# SIMPLIFICATION IN PHONOLOGICAL ACQUISITION
## (A CASE STUDY OF ATALA)

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**ABSTRACT**

This study aims to determine a child's language acquisition at the phonological level and to describe its simplification of sounds. This research is a case study applying a qualitative descriptive approach. The subject observed is Atala, a boy aged 28 months. The data are obtained by recording and direct observation approximately one month. The data are transcribed and then identified by comparing the child's pronunciation with adult mode in order to see the simplification of the sounds in the child's speech. Based on the Ingram's theory, 34 data presented shows the simplifications of sounds occur in the form of substitution consisting of stopping (6), fronting (9), and gliding (5); assimilation containing consonant harmony (3) and vowel harmony (2); while syllable structure consisting of last consonant reduction (2) and initial onset reduction (7). It is found that the simplifications of sounds commonly happen on the substitution covering fronting and stopping then syllable structure covering initial onset reduction. It is due to an indication that the child is imperfect to actively move the articulators in appropriate place or manner of articulation especially in producing some fairly complex sounds. There are some sounds cannot be produced in this case, such as sounds [r], [s], and [g], the subject obviously simplifies these sounds when he has to pronounce them in any positions of a word. Meanwhile he has been able to produce singly vowels and consonant [a], [i], [u], [e], [o], [p], [b], [t], [d], [m], [n], [ɲ], [ŋ], [w], [y], [j], [c], [l], [h], [ʔ], but sometimes simplifies them in certain position of the word.

**Keywords: simplification, child phonological acquisition, phonological process**

*ABSTRAK*

*Penelitian ini bertujuan untuk mengetahui bagaimana pemerolehan bahasa anak pada aspek fonologi serta menggambarkan penyederhanaan bunyi pada proses tersebut. Penelitian ini adalah studi kasus yang menggunakan pendekatan deskriptif kualitatif. Subjek penelitian adalah Atala, anak berusia 28 bulan. Data diperoleh melalui teknik rekam dan libat cakap selama kurang lebih satu bulan. Rekaman percakapan*

*ditranskripsi dan kemudian diidentifikasi dengan cara membandingkan pengucapan anak dengan pengucapan orang dewasa guna melihat penyederhanaan bunyi dalam ujaran anak. Berdasarkan teori Ingram, 34 data yang dihadirkan menggambarkan penyederhanaan bunyi berupa substitusi seperti penghentian (6), pengedepanan (9), dan peluncuran (5); kemudian asimilasi berupa keharmonisan konsonan (3), keharmonisan vocal (2); selanjutnya struktur suku kata berupa pengguguran konsonan akhir (2) dan pengguguran konsonan awal (7). Bentuk penyederhanaan bunyi yang cenderung terjadi pada kasus Atala adalah subtitusi bunyi, khususnya pengedepanan dan penghentian, kemudian struktur suku kata berupa pengguguran konsonan awal. Hal ini disebabkan adanya indikasi ketidaksempurnaan anak dalam memposisikan alat ucap pada tempat dan cara artikulasi yang tepat terutama ketika memproduksi bunyi yang cukup kompleks. Bunyi yang belum mampu diucapkan Atala adalah bunyi [r], [s], dan [g, sementara bunyi yang sudah mampu diproduksi meskipun kadang-kadang mengalami penyederhanaan pada posisi tertentu dalam suatu kata adalah bunyi [a], [i], [u], [e], [o], [p],[b],[t], [d], [m],[n], [ɲ],[ŋ], [w], [y], [j], [c], [l], [h], [ʔ].*

**Kata kunci: pemerolehan bahasa pertama, fonologi, penyederhanaan bunyi**

## INTRODUCTION

### Research Background

Linguistic input is obviously a crucial and important thing for children to construct their language as a part of the first language acquisition process. As cited in Chaer (2009), Ingram (1989) explained that the first language acquisition in children occurred slowly and greatly affected by listening inputs. Fromkin, Rodman and Hyams (2003: 534) cited in Ulaimah et.al (2016) state that "No one teaches a child the rules of grammar. Each child constructs the rules of her language alone, generalizing rules from the linguistic input she receives." It shows how important linguistic input for children in obtaining their first language. The linguistic input might be found in their circumstance or surroundings which constructs indirectly their language ability. It is also in harmony with research conducted by Suardi et al. (2019) who said that environmental factors affect language acquisition in children in phonological aspects, especially family. This is evidenced by the enormous number of vocabulary words from family and surroundings. (cited in Trisna Dewi, 2020).

In the first language acquisition, especially in the phonological aspect, Ingram (1989) said that the pronunciation of children always changes progressively until the children reach

standardized speech. It is seen on the case of Atala, who is able to speak one to two words in Indonesian language, but it is found that some sounds are not properly pronounced even though he has already tried to imitate the adult's vocalization.

Based on Atala's case in the imperfect pronunciation of certain vocabularies found in a daily conversation, there is an indication that there is a simplification in sounds in which the child has not yet reached perfection in the stage of acquiring language sounds. Simplification is a consideration of children to make errors in producing sounds. Yule (2010) cited in Ulaimah et.al (2016) said the simplification in sounds is known as a phonological process. It mentioned that the children had articulation problems when they produced a word and tried to simplify the words which are difficult to pronounce. Some simplifications in sounds on Atala's case can be seen on samples such as sound [r] which cannot be pronounced correctly so that it becomes [l], the inaccuracy in pronouncing certain sounds such as sound [s], [c], [j] at the beginning of the word, and omission of certain sounds in certain position of the words.

Supported by that case, a new research discussing simplification in Indonesian language was decided to do. Rini (2000) said that research in first language acquisition in Indonesian language, especially about simplification, is less commonly conducted, researchers tend to use English as the object. However, a latest statement taken from the previous researcher, Trisnadewi (2020), said that many people do research on acquisitions language up to now. Thus, research on language acquisition, especially case of children simplification in Indonesian language might be enough to be a useful and interesting research to continue.

Furthermore, to support this aim, there are several previous studies are used to give guideline to conduct this research. Two of them are chosen randomly to be presented here. First research comes from Adnyani and Pastika (2016) who investigated phonological development in a case study on a child raised in bilingual simultaneously, Indonesian and Germanic. They took 8 months to observe the child from 12 months to 20 months. They found that every month new phonemes existed, and the child had not yet acquired certain

sounds belonging to Germanic and Indonesian sounds. The sounds were either substituted by other sounds or were deleted through phonological processes. Next study is taken from Yanti (2016) who discussed about vowel and consonant acquisition in a child aged 2 years to 2 years 6 months and analyzed what factors affecting phonology acquisition of the child. She found that the phonological acquisition in the early age is significantly affected by the biological aspect and circumstance aspect. The roles or stimulus of the family or society are very crucial to affect the phonological acquisition of the child.

After learning some previous studies above, finally, it is decided to conduct a latest research related to the same topic, phonological acquisition in the early age. Then it is determined to investigate the case on Atala as the subject observed. It is caused by the fact that there is an indication of simplification in certain sounds while producing words.

**Research Questions**

1. How is the language acquisition of a child at the phonological aspect in the case on

   Atala?

2. How is the child simplification in sounds in the case on Atala?

**Research Aims**

1. To determine the language acquisition of a child at the phonological aspect in the

   case on Atala.

2. To describe the child simplification in sounds taken from the case on Atala.

**Literature Review**

**Phonological Process**

As cited in Adnyani and Pastika (2016), Ingram (1981) mentioned that simplification of phonological acquisition in a child language divided into three types of phonological processes where the child commonly simplified the adult mode covering substitution, assimilation and syllable structures. It is explained more comprehensively in Chaer (2009) describing substitution process is classified into Fronting, Stopping, Vowel neutralization, Gliding, and Vocalization. The assimilation process is categorized into voice harmony, consonant harmony, and vowel harmony. Meanwhile, the syllable structure processes are grouped into cluster reduction, removal of final consonant, elimination of unvoiced syllable, and reduplication.

1. Substitution Process

It is said that Substitution sounds means the child cannot yet articulate certain sounds and change it with other sounds.

1.1 Stopping

Stopping is a phonological process in which fricatives and occasionally other sounds are replaced by stop consonants. It is seen on in the case of Indonesian word production, the fricative sound [s], at the beginning of word were replaced by stop sounds [t] or [c].

1.2 fronting

Fronting is a phonological process where children tend to replace velar and palatal consonants with alveolar consonants.  It is also illustrated in the case of Indonesian word production, the velar [k] and [g], in the final position or in the middle position of word were replaced by alveolar sounds [t] or [d].

### 1.3 Gliding

Gliding is a phonological process in which the child tends to replace the liquid consonant sounds [l], [r] with glide sounds [w].

### 1.4. vocalization

vocalization is a phonological process in which the child tends to replace one syllable with a vowel (mainly occurs in English)

### 1.5 vowel neutralization

vowel neutralization is a phonological process where children tend to replace vowel sounds into center vowel.

In addition, Adnyana and Pastika (2016) illustrates another substitution in phonological process of children describing certain sounds of oral sounds in certain positions are replaced into nasal sounds, such as [r] and [l] becoming [n] at the initial position of a word. They found that at the early stage of their language development, it is easier for a child to produce the alveolar nasal [n], as in creating [n] the child only works with the tip of the tongue touching the alveolar ridge, letting the air pass through the nasal cavity.

## 2. Assimilation

The assimilation process, namely the tendency to assimilate one segment to another segment in a word;

### 2.1 Voicing

Voicing is a phonological process in which voiceless consonant sound tends to be voiced if it appears in front of a vowel. While it changes to be voiceless when it appears at the end of a syllable.

## 2.2 Consonant Harmony

Consonant Harmony is a phonological process where consonant sound tends to assimilate another consonant. This process frequently occurs in alveolar [d] to velar [g], bilabial [b]. In addition, this process does not occur only in place of articulation, but also occur in manner of articulation as cited in Adnyana and Pastika (2016) that they call as *nasal harmony* where labial stop [p] & [b] assimilate with labial nasal [m].

## 2.3 Progressive Vowel Assimilation

Progressive Vowel Assimilation is a phonological process in which an unstressed vowel is assimilated with a stressed vowel that appears in front or behind that. Meanwhile it depends on the position not the phonemes.

## 3. Syllable Structure

Syllable Structure is a tendency of children to simplify structure of syllables by deletion.

## 3.1 Cluster Reduction

Cluster Reduction is a phonological process that occurs when a consonant cluster is reduced to one consonant only. It is illustrated as; CCVC into CVC.

## 3.2 Last Consonant Reduction

Last Consonant Reduction is a phonological process where constant in last structure syllables is omitted as CVC into CV.

## 3.3 Unstressed Syllable Reduction

Unstressed Syllable Reduction is a phonological process in which unstressed syllables are unpronounced if the preceding syllable is stressed syllable.

3.4 Reduplication

Reduplication is a phonological process where in a long word the CV syllable is repeated. This process was found in Trisnadewi (2020) which some reduplication case occurs aligning with Ingram's theory.

**Speech Sound**

Vinker (1986) in Hamann & Schmitz (2005) states that phonetics is concerned with how sounds are produced, transmitted and perceived. Phonology is concerned with how sounds function in relation to each other in a language. Produce language is producing sound that uses an articulator. The articulator covers speech organs that cover lips to diaphragm as air duct (lips - tongue - teeth - nasal cavity - oral cavity - pharynx - larynx - trachea - lungs - diaphragm). There are 4 places in which a sound can be modified they are; pharynx, oral cavity, lips and nasal cavity.

1. Consonants

Consonants are often classified by being given a so-called VPM-label. VPM stands for Voicing, Place, Manner. Voicing means that the vocal folds are used; if they are not, the sound is voiceless (note that vowels always imply the use of vocal folds). It is divided into voiced and voiceless. Simply, voiced consonants require the use of the vocal cords to produce their signature sounds; voiceless consonants do not. For instance [f] is voiceless as in few and [v] is voiced as in view.

2. Place of Articulation

Place of articulation is the place where the air flow will be more or less obstructed. Place consist of;

- Bilabial

  Bilabial sounds are produced when the lips are brought together. Examples are [p], which is voiceless, as in *pulang* or [b] and [m] which are voiced, as in *beli*, *mau*.

- Labiodental

  Labiodental sounds are made when the lower lip raises towards the upper front teeth. Examples are [f] *fana* and [v] *vokal*.

- Dental

  Dental sounds are produced by touching the upper front teeth with the tip of the tongue. Examples are [θ] *oath* (voiceless) and [ð] *clothe* (voiced). However these sounds do not exist in Bahasa.

- Alveolar

  Alveolar sounds are produced by raising the tip of the tongue towards the ridge that is right behind the upper front teeth, called the alveolar ridge. Examples are [t] in *mati* and [s] in *sayang* and [d] in *duduk*, [z] in *zebra,* [n] in *ngantuk*, [l] in *liar*, [r] in *turun*.

- Palato Alveolar

  Palato Alveolar sounds are made by raising the blade of the tongue towards the part of the palate just behind the alveolar ridge. Examples [ʃ] *pressure,* [tʃ] *batch* (voiceless) and [ʒ] pleasure, [dʒ] *badge* (voiced). Meanwhile in Indonesia the sound is [c] as in *cantik*, [ɲ] as in *punya* and [j] as in *jembatan.*

- Palatal

  Palatal sounds are very similar to palato alveolar ones, they are just produced further back towards the velum. The only palatal sound in English is [j] as in *yes, yellow, beauty, new* and it is voiced. Meanwhile in Indonesia is [y] as in *yang, ayam & ayah.*

● Velar

Velar sounds are produced by raising the back of the tongue towards the soft palate/velum. The sounds are [k] as in *kecil*, [g] as in *ga* & [ŋ] as in *burung*. Then [w] is a velar which is accompanied with lip rounding.

● Glottal

Glottal sounds are produced when the air passes through the glottis as it is narrowed, the sound is [h] as in *halo*.

3. Manner of Articulation

Manner of articulation has to do with the kind of obstruction the air meets on its way out, after it has passed the vocal folds. It is the way to produce sound in the articulator which is grouped in 6 manners.

● Plosive

Plosives are sounds in which there is a complete closure in the mouth, so that the air is blocked for a fraction of a second and then released with a small burst of sound, called a plosion (it sounds like a very small explosion). Plosives may be bilabial [p, b] as in *sapi*, *babi*, alveolar [t, d] *takut*, *donat*, velar [k, g] as in *kamu*, *ganti*.

● Fricative

Fricative has a closure which is not quite complete, means that the air is not blocked at any point, and therefore there is no plosion. On the other hand, the obstruction is big enough for the air to make a noise when it passes through it, because of the friction. This effect is similar to the wind whistling around the corner of a house. Fricatives may be labiodental [f] as in *foto* [v] as in *video*, dental [θ,ð] *breath*, *breathe*, alveolar [s] as in *sapu*, [z] as in *ziarah*, palato-alveolar [ʃ,ʒ] *nation*, *evasion*, and glottal [h] *hapus*.

● Affricate

Affricate is a combination of a plosive and a fricative. They begin with a complete closure, but instead of a plosion, they have a very slow release, moving backwards to a place where a friction can be heard (palato alveolar). The two English affricates are both palato alveolar, [tʃ] which is voiceless, *chin, rich*, and [dʒ] which is voiced, *gin, ridge*. Meanwhile in Indonesian affricate sounds represented by [c] as in *curang* and [j] as in *jajan.*

● Nasal

Nasal resembles plosives, except that there is a complete closure in the mouth, but as the velum is lowered the air can escape through the nasal cavity. Though most sounds are produced with the velum raised, the normal position for the velum is lowered, as this is the position for breathing. The sounds are [m] as in *minum,* [n] & [ŋ] as in *nangis,* [ɲ] as in *banyak.*

● Lateral

Lateral is produced when the air escapes around the sides of the tongue. The sounds is [l] as in *lihat, lalu & layar*

● Approximant

Approximant is produced where the tongue only approaches the roof of the mouth, so that there is not enough obstruction to create any friction. They are [r] as trill as in *rakus, robot*, [y] as in *ayo* and [w] as in *wanita & waktu.*

4. Vowel

Vowel classification concerned with tongue position which divided into part of the tongue involved consist of front [I, e, æ], central [ə] and back [ɑ, ɔ, u], and tongue height consist of high [I], middle [e,ə] and low [a]. According to Kridalaksana in Narson, 1999:36 (in Tasliati, 2011) states that monophthong is a single vowel sound that is formed with the quality of the speech apparatus (tongue) not changing from the beginning to the end of its

articulation in a syllable. A diphthong or double vowel has a characteristic when it is pronounced that the position of the tongue is different from one another. The differences are related to the height and lowness of the tongue, the part of the tongue that moves, and its structure (distance of the tongue from the palate). Whereas according to PUEBI Daring diphthong sounds in Indonesian consists of 4, they are: [ai] as in *pandai*, [au] as in *autodidak*, *harimau*, [ei] as in *geiser*, *survei*, [oi] as in *boikot*, *koboy*.

**RESEARCH METHOD**

Subject observed in this case is a male child aged 2 years specifically 28 months whose name is Rafadan Atala. Atala lives with his big family consisting of parents, grandparents, and siblings as Indonesian native speakers in Citayam, West Java. As stated before, adult people in his surroundings speak in Indonesian as a first language but they combine informal forms.

In order to conduct this study, descriptive qualitative is applied as the research method, while the technique of collecting data is interviewing and recording. The data are recording of child's conversation in natural situations about game, food, shopping, playing, so on with his sisters, cousins, parents, grandmother and relatives. The period of collecting data in this case is around a month which finally collected 100 short conversations in which each duration is 20 - 60 seconds. By the conversations, it collected hundred words then we identified 76 imperfectly words pronounced. Then, selected words are transcribed phonetically based on International Phonetic Alphabet (IPA) and compared with adult's pronunciations in order to see the simplification of sounds in child's speech. Next, the transcriptions are identified and analyzed to find out the simplification case of Subject observed (Atala). Each simplification in sounds is categorized in accordance with Ingram's theory. Last, the data are presented verbally and supported by table to make clearer explanations.

**ANALYSIS AND DISCUSSION**

According to the data collected around one month, it is found that some simplifications in sounds occurred in the case of Atala who is a 28-months child. The data show that the child simplifies the sounds when he pronounced certain words. The simplifications of the phonological process in Atala's case cover substitution, assimilation, and syllable structure process. Substitution process consists of stopping, fronting, and gliding; while the assimilation happens on consonant harmony and vowel harmony; the last syllable structure process occurs in last consonant reduction and initial onset reduction. Each process is described in more detail below.

**1. Stopping**

Table 1. Stopping

| No | Word | Adult's Pronunciation | Child's Pronunciation | Equivalent in English |
|----|------|----------------------|----------------------|----------------------|
| 1 | sapi | [sapi] | [tapi] | cow |
| 2 | sakit | [sakit] | [tatit] | sick |
| 3 | satu | [satu] | [tatu] | one |
| 4 | susu | [susu] | [tucu] | milk |
| 5 | bisa | [bisa] | [bita] | can |
| 6 | gosok | [gosok] | [otok] | rub/brush |

It can be seen on data table 1, by comparing child's pronunciation and adult's pronunciation, it describes fricative sound [s] is replaced by stop sound [t] at the beginning and in the middle of word. Although both sound [s] and [t] have similar place of articulation named alveolar, Atala cannot place the articulator in correct manner of articulation to produce the fricative sounds properly. Based on Atala's case, Stopping is commonly found as a form of simplification when this child tried to produce words containing fricative sound. It is caused by the fact that producing fricative sounds is more difficult rather than stop sound for

children. It is harmony with Verhar (2012) who explained that a child has to constrict the vocal tract by placing two articulators close to one another to create friction or fricative sound, while to produce stop sound, the child only needs to bring the lips closer to stop the airflow completely. Yanti (2016) also mentioned that the factor of simplification or phonological processes is inability of child articulatory caused by biological aspects. Thus, it can be the reason why substituting fricative with stop sound is less complex to produce.

## 2. Fronting

Table 2. Fronting

| No | Word | Adult's Pronunciation | Child's Pronunciation | Equivalent in English |
|----|------|----------------------|----------------------|----------------------|
| 1 | ikut | [i**k**ut] | [i**t**ut] | follow |
| 2 | aku | [a**k**u] | [a**t**u] | I / me |
| 3 | buka | [bu**k**a] | [bu**t**a] | open |
| 4 | bukain | [bu**k**ain] | [bu**t**ain] | open |
| 5 | bukan | [bu**k**an] | [bu**t**an] | no / not |
| 6 | ikan | [i**k**an] | [i**t**an] | fish |
| 7 | lagi | [la**g**i] | [la**d**ih] | more |
| 8 | gigi | [**g**i**g**i] | [**di**d**i**] | tooth |
| 9 | tiga | [ti**g**a] | [ti**d**a] | three |

Table 2 illustrates how the child substitutes certain sounds into another sound, this child substitutes velar and palatal consonants with alveolar consonants. This form, fronting, is the most common case of simplification which is found in subject observed. The velar sound [k] is replaced by the alveolar sound [t] at the middle of words, and velar sound [g] changes into alveolar sound [d] at the initial word and in the middle of words. The child gets a quite similar problem with the previous case, stopping, in which the child cannot produce certain sound because the complexity of speech sound mechanism itself.  Based on Verhar

(2012), the alveolar sound is produced by only being able to move the tip of the tongue up to alveolar ridge, while the palatal and velar sound are produced by using the blade and back of the tongue to reach velum and palate. It is indicated that the production of velar and palatal sound is more difficult than the alveolar sound for children in the early stage.

## 3. Gliding

**Table 3. Gliding**

| No | Word | Adult's Pronunciation | Child's Pronunciation | Equivalent in English |
|----|------|----------------------|----------------------|----------------------|
| 1 | burung | [buruŋ] | [bu**w**uŋ] | bird |
| 2 | turun | [turun] | [tu**w**un] | decent / down |
| 3 | bola | [bola] | [bo**w**a] | ball |
| 4 | ilang | [ilaŋ] | [i**y**aŋ] | lost |
| 5 | beli | [bəli] | [bəy**i**] | buy |

Table 3 illustrates how the child substitutes liquid sounds [r] and [l] with glide sound [w] and [y]. It is found that the liquid sound [r] changes become glide sound [w] in the middle of words, meanwhile the liquid sound [l] is tend to be replaced by glide sound [y] in the middle of words, although there is also a liquid sound [l] is sometimes changed into glide sound [w].

When the children produce the sound [l], they need to raise the tip of the tongue towards the alveolar ridge and let the air escapes around the sides of the tongue, while sound [r] should be produced in the same place with the sound [l], but it needs more effort so that there is no obstruction to create any friction. It might be more complex for children at the early stage, thus they only tend to approach the tongue to the roof of the mouth that causes substitution sound [l] and [r] with [y] and [w]. So the complexity and inability in completely controlling the articulator are factors affecting the simplification of sounds.

## 4. Consonant Harmony

**Table 4. Consonant Harmony (Nasal harmony)**

| No | Word | Adult's Pronunciation | Child's Pronunciation | Equivalent in English |
|----|------|----------------------|----------------------|----------------------|
| 1 | banyak | [**b**aɲaʔ] | [**m**aɲaʔ] | many |
| 2 | bakwan | [**b**aʔwan] | [**m**awan] | bakwan |
| 3 | donat | [**d**onat] | [**n**onat] | donut |

A type of assimilation is consonant harmony in which consonant sound tends to assimilate another consonant including alveolar and nasal harmony. It is seen on table 4 which demonstrates how the subject observed assimilates the bilabial sounds [b] at the beginning of words become nasal sound [m], while the alveolar sound [d] becomes nasal sound [n]. As cited in Adnyana and Pastika (2016), they called *nasal harmony* where labial stop [p] & [b] assimilate with labial nasal [m]. There is an indication that the occurrence of nasal sound in the second syllable of a word influences the labial stop consonant in the beginning of the word. Moreover, these sounds [p], [b], and [m] come from a same place of articulation which is sometimes not easy to distinguish. Thus, both of them are assimilated.

Then, another word which begins with alveolar sound [d] which also contains nasal in the second syllable might be affected by the same reason. Although the consonant harmony frequently occurs in alveolar [d] to velar [g], in this case it does not happen. The influencing of nasal sound in the second syllable is indicated as a stronger reason to describe the occurrence of consonant harmony.

## 5. Vowel Harmony

**Table 5. Vowel Harmony**

| No | Word | Adult's Pronunciation | Child's Pronunciation | Equivalent in English |
|----|------|----------------------|----------------------|----------------------|
| 1 | mainan | [m**ae**nan] | [n**e**nan] | Toy |
| 2 | mainin | [m**ae**nin] | [m**e**nin] | Played |

It is explained before that assimilation is a tendency to assimilate one segment to another segment in a word. It also occurred in the sequence vowels produced by the subject observed. Sequence vowel is condition when two vowels exist next to each other in one word belonging to different syllables. As cited in Adnyana and Pastika (2016), this type is included as vowel harmony where certain vowels are altered to create another vowel segment. Based on Atala's case, the child tried to assimilate the sequence vowel [a] +[e] become [e]. Vowel [a] is a kind of a low and back vowel, while [e] is a part of central and front vowel. It is indicated that the child cannot produce the sequence vowels because it will be more complex for children at the early stage to move the tongue from back to the front position in sequence. Thus, the subject observed tends to assimilate the sequence vowel to a single vowel, [a] +[e] to [e].

## 6. Last consonant reduction

Table 6. Last consonant reduction

| No | Word | Adult's model | Child's Pronunciation | Equivalent in English |
|----|------|---------------|----------------------|----------------------|
| 1 | cantik | [**can**tik] | [**ya**tik] | beautiful |
| 2 | kerja | [**kər**ja] | [**kə**ja] | work |

Table 6 illustrates the case of removal of the last consonant words. It is a part of simplification in syllable structure which happens in the end of first syllable. The last consonant reductions are seen on the deletion of sound [r] in the word *kerja,* and sound [n] in the word *cantik.* It is supported by Ingram (1981) who stated that a CVC syllable is commonly reduced to CV by deleting the final consonant (as cited in Chaer 2009). Based on this case, it seems hard for the subject observed to produce [r] as a trill sound and [n] as nasal sound at the end of a first syllable because it makes the child needs to put the tip of the tongue to the alveolar ridge while later, he has to produce the second syllable which begin with consonant.

## 7. Initial onset reduction

**Table 7. Initial onset reduction**

| No | Word | Adult's Pronunciation | Child's Pronunciation | Equivalent in English |
|----|------|----------------------|----------------------|----------------------|
| 1 | roti | [roti] | [oti] | bread |
| 2 | botak | [bota?] | [ota?] | blad |
| 3 | kamu | [kamu] | [amuh] | you |
| 4 | mana | [manah] | [anah] | where |
| 5 | HP | [hape] | [ape] | Handphone / mobile |
| 6 | sepatu | [səpatu] | [əpatu] | shoe |
| 7 | gosok | [goso?] | [oto?] | brush / rub |

Table 7 shows how the subject observed tends to delete certain initial onsets of words. According to Adnyana and Pastika (2016), deletion of an initial phonological unit of a word is part of simplification of syllable structure. They found it commonly happened not only in Indonesian but also in German. They said that deletion frequently appear in the particular Indonesian words consisting two syllables, while in German it can be found in words consisting one or two syllables. It is also seen on Atala's case where some consonant + vowel sound at the first syllables is commonly reduced become a vowel only, or we can say that CV become V. This deletion was mostly happening in the words consisting of two syllables. The reduction is also probably caused by the sound in which Atala has not been able to produce such as [r], [s], and [g].

**CONCLUSION**

**conclusion**

Based on the discussion above, simplifications in Atala's case are classified into 3 processes covering 7 types, they are; **substitution** as the most case found in this study covers stopping (6), fronting (9) and gliding (5); **assimilation** as the next simplification in sounds covers consonant harmony (3) and vowel harmony (2); and **syllable structure** as the last form of simplification in this case consists of last consonant reduction (2) and initial onset reduction (7).

As a more detail finding, fronting is the most frequent substitution process occurred on Atala's case because of tendency in inability to produce velar-plosive sound which has to control the back of the tongue to reach velum, as well in producing the fricative sounds that trickier in producing sound by constrict the vocal tract which the closure is not completely. This is also seen on the Atala's inability in producing retroflex sound as in gliding where the complexity affects the child to avoid and substitute the sound to another sound. Moreover, consonant harmony is the most common assimilation process found because of the resemblance between a consonant with another consonant neither based on the place of articulation nor manner of articulation. As well as vowel harmony, Atala cannot produce diphthong sounds then assimilate it with the similar monophthong. Furthermore, initial onset reduction is the most often syllable structure occurred on Atala's case. This tendency is due to that Atala's unmastered phonemes occur at the initial onset of a word. The child tried to simplify it because he wants to avoid the complexity in producing certain sounds. It is same as the process of the last consonant reduction which is found in 2 presented data.

Based on the result, Atala has mastered to produce phonemes covering [a], [i], [u], [e], [o], [p], [b], [t], [d], [m], [n], [ɲ], [ŋ], [w], [y], [j], [c], [l], [h], [ʔ]. Despite Atala enable to produce these phonemes singly but if some phonemes meet other phonemes in a word construction, it will be simplified by assimilating, substituting or deleting as efforts to imitate adult's pronunciation. Finally, it draws a conclusion that simplifications on Atala's case are affected by the biological factors specifically the inability in completely controlling the active articulator to place in the appropriate place and manner of articulation.

**Suggestion**

It provides suggestion which are expected to be useful for the next researchers. The result of this research hopefully can be used as a part of basis for further researches. Using proper tools such as recorders with high technology design in collecting data become more effective and efficient because the activity of the child is lots of motion so the observer should provide proper tools in order to get clearer data.

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