfered by /d/.	Under differentiati on of phoneme
Challenge	/celendy/	/ʧælindʒ/	/tf/ is interfered by /c/	Under differentiati on of phoneme

Knowledge	/kn o ulej/	/n v lidʒ/	/ p / is interfered	Under
			by / o /	differentiati
				on of
				phoneme
				1

Under-differentiation of phonemes occurs when two sounds on L2 are confused by bilingual because there is no distinction in their L1. 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 advantages, anesthesia, surgery, pleasure, them, above, young, enjoyment, without, cancer, challenge, and knowledge. 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.

1) Distinction between /e/ and /æ/

The students tend to pronounce the word *advantages* as /edventejəs/ while according to Collins dictionary, the correct pronunciation of the word advantages is /ædvæntɪdʒɪz/. 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

¹ Uriel, Weinrich. *Languages in Contact*. (New York: Mouton publisher, 1979) p.18

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.

2) Distinction between /j/ and /dʒ/

The students tend to pronounce the word *advantages* as /edventejəs/ while according to Collins dictionary, the correct pronunciation of the word advantages is /ædvæntɪdʒɪz/. 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.

3) Distinction between /t/ and /e/

The students tend to pronounce the word *anesthesia* as /anestəsai/ while according to Collins dictionary, the correct pronunciation of the word *anesthesia* is /ænɪsəɪːziə/. In this case, the Javanese speakers tend to pronounce /ə/ as /t. They do not recognize /ə/ 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) Distinction between /s/ and /ʒ/

The students tend to pronounce the word *pleasure* as /plesər/ while according to Collins dictionary, the correct pronunciation of the word *pleasure* is /pleʒər/. In this case, the Javanese speakers tend to pronounce /ʒ/ as /s/. They do not recognize /ʒ/ in their mother tongue system; therefore they use similar sound which is /s/ to replace that sound. This condition results on mispronunciation of English word because the fact that English language differ the usage of both sounds.

5) Distinction between /d/ and /ð/

The students tend to pronounce the word *them* as /dəm/ while according to Collins dictionary, the correct pronunciation of the word *them* is /ð/. 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.

6) Distinction between /c/ and /tʃ/

The students tend to pronounce the word *challenge* as /celenj/ while according to Collins dictionary, the correct pronunciation of the word *challenge* is /tʃælɪnʤ/. In this case, the Javanese speakers tend to

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

7) Distinction between /o/ and /p/

The students tend to pronounce the word *knowledge* as /knoulej/ while according to Collins dictionary, the correct pronunciation of the word *knowledge* is /nɒlɪʤ/. In this case, the Javanese speakers tend to pronounce /p/ as /o/. They do not recognize /p/ 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.

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.

b. Over- differentiation of phonemes

Table 4.4

Over-differentiation of phonemes

Word	Students' pronunciation	Correct pronunciation	Information	Types
That	/de?/	/ðæt/	/t/ is interfered by /?/	Over differentiation of phonemes
Student	/studən/	/stju:dənt/	/d/ is interfered by /d/	Over differentiation of phonemes
Protect	/protek/	/prətekt/	/t/ interfered by /t/	Over differentiation of phonemes

Over-differentiation of phonemes occurs when the distinction of phonemic system in L1 is not required on producing L2.² 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, student and protect. Those words are mispronounced by the students because they transfer their phonological system to produce those English words.

Javanese speakers recognize and distinguish between /d/ and /d/, /k/ and /?/, /t/ and /t/ while English speakers are not. This may result on

mispronouncing some identical English sounds if they use their phonological system.

1) Distinction between /k/ and /?/

The students often pronounce the word *that* as /de?/ while according to Collins dictionary, the correct pronunciation of the word *that* is /ðæt/. /?/ 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 /bebe?/. 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 /de?/ by the students. Moreover, this error has become the habitual and established attitude on students.

2) Distinction between /d/ and /d/

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

3) Distinction between /t/ and /t/

The researcher also found that there is student who pronounces the word *protect* as /protek/ while according to Collins dictionary, the correct pronunciation of the word *protect* is /protekt /. /t/ sound is also common found in Javanese word, for instance the word *kuthuk*, to name the little chicken, is pronounced as /kotok/. English language does not recognize the /t/; therefore this condition may produce mispronunciation of English word.

c. Reinterpretation of distinction

Table 4.5

Reinterpretation of distinction

Word	Students'	Correct	Information	Types
	pronunciation	pronunciation		<i>-</i> -
Better	/bettər/	/betər/	Different	Reintrepet
			interpretation	ation of
			on geminate	distinction
			sound; tt	
Addicted	/add1ktəd/	/ədɪktɪd/	Different	Reintrepet
			interpretation	ation of
			on geminate	distinction
			sound; dd	
apply	/əpplɪ/	/əplaɪ/	Different	Reintrepet
			interpretation	ation of
			on geminate	distinction
			sound; pp	
bullied	/bullɪd/	/bʊlid/	Different	Reintrepet
			interpretation	ation of
			on geminate	distinction
			sound; ll	

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". 3 This simply means to Javanese speaker's error interpretation in stressing some English words. For instance, the word bullied is sometimes pronounced as /bullid/ while the correct pronunciation of the word bullied is /bolid/. 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.

d. Actual phonic substitution

Table 4.6
Actual phone substitution

Word	Students'	Correct	Information	Types
	pronunciation	pronunciation		
Younger	/yəŋər/	/jAŋgər/	e/ŋ/ is interfered by	Actual phone substitution
			j/ŋ/	substitution
Distinguish	/distinuish/	/distingwif/	e/ŋ/ is	Actual phone
			interfered by	substitution
			_j /ŋ/	
Cause	/cos/	/kɔ:z/	/z/is	Actual phone
			interfered by	substitution
			/s/	
Diseases	/asəs/	/dɪzɪːz/	/z/ is	Actual phone

			interfered by	substitution
			/s/	
Raise	/res/	/reiz/	/z/ is interfered by	Actual phone substitution
			/s/	

Actual phone substitution: occurs when two sounds of two languages is considered alike by bilingual but the fact that the pronunciation is different. ⁴ 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 younger, distinguish, cause, diseases and raise. From those example, the researcher may identify the error pattern made by Javanese speakers which is covered by actual phone substitution type, they are the substitution between /ŋ/ in English and /ŋ/ in Javanese, moreover the substitution between /s/ and /z/.

1) Substitution the η sound

The phoneme ŋ of both languages are defined alike; they are voiced velar nasal, however, the pronunciation is different; phoneme ŋ in English is added /g/ sound when pronounce it. For instance, the word of distinguish is pronounced as /distingwis/ rather than pronounced as /distinguish/. In fact, this condition is rarely happened to Javanese word.

⁴ Uriel, Weinrich. *Languages in Contact.* 19

To this case, the students may have mispronunciation to produce the word consisting of that sound.

2) Substitution between sounds /s/ and /z/

The students tend to pronounce the word *disease* as /disəs/, while the correct pronunciation of the word *disease* according to Collins dictionary is /dizi:z/. Using /z/ to pronounce /s/ is rarely happened to Javanese language, they still use the /s/ to pronounce the /s/. 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.

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 /ʃ/, /ʧ/, /e/, /ð/, /dʒ/ and /ʒ/ for consonant sounds and /æ/, /A/ and /p/ 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/, /t/, /ʔ/, /p/ 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 phonemes.⁵ The description of each factor will be explained follow.

a. 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 /e/; the word *cloth* is pronounced as /klot/ by the students, while according to Collins dictionary, the correct pronunciation of the word *cloth* is /klpe/, distinction between /d/ and /ð/; the word *them* is pronounced as /dəm/ by students, while according to Collins dictionary, the correct pronunciation of the word them is /ðəm/, distinction between /j/ and /dʒ/; the word job is pronounced as /job/ by students, while according to Collins dictionary, the correct pronunciation of the word job is /dzpb/, distinction between /c/ and /tf/; the word challenge is pronounced as /celenj/ while according to Collins dictionary, the correct pronunciation of the word *challenge* is /tfælindʒ/, distinction between /s/ and /3/; the word *pleasure* is pronounced as /plesər/ while according to Collins dictionary, the correct pronunciation of the word pleasure is

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⁵ Uriel, Weinrich. Languages in Contact......64

/pleʒər/, distinction between /e/ and /æ/; the students pronounce the word *cancer* as /kencər/, while according to Collins dictionary, the correct pronunciation of the word *cancer* is /kænsər, moreover distinction between /o/ and /p/; The word *often* is pronounced as /ofdən/ while according to Collins dictionary, the correct pronunciation of the word *often* is /pfən/.

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.

b. 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 /?/, moreover /t/ and /t/. For instance, /d/ to pronounce /dadi/ 'become', /d/ to pronounce /adus/ 'take a bath'; /k/ to pronounce /kasur/ 'bed', /?/ is common to pronounce /k/ which is in the end position /ɛlɛ?/ 'ugly'; /t/ to pronounce /tali/ 'rope' and /t/ to pronounce /kutuk/ 'to name little chicken'.

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.

c. 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 /c/ to pronounce /t/, for instance the word *teaches* is pronounced as /ticis/ while according to Collins dictionary the correct pronunciation of the word *teaches* is /ti:t/iz/ because they do not have /t// in their language system.

d. Different pronunciation of equivalent phonemes

The last, different pronunciation of equivalent phonemes, it means that the identical phonemes which are defined on both first language and target language may have different pronunciation. For instance, the word of *finger* is pronounced by Javanese speaker as /fiŋər/ rather than pronounced as /fiŋgər/. Because the Javanese speaker does not recognize the additional /g/ sound when producing /ŋ/ sounds, whereas English add

/g/ sound when pronounce it. In fact, this condition is rarely happened to Javanese word. To this case, the students may have mispronunciation to produce the word consisting of that sound. For this factor, it may cause the phonological interference on the fourth type that is actual phone substitution.

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.