

CHAPTER IV

DISCUSSION

This chapter consists of two parts. In the first part the writer would like to present and analyze the data, called data presentation and analysis. The writer presented the data in a form of a table. Then, she analyzed and classified it based on the phonological process proposed by Ingram. The second part, the writer would like to discuss about her findings from the data, namely discussion of the findings.

4.1. DATA PRESENTATION AND ANALYSIS

In this study, the writer found one type of alternation based on Davenport and Hannahs and eight processes based on Ingram's theory. The data presentation and the analysis of the children's alternation and processes would be presented below based on the classification:

4.1.1 PHONOLOGICAL ALTERNATIONS

Phonological alternations come in many shapes and sizes, and the processes behind them are equally varied, as are the kinds of factor which condition them (Davenport and Hannahs, 2005). In the age of 21 month old, children have acquired all vowels, yet the consonants are still limited (Dardjowodjodo, 2000). Therefore, they simplify the adult word and make some alternations. For example, the alternation that produces by Lyla in the first conversation which mentions part of her body, she often to change the sound, and below are the alternation that occur in the subject's speech:

Table 4.1 Table of Alternations in the conversation 1

Words and its transcription		Subject's pronunciation	Phonological alternation
'bokong'	[bəkɔŋ]	[ɔkɔŋ]	/b/ → /ɸ/
'irung'	[irɔŋ]	[iyɔŋ]	/r/ → /y/
'rambut'	[rambut]	[ambut]	/r/ → /ɸ/
'iki'	[iki]	[iti]	/k/ → /t/
'kuping'	[kupinŋ]	[upinŋ]	/k/ → /ɸ/
'sapi'	[sapi]	[api]	/s/ → /ɸ/
'kalung'	[kaluŋ]	[ayuŋ]	/k/ → /ɸ/

The alternation shown above is the alternation of changing sound because the subject got difficulty to produce the sound that come in the initial of word. For instance, in the word 'bokong', 'rambut', 'kuping', 'sapi', and 'kalung', while the changing sound of [r] to [y] is because the subject has not produced the sound [r] yet (Dardjowodjodo, 2000). In the other hand, the subject can produce [k] in the word 'bokong', yet she was not able to produce it in the word 'iki' then she makes an alternation to change the sound [k] to [t], becomes 'iti' (Smith in Lust and Foley, 2004). It because the [k] sound is followed by front vowel [i], then [k] sound is changed to [t] sound. If the [k] sound is followed by back vowel [ɔ], then the sound [k] do not change. This alternation is also typically of phonological alternations, namely phonetically conditioned alternations as proposed by Davenport and Hannahs, 2005.

In the next conversation, the subject is after taking a bath. She also often did some alternations of changing the sound by deleting the initial of word or substituting with another sound:

Table 4.2 Table of Alternations in the conversation 2

Words and its transcription		Subject's pronunciation	Phonological alternation
'alis'	[alis]	[ayis]	/l/ → /y/
'dewi'	[dæwi]	[æwi]	/d/ → /ϕ/
'kangen'	[kaŋən]	[ŋən]	/ka/ → /ϕ/

The table above, shown that the subject often makes some alternations of deleting of initial consonant and syllable. The subject also make an alternation to substitute the sound [l] with [y] sound, because the development of phonology the subject, she has not produced the sound [l] yet. Therefore, she got difficulty to pronounce 'alis', the she alternated to change it with 'ayis' in phonological acquisition (Smith in Lust and Foley, 2004).

In the third conversation, the subject only make an alternation of low vowel [a] which is changed to mid vowel [ə] in the word 'maneh'. The subject got difficulty to pronounce 'maneh', then she deletes the initial consonant [m] and changes the vowel [a] to [ə], it becomes [ənəh].

While in the next conversation the subject did some alternations of sound in the word:

Table 4.3 Table of Alternations in the conversation 4

Words and its transcription		Subject's pronunciation	Phonological alternation
'tivi'	[ti:vi:]	[ti:pi:]	/v/ → /p/
'bakso'	[baʔso]	[aco]	/b/ → /ϕ/, /k/ → /ϕ/, /s/ → /c/
'sewu'	[sæwu]	[æwu]	/s/ → /ϕ/

In the table above, the subject did some alternations which make the sound changes from the target word. For example: in the word 'tivi', where the subject changed [v] to [p]. In the phonological development, the child in the age of 29 month has not produced the sound [v] yet (Dardjowodjodo, 2000). Therefore, she simplified to change 'tivi' to 'tipi'. While in the word 'bakso' the subject makes three alternations. First, she deleted the initial consonant of sound [b]. Second, she deleted the glottal sound in the middle word, and last alternation is the sound [c] changes [s] sound. So, she got difficulty to speak 'bakso', then she changes it becomes 'aco' (Smith in Lust and Foley, 2004). Then, the last word of 'sewu', the subject did like usual to change the sound because she delete the initial of consonant.

In the next conversation, the subject makes long conversation which also she did many alternations of changing sound:

Table 4.4 Table of Alternations in the conversation 5

Words and its transcription		Subject's pronunciation	Phonological alternation
'melok'	[mælok]	[æyok]	/m/ → /φ/, /l/ → /y/
'kerupuk'	[kəru:pu?]	[pupu?]	/kə/, /ru/ → /φ, /pu/ → /pupu/
'hasan'	[hasan]	[acan]	/s/ → /c/
'widy'	[widi]	[idi]	/w/ → /φ/
Hape	[hape]	[ape]	/h/ → /φ/
'kung'	[kuŋ]	[tuŋ]	/k/ → /t/
'lucu'	[lucu]	[ucu]	/l/ → /φ/
'gak'	[ga?]	[da?]	/g/ → /d/
'ketok'	[kætɔ?]	[ætɔ?]	/k/ → /φ/
'foto'	[foto]	[poto]	/f/ → /p/
'gol'	[gol]	[goŋ]	/l/ → /ŋ/

From the table above, shown that most the changing sound of because the subject deletes the initial of consonant and syllable. It because, in the phonological process which are directly motivated by the tendency of young children to simplify syllable structure. For, most children, the direction is toward a basic CV syllable (Ingram, Fletcher and Garman, 1986). While, in the age of 21 month old, the subject also have tendency to simplify the initial consonant of word. While, in the word 'melok' the subject change the sound [l] to [y] because in the phonological acquisition, she has not produce the sound [l] yet. In the word 'kerupuk', the subject deletes the syllable [kə] and [ru] then for [pu] to [pupu?], it might of some interest is the fact that children vary greatly in their tendencies to reduplicate. Then in the word 'gak' the subject do phonetic variability, where the children can produce the same word with different sound in the same day (Hoagg, 2007). Therefore, she can produce 'gak' or 'dak' then she also can speak in the same sound [g] in the word 'gol'. Yet, in the word 'gol' the subject makes an alternation where the last sound [l] is changed to [ŋ] sound because it is influenced by velar [g]. Therefore, this alternation also included in the typically of phonological alternations that proposed by Davenport and Hannahs, namely phonetically conditioned alternations. The subject also has not produced the sound [f] because of the child's biological growth (Dardjowodjodo, 2000). Therefore, the subject makes an alternation to change the sound [f] to [p] sound.

In the next conversation, is playing medicine in her drugstore:

Table 4.5 Table of Alternations in the conversation 6

Words and its transcription		Subject's pronunciation	Phonological alternation
'bukakno'	[bukaʔnɔ]	[butaʔnɔ]	/k/ → /t/
'lila'	[lila]	[iya]	/l/ → /ɸ /, /l/ → /y/
'permen'	[pərmæn]	[mæn]	/per/ → /ɸ
'dewe'	[dewe]	[wewe]	/de/ → /ɸ , /we/ → /wewe/
'mrono'	[mrɔnɔ]	[nɔnɔ]	/mrɔ/ → /ɸ/, /nɔ/ → /nɔnɔ/

In the table above, shown that the subject make some alternations of changing the sound of word where [k] is changed to [t] because it is influenced from the vowel, like in the previous words 'bokong' and 'kung' and 'iti', the word 'bukakno' also conditioned purely by the phonetic environment. Therefore, it is typically of phonetically conditioned alternation. In the word 'lila', the subject deletes the initial consonant like in the other words, and changes the sound [l] to [y] because she has not produce the sound [l] yet. In the word 'dewe' and 'mrono' she often produces this word with 'wewe' and 'nono'. Here, the subject deletes the syllable [de] and [mrɔ], and reduplicate last CV of word [we] and [nɔ]. It is only the interest of the subject, because some seem to like to do reduplicate a lot, whereas others rarely do it (Ingram in Fletcher and Garman, 1986).

In the next conversation, the subject did like the previous alternation, that deletion of the initial consonant, syllable, and cluster:

Table 4.6 Table of Alternations in the conversation 7

Words and its transcription		Subject's pronunciation	Phonological alternation
'dian'	[dian]	[ian]	/d/ → /ϕ/
'klengkeng'	[klæŋkæŋ]	[æŋkæŋ]	/k/ → /ϕ/
'nyamuk'	[n̄amu?]	[amu?]	/n̄/ → /ϕ/
'nakal'	[nakal]	[ataŋ]	/n/ → /ϕ/, /l/ → /ŋ/
'ilang'	[ilang]	[iyang]	/l/ → /y/
'mrene'	[mrene]	[nene]	/mre/ → /ϕ/, /ne/ → /nene/
'kenek'	[kənæ?]	[ənæ?]	/k/ → /ϕ/

The table above, shown that the subject did some alternations like deleting the initial consonant, cluster or syllable, to simplify the word. For instance, she deletes the sound [d], [n̄], [n], [mre], and [k]. While, she also changed the sound [l] to [ŋ], where the vowel follows to nasalized. So, it includes of typically of phonetically conditioned alternations. On the other hand, the subject also did reduplication in the word 'mrene' where the last CV /ne/ is reduplicated to [nene].

In the next conversation, is about family members. The writer found the alternations by the subject like deletion of initial consonant, cluster consonant and substitution:

Table 4.7 Table of Alternations in the conversation 8

Words and its transcription		Subject's pronunciation	Phonological alternation
'ndelok'	[ndələ?]	[əyɔ?]	/nd/ → /ϕ/, /l/ → /ϕ/
'tahu'	[tahu]	[ahu]	/t/ → /ϕ/
'goreng'	[gɔræŋ]	[gɔyæŋ]	/r/ → /y/
'ŋompol'	[ŋompol]	[ompon]	/ŋ/ → /ϕ/, /l/ → /ŋ/
'kulit'	[kulit]	[uyit]	/k/ → /ϕ/, /l/ → /y/
'mateng'	[matəŋ]	[atəŋ]	/m/ → /ϕ/

From the table above, the subject did the alternation of deleting the initial consonant like [l], [t], [ŋ], [k], and [m], while she also deleted the cluster consonant [nd] in the word 'ndelok' and substituted the sound [l] and [r] to [y] sound where the subject in the age 21 month old has not produce these sound yet. In the word 'ngompol' the subject did nasalized where vocal followed by a nasal consonant, the vowel is nasalized, called phonetically conditioned alternations.

For the next conversation, the writer and the subject made a conversation with topic of make up:

Table 4.8 Table of Alternations in the conversation 9

Words and its transcription		Subject's pronunciation	Phonological alternation
'wedak'	[wədəʔ]	[daʔ]	/wə/ → /ϕ/
'ngoco'	[ŋɔcɔ]	[ɔcɔ]	/ŋ/ → /ϕ/
'sepatu'	[səpatu]	[patu]	/sə/ → /ϕ/
'kebayak'	[kəbayaʔ]	[bayaʔ]	/kə/ → /ϕ/

In the table above, the subject only did some alternations of deleting of initial consonant [ŋ] and syllable [wə], [sə], [kə]. In the next conversation analysis, the writer found that the subject only did the deletion and substitution in doing the alternation:

Table 4.9 Table of Alternations in the conversation 10

Words and its transcription		Subject's pronunciation	Phonological alternation
'jaket'	[jakæt]	[atæt]	/j/ → /ϕ/, /k/ → /t/
'montor'	[mɔntɔr]	[ɔtɔŋ]	/m/ → /ϕ/, /n/ → /ϕ/
'moleh'	[molɛh]	[oyeh]	/m/ → /ϕ/, /l/ → /y/
'apotek'	[apotek]	[teʔ]	/apɔ/ → ϕ

In that table, the subject did some alternation to simplify the difficult sound of word. For instance, deleted the initial consonant [j], [m], and [apo]. While she also substitute the sound [k] to [t], [l] to [y], and sound [n] is deleted in the middle of word 'montor'. She often did it because of the child's biological growth that the subject has not produce the sound yet.

In the last conversation with the subject, the writer found:

Table 4.10 Table of Alternations in the conversation 11

Words and its transcription		Subject's pronunciation	Phonological alternation
'bir'	[bi:r]	[bi:]	/r/ → /φ/
'susu'	[susu]	[cucu]	/s/ → /c/
'nangdi'	[naŋdi]	[andi]	/n/ → /φ/, /ŋ/ → /n/

In the table above, the subject did some alternation like deleting of initial consonant of the sound [r], because in the age of 21 month old, children have not produce that sound yet (Dardjowodjodo, 2000). In the word 'susu', the subject alternated to substitute the sound [s] to [c]. While, in the word 'nangdi' the subject did two alternations of changing the sound [n] to be deleted and the sound [ŋ] is substituted by the sound [n].

So, from the conversation that the writer had done with the subject, the writer found many alternations that were done by the subject. While for typically of the phonological alternations, the writer only found one out of three of typically phonological alternations, is phonetically conditioned alternation. Since the phonological acquisition that produced by the subject only being conditioned purely by the phonetic environment.

4.1.2 PHONOLOGICAL PROCESSES

Phonological process is considerable development in phonological ability to produce adult sounds and combine into more complex phonological structures (Ingram cited in Fletcher and Garman, 1986). These process occurred in the age 1;6 to 4 year old. From the observation that was done by the writer, she found some phonological processes which occurred in the age of 21 month old Javanese child as proposed by Ingram's theory. Beside, the writer also found the phonological process which did not occur in the Ingram's theory. The data presentation and analysis of the subject's speech processes would be presented in these tables bellow based on the classification:

4.1.2.1 SUBSTITUTION PROCESS

In this process, sound changes in which one sound class replaces another class of sound. The process of substitution in Ingram's theory is divided into five sub processes, and below are the processes that occurred in the subject's words production:

Table 4.11 Table of Substitution Process-Stopping

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'tivi'	[ti:vi:]	[ti:pi:]	/v/ → /p/	[p] sound replaces [v] sound	Stopping
'foto'	[foto]	[poto]	/f/ → /p/	[p] sound replaces [f] sound	

The table above shows us that the process of substitution, fricatives [f, v,] are substituted by a stop consonant [p], called stopping.

In her analysis, the writer found two stopping processes which occurred in the subject's speech. The first is the substitution of fricative sound [v] is alternated to the sound [p] which occurred in the word 'tivi'. In pronouncing [ti:vi:], the subject replaces [v] sound with [p] sound, and then it becomes [ti:pi:]. The second example is substitution [f] into [p] which occurred in the pronunciation of the word 'foto'. The subject pronounces it as [poto] instead of [foto]. Here, the sound [f] was alternated to [p], which result from phonological process, called stopping.

In the phonological acquisition, children often do some substitution of sound because they avoid from their difficulty of sound (Smith in Lust and Foley, 2004). In the order of phonological development, in the age of 21 month old children have not acquired the sound [f] and [v] yet (Dardjowodjojo, 2000). Therefore, the subject substituted the sound to another class of sound.

Another process of substitution is shown in the table below:

Table 4.12 Table of Substitution Process-Fronting

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'kung'	[kuŋ]	[tuŋ]	/k/ → /t/	[t] sound substitutes [k] sound	Fronting
'gak'	[gaʔ]	[daʔ]	/g/ → /d/	[d] sound replaces [k] sound	

The process shown above, is the substitution of velar [k, g], with alveolar [t, d], called fronting.

In this process the writer found two processes that occurred in the subject's speech. First, the sound [k] is alternated to [t] sound in the first word.

The subject substitutes the sound [k] with alveolar one [t] in the word [kuŋ], then it becomes [tuŋ]. Next is the substitution of [g] sound with [d] sound. The sound [g] is alternated to [d], which occurred in the word 'gak'. It is pronounced as [daʔ] by the subject instead of [gaʔ]. The alternation of substituting the sound [k] to [t] and [g] to [d] which result from phonological process, called fronting.

In the sound [k], the writer ever saw the subject pronounces it in the word 'bokong' but then she deletes the initial consonant of [b] sound, then it becomes [ɔkɔŋ], it might be the sound [k] is followed by the same vowel [ɔ] in before and after velar sound [k]. So the subject can produce sound [k], while it might be difficult for the subject to pronounce [k] in the initial word, and it might be influenced by the back-high vowel [u], therefore she changed the sound [k] to the sound [t] in the initial of word. While, in the word 'gak', the subject sometimes could produce it, yet sometimes she also replaced the sound [g] into [d] sound, like in the word 'gak'. While the subject sometimes can produce the velar sound [g] when [g] is followed by a back vowel [u], which occurred in the word 'guk-guk' [gu:ʔ-gu:ʔ]. The writer assumes that the subject could not produce velar sound [g] when it followed by front vowel [a]. So, the subject changes it to [d] to simplify the adult's word (Smith in Lust and Foley, 2004). Therefore, in this process the subject alternated to substitute the sound [k] to [t] and the sound [g] to [d] which results from phonological process, called fronting.

Table 4.13 Table of Substitution Process – Gliding

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'melok'	[mælək]	[æyək]	/m/→/ɸ/, /l/→/y/	[y] sound substitutes [l] sound	Gliding
'goreng'	[gɔræŋ]	[gɔyæŋ]	/r/ → /y/	[y] sound replaces [r] sound	

The third process in substitution process is the replacement of a glide [w, y] for a liquid sound [l, r]. The writer found three alternations that occurred in the subject production. First, the sound [m] for the initial consonant is deleted, and then the sound [l] is substituted to the sound [y], in the word 'melok'. The subject pronounces [æyək] instead of [mælək]. Second, the sound [r] is substituted to the sound [y], in the word 'goreng'. The subject pronounces [gɔyæŋ] instead of [gɔræŋ]. Here, the sound [l] is substituted by the sound [y], and the sound [r] is also alternated to [y], because in the age of 21 month old, children have acquired the sound [l] and [r] yet in the phonological development (Dardjowidjojo, 2000). Therefore, the subject alternated to simplify the sound of word in which result from the phonological process, called gliding.

Table 4.14 table of Substitution Process – Vowel neutralization

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'Maneh'	[manæh]	[ənæh]	/m/→/ɸ/, /a/ → /ə/	[ə] sound substitutes [a] sound	Vowel neutralization

The last process in substitution process is the substitution of vowel, namely vowel neutralization. It occurs when a child tends to change vowel into

oral and often centralized vowel. Here, the writer found from the subject's word that [a] sound in the word 'maneh' is replaced into central vowel [ə]. The sound [a] is alternated to [ə]. So, the pronunciation is changed from [manəh] into [ənəh]. Here, the subject alternates to substitute the vowel [a] into [ə]. Before that, the sound [m] which occurs in the initial of word is deleted by the subject, because in the age of 21 month old, children often do some interest to delete the initial consonant or syllable (Ingram in Fletcher and Garman, 1986). Therefore, though the children at the age of 21 month old have produce all vowels, yet they still doing an alternation to simplify the adult's word, namely vowel neutralization.

4.1.2.2 ASSIMILATORY PROCESS

In this process, sound changes in which one sound or syllable influences another sound or syllable. Assimilatory process consists of three sub processes: voicing, consonant harmony, and progressive vowel assimilation. And this table showed the type of assimilatory process which the writer found in her analysis.

Table 4.15 Table of Assimilatory process – velar assimilation

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'gol'	[gol]	[goŋ]	/l/ → /ŋ/	[l] sound assimilate to [ŋ] sound	Velar assimilation

In her analysis, the writer only found one of assimilatory process in her data that is the process of consonant harmony. Consonant harmony is divided into three patterns: velar assimilation, labial assimilation, and denasalization. The one

shown in the table is the process of velar assimilation. The table above explains that the apical consonant [l] assimilate into neighbouring velar assimilation [ŋ] since it is influenced by the neighbouring velar consonant [g]. The assimilation of apical consonant [l] is changed into [ŋ] which occurred in the word 'gol'. Since that word began with velar consonant [g], the final consonant is assimilated into velar consonant [ŋ]. It can be seen from the pronunciation of the word 'gol' which is changed from the word [gol] into [goŋ]. Beside, the subject also has not produce the sound [l] in the phonological development. Therefore, the sound [l] is alternated to [ŋ] which result from phonological process, called velar assimilation. In phonological alternation, this type is also called phonetically conditioned alternations.

4.1.2.3 SYLLABLE STRUCTURE PROCESS

In this process, the sound changes that cause sounds or syllable to be reduced, deleted or repeated. Syllable structure is divided into four sub processes: cluster reduction, deletion of final consonants, deletion of unstressed syllable, and reduplication. And bellow are the syllable structure process that the writer found in her data:

Table 4.16 Table of Syllable structure process – Deletion of final consonant

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'bir'	[bi:r]	[bi:]	/r/ → /ϕ/	Final [r] is deleted	Deletion of final consonant

From the data that the writer analyzed, deletion of final consonant is also occurred in the word production of the subject. It was pronounced when the

subject saw the doll of bear, she said [bi:] instead of [bi:r]. So, the subject deleted the final consonant [r]. According to Dardjowidjojo (2000), children at the age of 21 month old, they have not produce the sound [r] yet, although this sound occur in the initial, middle, or final of consonant. Therefore, the subject did this deletion of final consonant.

Table 4.17 Table of Syllable structure process – Deletion of unstressed Syllables

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'sedotan'	[sədɔtan]	[dɔtan]	/sə/ → /ϕ/	[sə] syllable is deleted	Deletion of unstressed Syllables
'jerapa'	[jərapa]	[yapa]	/jə/ → /ϕ /, /r/ → /y/	[jə] syllable is deleted	
'rokok'	[rɔkɔʔ]	[kɔʔ]	/rɔ/ → /ϕ /	[rɔ] syllable is deleted	
'wedak'	[wədəʔ]	[daʔ]	/wə/ → /ϕ/	[wə] syllable is deleted	

Deletion of unstressed syllables is the most often process that occurred in the subject speech. The writer found that the subject often deleting the unstressed syllable to pronounce words. From the table above, it showed that the subject deletes the first syllable [sə] which unstressed, and pronounces it becomes [dɔtan] instead of [sədɔtan]. In saying the word 'jerapa', the subject deletes the first syllable [jə] which unstressed, and pronounces it becomes [yapa], she also substitutes [r] sound into [y] sound instead of [jərapa]. While in the word 'rokok', the subject deletes the first syllable [rɔ] which unstressed, and pronounces it becomes [kɔʔ] instead of [rɔkɔʔ]. And she also deletes the first syllable of [wə] which unstressed in the word 'wedak'. Here, the subject alternates to reduce

unstressed syllable, such as [sə], [jə], [rə], and [wə] because most children have tendency to simplify syllable structure, the direction is toward a basic CV syllable (Ingram in Fletcher and Garman, 1986), which result from phonological process, called deletion of unstressed syllable.

Table 4.18 Table of Syllable structure process – Reduplication

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'mrono'	[mrɔnɔ]	[nɔnɔ]	/mrɔ/→/ɸ/, /nɔ/→/nɔnɔ/	Reduplicates [nɔ] syllable	Reduplicati on
'mrene'	[mrene]	[nene]	/mre/→/ɸ/, /ne/→/nene/	Reduplicates [ne] syllable	
'kerupuk'	[kəru:puʔ]	[pupuʔ]	/kə/→/ɸ/, /ru/→/ɸ/, /pu/→/pupu/	Reduplicates [pu] syllable	
'dewe'	[dewe]	[wewe]	/we/→/wewe/	Reduplicates [we] syllable	

The last sub processes of syllable structure process, called reduplication. The subject simplifies word by repeating the last syllable. The kind or process of reduplication can be seen in the table above. In the word 'mrono', the subject reduplicates [nɔ] which is syllable, and pronounced it becomes [nɔnɔ] instead of [mrɔnɔ], the subject also deleted the unstressed syllable of [mre]. Next, in saying the word 'mrene', the subject reduplicates [ne] which is syllable and pronounced it becomes [nene] instead of [mrene], in this word the subject also did deletion of unstressed syllable of [mre]. Another example of reduplication the writer found in her analysis is the pronunciation of the word 'kerupuk'. By repeating the syllable [pu], then it becomes [pupuʔ] instead of [kəru:puʔ], in this word the subject also deleted two syllables that occurred before the last syllable of [puʔ], those are [kə]

and [ru]. The last example was occurred in the word 'dewe'. The subject repeated the syllable [we], and pronounces it becomes [wewe] instead of [dewe], beside that the subject also did a deletion of syllable [de]. Here, the subject alternates to reduplicate the last syllable of the word, such as [nɔ] for [nɔnɔ] instead of [mrɔnɔ], [ne] for [nene] instead of [mrene], [pu] for [pupu?] instead of [kəru:pu?], and [we] for [wewe] instead of [dewe] which result from phonological process, called reduplication. On the other hand, the subject also did some deletion of syllables before reduplicating the last syllable of the word.

4.1.3 Other Variations

The writer also found some processes which do not occur in the Ingram's theory. The first one is the substitution of the sound [r] into [ŋ]. The subject has not produced the retroflex [ɾ], and she often substituted into velar [ŋ]. For example in the table below:

Table 4.19 Table of Substitution – Nasalization

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'montor'	[mɔntɔr]	[ɔtɔŋ]	/m/→/ɸ/, /n/→/ɸ/, /r/ → /ŋ/	[ŋ] sound substitutes [r] sound	Nasalization
'ajar'	[ajar]	[aŋaŋ]	/r/ → /ŋ/	[ŋ] sound substitutes [r] sound	
'door'	[dɔ:r]	[dɔ:ŋ]	/r/ → /ŋ/	[ŋ] sound substitutes [r] sound	

The first process is the retroflex [r] which tends to be changed with a velar [ŋ]. The subject changes the retroflex [r] with nasal [ŋ], and pronounces it as [ɔtɔŋ], instead of [mɔntɔr]. In this word the subject also did deletion of initial consonant [m], and deletion the sound [ŋ] which comes in the middle of word. When the subject heard the word 'kurang ajar', the subject imitated to say [ajan] instead of [ajar]. The sound [r] is alternated to [ŋ], which the writer assumed a pattern of this process only happened when [r] exist at the end of the word. While the next word, the sound [r] changed into [ŋ] which occurred in the word 'door'. It is pronounced as [dɔ:ŋ] by the subject instead of [dɔ:r]. Dardjowidjojo (2000) stated that in the age of one to two year old children could not produce the sound [r], in every place of word. She always replaces the sound [r] to another sound. Even though, it occurred in the initial, middle or final word, the subject always substitutes the sound [r] to another sound.

The writer assumed that in the phonological acquisition, the subject will simplify to avoid the sound [r], and then the sound of the word also will change (Smith in Lust and Foley, 2004).

The second substitution that did not belong to Ingram's theory is the substitution of the fricative [s] to alveolar [c]. For example in the table below:

Table 4.20 Table of Substitution - Palatalization

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'susu'	[su:su:]	[cu:cu:]	/s/ → /c/	[ŋ] sound substitutes [r] sound	Palatalization
'bakso'	[ba?so]	[aco]	/b/ → /ɸ/, /ʔ/ → /ɸ/, /s/	[ŋ] sound substitutes [r]	

			→ /c/	sound	
'hasan'	[hasan]	[acan]	/h/→/φ/, /s/ → /c/	[ŋ] sound substitutes [r] sound	

In this process, the subject tends to change the sound [s] into [c] in the first and in the middle of a word, while she is able to produce the sound [s] in the end of a word, such as in the word 'wes', 'bis', and the other word. Yet, the subject still got difficulty in pronouncing the word [s] in the first and in the middle of the word. For example, in the word 'susu', the subject tends to substitute the sound [s] into [c] sound, and then it becomes [cu:cu:]. It is also the same in the word 'bakso', and 'hasan'. While, in the word 'bakso', the subject did three alternations where the subject deleted the initial of consonant [b], then she deleted the glottal sound [ʔ] where occurred in the middle of word, then she substituted the sound [s] to [c]. In the word 'hasan', the subject also did two alternations where she deleted the initial of consonant [h], then she substituted the sound [s] to [c] sound. Therefore, in the initial and middle word, the subject alternates the sound [s] into [c].

In the phonological development of children in the age of 21 month old, Dardjowidjojo (2000) stated that in that age children only occurred the sound [s] in the last of word.

Next process is deletion of initial consonant. The subject often eliminates consonants which occur at the beginning of a word. For example in the table below:

Table 4.21 Table of Deletion of Initial Consonant

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'jaket'	[jatæt]	[atæt]	/j/ → /∅/	[j] sound is deleted	Deletion of Initial Consonant
'kuping'	[kupɪŋ]	[upɪŋ]	/k/ → /∅/	[k] sound is deleted	
'rambut'	[rambut]	[ambut]	/r/ → /∅/	[r] sound is deleted	
'payung'	[payuŋ]	[ayuŋ]	/p/ → /∅/	[p] sound is deleted	
'sewu'	[sæwu]	[æwu]	/s/ → /∅/	[s] sound is deleted	
'lila'	[lila]	[iya]	/l/ → /∅/, /l/ → /y/	[l] sound is deleted	
'numpak'	[numpa?]	[umpa?]	/n/ → /∅/	[n] sound is deleted	
'ngamen'	[ŋamæn]	[amæn]	/ŋ/ → /∅/	[ŋ] sound is deleted	
'tahu'	[tahu:]	[ahu:]	/t/ → /∅/	[t] sound is deleted	
'dewi'	[dewi:]	[ewi:]	/d/ → /∅/	[d] sound is deleted	

In this process, there is a tendency to eliminate all consonants which occurred at the beginning of a word. The writer found that bilabial sounds [b], [p], [m]; labiodental [w]; alveolar [t], [d], [s], [n], [l], [r]; palatal [ç], [j]; velar [k], [ŋ]; glottal [h]. The subject feels difficulty to produce those sounds at the beginning of the word. For example in the word 'lila', the subject calls her name only by saying [iya], in this word the subject also substitutes [l] sound like the previous analysis of gliding. The same as the word 'lila' the subject also reduced the consonant at the beginning of the words like 'jaket', 'kuping', 'rambut', 'payung', 'sewu',

'bakso', 'melok', 'numpak', 'ngamen', 'tahu', 'dewi', 'widy', 'coklat', 'mateng' even her own uncle 'hasan'. Therefore, this process is different with the process that proposed by Ingram, because the subject only reduces the first consonant not to deletes the syllable of unstressed consonant.

This process often occurred in the subject speech, because the child has interest to simplify the adult's speech by deleting the initial of consonant.

The third is the deletion of initial cluster consonant. In the Ingram's theory there is a cluster reduction, where a consonant cluster is reduced tend to a single consonant. While the deletion of initial cluster consonant, is deleting a cluster consonant when it comes at the beginning of a word. For example in the table below:

Table 4.22 Table of Deletion of Initial Cluster Consonant

Words and its transcription		Lyla's speech	Alternation	Process	Phonological process
'mlebu'	[mləbu:]	[əbu:]	/ml/ → /ɸ/	[ml] sound is deleted	Deletion of Initial Cluster Consonant
'ndelok'	[ndəyɔʔ]	[eyɔʔ]	/nd/ → /ɸ/, /l/ → /y/	[nd] sound is deleted	
'klengkeng'	[klæŋkæŋ]	[æŋkæŋ]	/kl/ → /ɸ/	[kl] sound is deleted	

In this process, it seems like the process of consonant cluster reduction, which tends to reduce one consonant then it becomes a single consonant. Yet, when the cluster consonant occurs at the beginning of a word, the subject tends to reduce the cluster consonant. So, when the subject got difficulty with cluster consonants [ml], [nd], and [kl] which come at the beginning of a word, she alternates to delete it. For example in the word 'mlebu', it becomes [əbu], and for

the word 'ndelok' then it becomes [əyoʔ]. In the word 'ndelok', the subject did two alternations where the cluster consonant is deleted, and the sound [l] was substituted to [y] sound. The subject also reduces a cluster [kl] in the word 'klengkeng', and then it becomes [æŋkæŋ]. Therefore, it is different with the process of consonant cluster reduction, because in this process, the subject deletes all of the clusters then it is called deletion of initial cluster consonant.

4.2. DISCUSSION OF FINDINGS

In this sub chapter, the writer would like to discuss about the findings of her analysis that she found in the previous sub chapter. The discussion includes the presentation of pattern that may undergo the phonological alternation and process which occur in the previous subchapter. The writer also includes some findings which are not mentioned in the theory of phonological process proposed by Ingram.

In Lyla's phonological development, there are more than sixty alternations that produced by the subject. In the age of 21 month, children still have limited consonants to produce like adult's word. Therefore, the subject did many alternations to simplify the adult's speech in her phonological acquisition. From those alternations, the writer only found one types of phonological alternation that proposed by Davenport and Hannahs (2005), that is phonetically conditioned alternations. Since the condition of the alternation is purely influenced only by the phonetic environment. The different of the language English and Javanese also influenced the absence of other phonological alternations.

In the phonological processes, as suggested by Ingram. There were only eight processes that produced by Lyla differently from the expected forms, that can be classified into substitution process: stopping, fronting, gliding, and vowel neutralization. The sub type of substitution process which did not occur in the subject's speech was vocalization process. For the assimilation process, there was only one process which occurred in the subject's speech, which was velar assimilation. However, the sub types of assimilation process, those are: voicing, labial assimilation, denasalization, and progressive vowel assimilation did not occur in the subject's speech. For the syllable structure process, there were three sub processes which occurred in the subject's speech, like deletion of final consonant, deletion of unstressed syllable and reduplication. In the syllable structure process, consonant of cluster reduction did not occur in the subject's speech.

The writer also found other variations which are not mentioned in the Ingram phonological process theory. There are four processes which were occurred in the subject's speech, like nasalization, palatalization, deletion of initial consonant, and deletion of initial cluster consonant.

The possible reason of the absence of some sub types of phonological alternations and processes, and the finding of other variations of phonological process which are not included in Ingram's phonological processes is probably the different language structure of Javanese and English. Therefore, not all types of alternation and sub types of processes occur in the subject's speech.

From the observation of phonological alternation and process of 21 month old Javanese child, it can be seen that the subject's speech was mostly in form of one-word utterances. It is very rarely to find more than one word utterance in the subject's speech. So, based on the observation that had been done by the writer, she assumed that the subject had acquired consonants and vowels bellow:

Table 4.15 Table of Lyla's Consonants

Manner of Articulation	Voiced (+)/Voiceless (-)	Place of articulation					
		Bilabilal	Labiodentals	Alveolar	palatal	Velar	Glottal
Stop	(-) (+)	p b		t d	c (j)	(k) g	?
Fricative	(-) (+)			(s)			(h)
Approximan	(+)		w		y		
Lateral	(+)						
Nasal	(+)	m		n		ŋ	

4.1 Diagram of Lyla's vowels

	Front	Central	Back
High	[i:] [ɪ]		[u:] [ʊ]
Mid	[e] [æ]	[ə]	[o] [ɔ]
Low	[a]		

From those table and diagram, it can be seen that the subject had been able to produce all Javanese vowels, and for the consonants however there were seven sounds that the subject had not yet produced until the last of April 2011. The consonant sound /l/, /r/, /ñ/, /f/, /v/, /z/, and /x/ were never occurred in the subject speech. The possible cause for this condition might be the child's biological growth, which was still disabled the subject from producing those sounds.

CHAPTER V

CONCLUSION

