A PHONOLOGICAL ANALYSIS OF PALATALIZATION IN THE *OSING* DIALECT OF JAVANESE, BANYUWANGI

THESIS

In Partial Fulfilment of the Requirements
for Master Degree in Linguistics

Galang Fajaryanto
NIM.13020317410002

FACULTY OF HUMANITIES
DIPONEGORO UNIVERSITY
SEMARANG
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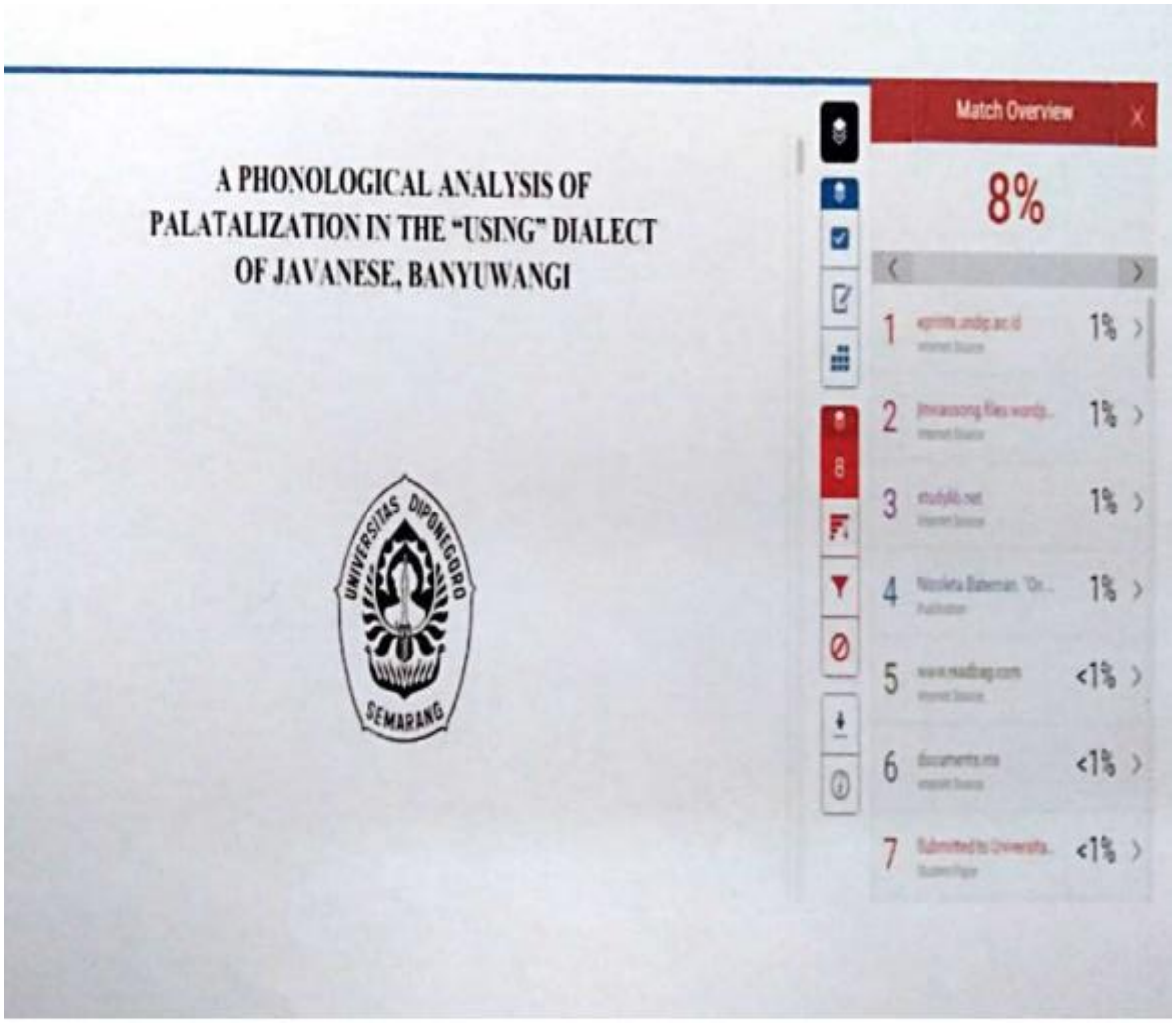
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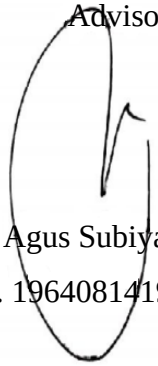

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I hereby declare that this study is my own and that, to the best of my knowledge and belief, this study contains no material previously published or written by another or material which to a substantial extent has been accepted for the award of any other degree or diploma of a university or other institutes of higher learning, except where due acknowledgement is made in the text of the thesis.

Semarang, December 22nd, 2020

Galang Fajryanto

MOTTO

The ultimate weapon that you have is a limitless patience

DEDICATION

This thesis is dedicated to

My beloved parent Ponidi and Mujiati who give me their endless loves, prayers and supports. You are my biggest wealth and inspiration to struggle in the hardest condition;

My wife Aprilia Divi Yustita for her continued and unfailing love, support and understanding my pursuit of my master's degree program that made the completion of my thesis possible.

My dear sister and brother, Damai Dini Ariwisan and Bias Tri Banadi who always remind me to be a good son for my parents and a good brother.

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Alkhamdulillahhirobil ‘Alamin

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Galang Fajaryanto

TABLE OF CONTENT

Contents

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

This article observes the palatalization in one of the local dialects in Indonesia. Compared with other dialects of Javanese in different geographical areas in Indonesia, palatalization phenomena almost do not exist in some of the Javanese dialects. However, based on my close observation, there is one local dialect that has palatalization phenomena in its pronunciation. The dialect is called *Osing* dialect. *Osing* is one of the Javanese dialects used by Banyuwangi inhabitants. This research observes the environment of syllables in *Osing* dialect based on the sound distribution that triggers the palatalization and identifies the types of palatalization. The data were taken from interviewing the local people as the participants especially in Kemiren village that represent the speech community of *Osing* dialect. For the analysis, this research used phonetic articulatory to see how the participants use *Osing* dialect. This research finds that the palatalization in *Osing* dialect happens in 11 consonants and 2 vowels as the *target* and the *trigger*. The palatalization appears on the target sounds by certain rules. The target sounds are palatalized if they are followed by the trigger sound. Moreover, this research also shows that palatalization in *Osing* dialect indicates a *secondary* palatalization.

Key words: Palatalization, Kemiren, Target, Trigger, Secondary palatalization

INTISARI

Artikel ini meneliti palatalisasi pada salah satu Bahasa lokal di Indonesia. Dibandingkan dengan dialek jawa lainnya di wilayah yang berbeda di Indonesia, fenomena palatalisasi hampir tidak ditemukan di beberapa dialek lokal Bahasa Jawa. Namun, berdasarkan pengalaman peneliti, ada sebuah dialek lokal dalam bahasa Jawa yang memiliki palatalisasi dalam pengucapannya. Dialek tersebut adalah dialek Osing. Dialek Osing adalah salah satu dialek Bahasa Jawa yang diujarkan oleh masyarakat Banyuwangi. Penelitian Ini meneliti distribusi bunyi dari lingkup silabel pada dialek Osing yang memicu munculnya palatalisasi dan mengidentifikasi tipe palatalisasinya. Data diambil dari mewawancara penduduk lokal khususnya di desa Kemiren yang merepresentasikan komunitas pengujar dialek Osing. Pada bagian analisis, penelitian ini menggunakan metode analisa fonetis artikulatoris untuk melihat bagaimana partisipan menggunakan dialek Osing. Hasil penelitian ini menunjukkan bahwa palatalisasi pada dialek Osing terjadi pada 11 konsonan dan 2 vokal sebagai target dan pemicu. Palatalizasi muncul pada bunyi target dengan aturan khusus. Target bunyi dipalatalisasi jika bunyi tersebut diikuti oleh bunyi trigger. Selain itu, penelitan ini juga menunjukkan bahwa palatalizasi dalam dialek Osing merupakan palatalisasi sekunder.

***Kata kunci** : Palatalisasi, Kemiren, Target, Pemicu, Palatalisasi Sekunder*

CHAPTER I

INTRODUCTION

This chapter describes background of the study, research problems, purpose of the research, significances, the scope of the research and the organization of the writing.

1.1 Background of the Study

Palatalization is not a new topic in phonology but it is a very unique and interesting topic to discuss. Palatalization is a common phenomenon in pronunciation and it has been used as a cover term for many different types of phonological processes. Palatalization is a process that involves tongue position to raise up for a moment in pronouncing a word or articulation. Primarily, palatalization is constructed from the interaction of the sounds with different features such as the consonants with front vowels, high vowels, and the palatal glide /j/ (high and/or front vocoids). For example, the phones [t], [fi], [tj] have been referred to as tongue-raising.

The phenomena of palatalization happen in many languages such as German, Russian, Polish and Japanese. There are a lot of researchers who conducted studies about palatalization. In Indonesia, the research on palatalization is hard to find or even there are no resources that specifically observe the

palatalization phenomena. Therefore, this article tries to disclose palatalization phenomena happening in one of the Indonesia's local languages.

The subject of this research is the *Osing* community in Banyuwangi district especially in Kemiren village. The term of *Osing* was derived from Balinese word *Tusing* which has a meaning '*no'* (Herusantosa, 1987; Arps, 2010;231). Commonly in the society the word *Using* is only in written whereas the pronunciation of this word become [oseŋ]. Some researchers were confused by these terms and even they used *Using* in their written rather than *Osing*. Based on Kongres Bahasa Jawa II in 1990, the linguists agreed to use *Osing* as the term to call the Banyuwangi inhabitant and the local dialect. other

The disparity in *Osing* dialect also come from several researchers' perception that Osing is a language rather than a dialect. However, in this study the researcher agreed that *Osing* is a dialect. Badan Bahasa (2008: 39) in *Bahasa dan Peta Bahasa* mentioned that the *Osing* is one of the dialects of Javanese. It also provided the language map of Indonesian in 2019 that Banyuwangi region is Javanese user (see in http: Petabahasa.Kemendikbud.go.id).

There are some *Osing* communities such as Glagah, Kabat and Licin that are also known as *Osing* dialect users. The location of this research was in Kemiren village. Kemiren is considered as the residence of native inhabitants who use Osing dialect. The *Osing* community in Kemiren is known for their traditional culture and unique dialect. And the object of this research is *Osing* dialect that is used by *Osing* speech community. It needs to understand that some researchers have contradiction about considering *Osing* as a language or a dialect. Here, the researcher stands on

the opinion considering *Osing* as a dialect. The researcher agrees with the explanation from Balai Bahasa Yogyakarta (cited in Wedhawati, 2006:20) that *Osing* dialect is included into one of the dialect variations of Javanese. Other reasons, *Osing* adopts a lot of vocabularies from several languages such as old Javanese, Kawi, modern Javanese, Sanskrit and other dialects (Ali, 2002). Therefore, *Osing* has a lot of similarities with those languages especially in writing (orthography) and meaning.

As mentioned above, *Osing* has a lot of similarities in writing form (orthography) and meaning aspect with other Javanese dialects. However, the striking difference between other Javanese dialects and *Osing* is on the pronunciation. Considering that *Osing* is one of the Javanese dialects, it can be neglected that many similarities exist in both of them. The *Osing* dialect has two uniqueness in phonological scope, they are the diphthongization and palatalization. There were several researchers that observed the *Osing* dialect, but they focused on diphthongization. For example, Franendya (2014) and Budiono (2015) concerned with phonological, lexical dialect, and dialect variation in Banyuwangi. Whereas, the research on palatalization has not been conducted before. The palatalization phenomenon in the *Osing* dialect has happened in a long time ago but there are no studies that specifically observed this phenomenon in order to find out the rules of palatalization. And this research is proposed to observe the palatalization phenomenon as the gap that needs to be fulfilled.

The palatalization in the *Osing* dialect can be seen in several sources such as Using-Indonesia dictionary (Ali, 2002), some articles related to Banyuwangi

language research (Franendya, 2014; Budiono, 2015; Ashar, 2018), and other books that relates to Javanese with the *Osing* dialect learning. Those studies mentioned that the phonemes are /b, w, g, d, l/ and these phonemes are pronounced as [bj, wj, gj, dj, lj,]. In fact, there are some more vocabularies that contain another consonant and they are pronounced by adding the glide or palatalized sound. Based on those facts, the researcher wants to conduct further observation about the rules of palatalization and the environment of palatalized sound in the *Osing* dialect. This topic has a potency to be observed through other linguistics points of view such as syntax, semantics, sociolinguistics and historical linguistics.

1.2 Research Questions

From the background above, the researcher proposed several research questions that need to answer. Those are as follows:

1. What are the form and the targets of palatalization in the *Osing* dialect?
2. What are the triggers of palatalization in the *Osing* dialect?
3. What are the relations of syllabification and palatalization in the *Osing* dialect?

1.3 Purpose of the Study

The general purpose of this study is to get the best solution of the research problems. Based on the research questions, the objectives of this study are:

a) To provide the form of palatalization in *Osing* dialect and show the placement of [j] sound in the palatalized form.

b) To describe the classification consonants and the vowels as the target and the trigger in *Osing* dialect palatalization
c) To find the pattern of palatalization in *Osing* dialect by considering the syllable relation and phonological process.

1.4 Significance of the Study

The researcher expects that this research can give a contribution theoretically and practically to the linguistics studies especially on phonological aspect of *Osing* dialect in Bayuwangi regency. The theoretical benefit of this study proposes a model analysis on palatalization phenomena through the study of transformational-generative phonology and provides the explanation about the factors needed to predict the palatalization in *Osing* dialect. The practical benefit, this study can be used as the reference by those interested in the phonological study especially palatalization topic and those who concerned with *Osing* dialect of Javanese.

1.5 Scope of the Study

The palatalization of *Osing* dialect can be done through various approaches for instance the articulatory phonetics, the phonetic acoustic, and the optimality theory. In this study, the researcher tried to analyze by using the articulatory phonology and phonetic acoustic approaches. The articulatory phonology approach is used to show the features of sounds production and make categorization based on the sound features. In addition, the researcher also used phonetic acoustic

approach in order to provide the evidence of palatalization by showing the sound wave of *Osing* dialect palatalization.

The object of this research is the words pronunciation or utterances of the *Osing* community in Kemiren village containing palatalization. Here, the researcher used generative phonology theory specifically the assimilatory process proposed by Chomsky and Halle (1968) to analyze the phonological process in palatalization. In addition, to analyze the pattern of palatalization, the researcher used the distinctive features by Oden (2005) and Schane (1973) to classify the sound features.

1.6 Organization of the Writing

This study is divided into five chapters as follows. Chapter one contains the background of the study, research questions, purpose of the study, significances of the study, scope of the study and organization of the study. This chapter provides the general frameworks of the study and connects to the following chapter.

Chapter two deals with the related literature; this chapter presents some previous studies regarding the concepts of palatalization and some theories used in this study. All of the previous studies are valuable and fundamental to establish the analysis in the studies.

Chapter three contains the method of the study; it describes the research design, the subject of the research, the data collection method, the data and the analysis. The researcher explains the steps during collecting the data and data processing before. Data processing is done in order to get the target data for the

analysis. Here, the researcher also mentions about the used method during the analysis to classify the sound in the data and presenting the findings.

Chapter Four provides the findings and discussions. The findings presented the data of palatalization that have been analyzed in general identification about the relation of sound in a syllable. The discussion elaborates on the findings in detailed explanation. The researcher categorized this section into several parts that discuss the analysis of palatalized form by using PRAAT software, the sound distribution of the target and trigger sounds, and the rules of palatalization.

Chapter five is the conclusion and suggestion; it presents the conclusion from the findings and discussion from the previous chapter. And, the suggestion contains several sights from the researcher about some gaps in this study and some suggestions about the development possibilities toward this study that can be done by other researchers.

CHAPTER II

REVIEW ON RELATED LITERATURE

This chapter has two sections. The first section is a review of related studies and the second is theoretical framework of the study. In the theoretical framework, the related theories are accounted for the basis theory of this study.

2.1 Previous Studies

This part contains the previous studies which have similar or same focus, terms and key words (Hamidi, 2010:35). This part consists of several theories and previous research that initiate to conduct a study about palatalization. This previous research establishes the proportion to connect the used theories in order to construct a framework in the analysis. Commonly, the related research in these articles were done in other countries. The insufficient related research in Indonesian local language or dialect become a challenge for the researcher to struggle in order to finish this research. In this section, the researcher classifies the previous studies into 1) the palatalization research and 2) the phonological studies of Javanese and *Osing* dialect. The first to the six research focuses on palatalization research and the seventh to tenth research is about the phonological studies of Javanese and *Osing* dialect.

The first article was written by T. A. Hall (2000). He examined palatalized r-sounds such as. flaps, trills and approximants, from a cross-linguistic perspective.

He criticized the previous research about r-sounds that found [rʲ] is far more marked in the languages than palatalized non-rhotics like [tʲ, dʲ, nʲ lʲ], the r-sounds are not stable hosts for palatalization will be attributed to a general ban on palatalized apical sounds. The result of Hall's research is valuable for this research in order to observe the r-sound features and its patterns to be palatalized. However, this research involves several consonants that also need to find the pattern. This research focuses on the palatalized consonants and some inconsistency of palatalization in the *Osing* dialect such as in sonorant sounds.

The second previous research was conducted by Nicoleta Bateman (2007). Bateman (2007) wrote a dissertation that observed palatalization in 117 languages. Her research presented descriptive and formal palatalization patterns in identifying two palatalization types, one involving a primary place of articulation change (*full palatalization*, e.g. /t/ → [ts]), and the involving of secondary palatal articulation (*secondary palatalization*, e.g. /t/ → [tʲ]). Bateman's research gives clear leads to conduct palatalization research. The difference between secondary and full palatalization is also provided in her dissertation. In her research, she analyzed the data through Articulatory Phonology (AP) and Optimality Theory (OT). In this current research, the researcher uses the articulatory phonology and Phonetic acoustics approach.

The third research is a dissertation written by Michel Van Der Hoek (2010). He also gave valuable information about palatalization related to historical linguistics. In his research, Hoek wrote about the palatalization in Dutch, German and Frisian. His research also provided some additional theories about secondary

articulation and the assimilation process. Those contribute to widening the understanding of the palatalization process. Hoek's research explained the historical linguistics of palatalization in west German. In this research, the researcher only focuses on the palatalization rules and without providing the historical linguistics of the *Osing* dialect. There is no observation and article that tracked the development of the *Osing* dialect diachronically. However, it is possible for other researchers to conduct a study about the historical linguistics of *Osing* dialect.

The fourth study is written by Bateman. Bateman (2011) wrote an article related to palatalization but she more concerned with typological aspect. Her article presented a typological overview of palatalization, it is more general compared with the previous one. She addressed some issues such as the definition of palatalization, palatalization types, the sounds that undergo palatalization (targets), and the sounds that trigger palatalization (triggers). In exploring the issues, she presented a series of implicational relationships among palatalization targets and triggers. At the end of the analysis, she proposed several implicational of the relationship among target palatalization and the trigger. In this study, the researcher adopts Bateman's idea to make a group of the target and the trigger of palatalization from the data collection then do further classification which the *Osing* dialect belongs to, secondary or full palatalization.

The fifth research was conducted by Siebren Dyk (2011). He observed about the pronunciation change caused by sociological factors. The lack of capability of immigrant to master a new language in pronunciation creates new phenomenon in

pronunciation. As a shortcut, the immigrants solved their problem by changing the initial glide /w/ into /j/. This case designates the dialectic changes caused by social factors. The triggering factor of palatalization is valuable to give an understanding in a phonological research and also it can be developed into historical linguistics research. In this research, the emergence of palatalization is not caused by the incapability of pronouncing a sound but the palatalization in the *Osing* seems as the characteristic owned by the *Osing* community.

The sixth research was written by Mfon Brownson Ekpe (2013). Epke (2013) wrote a study about the *Anaang* community. His research focused on the articulatory feature in the *Anaang* language especially palatalization phenomenon. In his finding, this research has the same problems and even it almost has the same answer. The Epke's goals was an investigation of the articulatory features of *Anaang* and how the palatalization was formed in the language. The findings of his investigation showed that palatalization in *Anaang* was formed when a non-palatal consonant is followed by a high front vowel [i]. A similar indication can be found in this research that some vowels involve in the palatalization, but they are not high front vowels. This research also tries to analyze the articulation of pronunciation to classify the phones. From the phone classification, the researcher can identify the pattern of palatalization in the *Osing* dialect. Epke's research did not provide the presence of palatalization if the target and the trigger appear twice. In this research, the researcher also observes the pattern of the target and the trigger if they show up twice in a word.

The seventh research was written by Abdul Latif Zen (2016). His research discussed about the phonology transformation of Sanskrit language into Javanese language. He also provided the development of old Javanese language, middle Javanese language and modern Javanese language. His findings showed the rule and sound changes such as (1) sound segment change; (2) sound appearance or insertion; (3) sound deletion; (4) sound fusion or combination; and (5) sound position change or metathesis. He also explained some factors influencing the sound changes. Zen's research contributes to give an understanding of the Javanese phonetics and the distinctive features. Considering that *Osing* is one of the Javanese dialect variations. The researcher perceives that there are no significant differences between the Javanese and the *Osing* phonetics symbols. The researcher agrees with the convention that *Osing* is one of the Javanese dialects. Therefore, the researcher assumed that the distinctive features of the *Osing* phonetics are mostly similar to the Javanese phonetics.

Unlike the previous research that talk about palatalization phenomena, this previous research contains some information about the *Osing* dialect in Banyuwangi. Franendya (2014) observed phonological differences in the *Osing* dialect of Tampo and Kemiren village. She revealed that in terms of phonological differences, there are 7 differences, the consonant addition, the vowel change / o / becomes / u /, the vowel addition / ə /, the vowel reduction that form / i / into / e /, the vowel addition / u /, the vowel reduction from sound / e / into / a /. In phonemic variation that is a change from phoneme / i / into / e / and the phoneme / e / into / a /. Her research showed several basic information of the *Osing* dialect especially the

vowels variation between two villages. Nevertheless, this research does not involve the lexical meaning, it just focuses on finding the pattern of palatalization in the *Osing* dialect. The result from Franendya's research contributes to the phonetic transcription of *Osing* pronunciation considering that this research work with the same object.

The idea of this research was initiated by Satwiko Budiono's (2015) research. Budiono (2015) described the literary situation in Banyuwangi by using dialectology and he also showed the language variation into language mapping in Banyuwangi. But the initiation was not his research result. The initiation was his statement that the consonants /b, w, g, d, j, l/ changes into [by, wy, gy, dy,jy ly] when they are pronounced by the *Osing* community. However, the researcher found a gap in Budiono's statement. The inserted glide sound or palatalization is not a simple phenomenon. Here, the phenomenon of palatalization in the *Osing* dialect has existed for a long time, but there is no scholar especially from Indonesia who tries to reveal this phenomenon in detail through phonological analysis. The researcher strongly believes that palatalization in the *Osing* dialect has a specific pattern toward phonological interaction not only a single phone or as Budiono's statement.

The last is a study about *Osing* dialect conducted by Moh. Saifuddin Hanis Ashar (2018). Here, Ashar (2018) stated that *Osing* has 7 vowels and 21 consonants. The vowels consist of */ a /, / e /, / é /, /è/, / i /, / o /,* and */ u /.* The consonants consist of */ p /, / b /, / m /, / w /, / t /, / d /, / T /, / D /, / n /, / s /, / c /, / j /, / ny /, / y /, / k /, / g /, / ng /, / h /, / r /, / l / and /'/.* Ashar (2018) also concluded that the palatal [j] sound

which often appears in lexicon containing *[ba], [ga], [da], [wa]*. If we compare Budiono's research (2015) and Ashar's research (2018) there is a gap in the palatalized forms. This research tries to analyze deeper about the palatalization of the *Osing* dialect because the researcher hypothesized that the appearance of the glide sound has a specific pattern and not all of the vocabularies that contain those /ba, ga, da, wa/ or /b, w, g, d, j, l/ are palatalized. In addition, some transcription symbols in Ashar's research do not belong to IPA or APA transcription. Here, the IPA symbol is used to transcribe the data considering that IPA is valuable more and it is used by many researchers to transcribe the data in phonology studies. In addition, the researcher used the distinctive feature theory to analyze the sound alternation and explaining the phonological process of palatalization in *Osing* dialect.

2.2 Theoretical Framework

In this part, the researcher elucidates the theoretical framework of this study. Some issues related to *Osing* dialect and phonological process (palatalization): 1) *Osing* phonetics symbols; 2) Concepts of palatalization;3) Transformational generative phonology, 3) Distinctive feature; 4) Syllable; and 5) Phonological process.

2.2.1 The *Osing* Phonetic Symbols

The usage of Javanese spread in almost all areas in Indonesia especially in Java Island. In Indonesia, there are several places or cities that are used as the Javanese language standard pronunciation such as Yogyakarta, Solo and other cities in central Java (Budiono, 2015). According to Balai Bahasa Yogyakarta, the *Osing* is not a local language but it is one of the Javanese dialect variations (cited in Wedhawati, 2006:20). So, the probability of significant differences between the Javanese and the *Osing* phonetics symbols is small.

In the previous parts Zen (2016) showed that the Javanese phoneme consists of 8 vowel and 23 consonants in Javanese without the diphthong and cluster. The vowels are */i/, /e/, /è/, /é/, /a/,/A/o/, /o/, /u/* and the consonants */b /, /c/, /d/, /dh/, /f/, /g/, /h/, /j/, /k/, /k/?/, /kh,/ /l/, /m/, /n/, /ng/, /ny/, /p/, /r/, /s/, / t /, /t/th /, /v/, /w/, /y/, and /z/*. Some of these phonemes do not purely exist in Javanese such as /f/, /kh/, /v/, /z/ because they are adopted from other languages. Therefore, they should be 8 vowels and 20 consonants. Compared with the phoneme of *Osing* dialect, Ali (2002: vi-vii) and Ashar (2018) provided that the *Osing* dialect has 7 vowels, 21 consonants. The vowels consist of */a /, / e /, / é /, /è/, / i /, / o /,* and */ u /.* The consonants consist of /p/, */b /, /c/, /d/, /dh/, /g/, /h/, /j/, /k/, /l/, /m/, /n/, /ng/, /ny/, /r/, /s/, / t /, /T /, /w/, /y/ and /'/.* And the transcription of the *Osing* is shown in the chapter 4 transformation of the *Osing* phonetics to IPA. The transformation is only used to show that both of them have similar basic symbols.

There are several differences in the phoneme symbols between Javanese and *Osing* symbols. Although, some symbols are written differently such as /dh/ = [D],

/th/ = [T] but they have the same phone with [d] and [ʈ]. In order to facilitate the analysis and overcome the differences in the transcription, the researcher used IPA (International Phonetic Alphabet) to transcribe the data. IPA has the phonetic symbols to represent the phonetic transcription completely of the data and it is used by many researchers.

2.2.2 Concepts of Palatalization

Ladefoged (1982) called palatalization as *secondary articulation*. In several years later, Katamba (1989) considered this palatalization as an *assimilation process*. Seen from the perspective of what the early German linguists, it is called *Lautphysiologie* and palatalization is often secondary, or the result of assimilation. Clark and Yallop (1990) defined palatalization as an articulation process that involves raising the tip and blade of the tongue to a high front position close to the anterior part of the hard palate region. Another researcher stated if a change in articulation in which the target consonants become palatal triggered by front vowels, it is called palatalization (Calabrese, 2005: 301). In this study, the researcher adopts Chen (1973) and Bhat (1978) to define the concept of palatalization. They gave the detail explanation about the palatalization types, the target and the trigger.

The researcher adopted the general implication of palatalization that proposed by Chen (1973) and Bhat (1978). The theory of these two researchers is mostly used by other researchers in order to give an explanation about palatalization containing the specific parts in palatalization. Chen (1973 and Bhat (1978)

generally states that palatalization involved two combinations of sound. We can assume that palatalization is not constructed by a single sound or it happens in a syllable. Chen (1973) has an implication toward the environment of palatalization. He implies if a consonant palatalizes before the lower front vowel ɛ, it should also palatalize before higher front vowels such as *e* and *i*.

Palatalization is a term referring to the articulation involving a movement of the tongue toward the hard palate. Bhat (1978) concluded and made the distinctive process of palatalization into tongue-fronting, tongue-raising, and *spirantization*. He also added that palatalization does not only happen in combined sounds but it is also possible of a single sound because different languages or dialects have different rules in the speech community. Chen (1973) and Bhat (1978) also mentioned two terms that relate to palatalization. The terms are *target* and *trigger*. To understand what do these terms mean and definition, here is the explanation.

2.2.2.1 The Targets of Palatalization

The previous researchers use the term *target* and *trigger* to simplify the terms in the palatalization process. *Target* is a term used in phonology to refer to the hypothesis of articulatory state to describe speech production (Crystal, 2008). The researcher concluded what is *target* sound in palatalization from Chen's (1973) statement. Chen (1973) did not bravely mention the definite sounds of *target* and *trigger* in palatalization. He just argued that the consonants from back to front; dorsal, coronal, and labial are the target of palatalization. According to Chen's

(1973) statement, the researcher concluded that target palatalization should be consonants, but they must be certain consonants with a specific feature.

Another researcher, Bhat (1978) also has the same opinion with Chen's (1973) argument that the consonants from back to front or in other words all places of articulation are possible to be palatalized and they are considered as the target palatalization (Bhat, 1978). However, he has differentiated the consonant in the palatalization process into three categories; *tongue-raising* that occurs more with apical and labial sounds and it is triggered by the following high (particularly front) vowel or semivowel. *Tongue-fronting* occurs frequently with velars and it is triggered by a vowel with [+front] feature (not necessarily high). *Spirantization* may occur alone with the palatal glide and the trill *r* among others and it may occur in combination with tongue-fronting and raising (Bhat 1978:56).

The definition of *Target* palatalization by Chen (1973) and the definition of the palatalization process by Bhat (1978) show a strong indication that the *Target* palatalization is definitely consonant sounds. As mentioned by Chen (1973), the target consonants in palatalization are not fixed for all palatalization phenomena. Therefore, the the target palatalization can be various and it should be different from one to another language or dialect. The chosen consonants as target palatalization depend on the speech community because all consonants have a possibility to be palatalized. In this study, the researcher does not try to find the historical bacground of the choosen consonants in the *Osing* dialect palatalization. The researcher focuses to clarify the palatalized sounds and find the general rules or pattern of palatallizattion in the *Osing* dialect.

2.2.2.2 The Trigger of Palatalization

In the previous part, Chen (1973) gave the general information about the common trigger based on the sound feature but he did not mention the sound specifically. Whereas, Bhat (1978) specifically mentioned that the general triggers in palatalization are commonly *[i],[e]* and *[j]* (palatal semi vowel). Similar with the target palatalization, all vowels cannot be considered as the *trigger* instantly in the palatalization. There are only some vowels with certain feature that functions to classify the *trigger* in palatalization. The implication from Chen (1973) about the palatalization seemingly refers to vowel sounds *[i], [e]* and *[ɛ]*. It means that Chen (1973) and Bhat (1978) have the same finding about the *trigger* in palatalization. Chen (1973) mentioned that the vowel features are high and lower front vowel. Therefore, the sounds such as [i], [ɪ], [e], [ɛ], [æ] and [a] have possibility to be the trigger in palatalization. The vowels with high and lower front features are considered as the *trigger* (Chen, 1973, Bhat, 1978 and Calabrese, 2005).

Bhat (1978) also classified some environtments with a strong probability to establish palatalization. He provided that the palatalization of fronting velars is triggered by a front vowel, the raising apical is triggered by palatal glide. He also gives some examples that sometimes velar palatalization is not affected by palatal glide and the front vowels do not always affect the apical sound (optionally) (Bhat 1978: 52-53). Blevin (2004:138) also esplained that the front high vowels and the glides can initiate the palatalization of velar sound frequently than non-high front vowel.

Another vowel feature such as the rounded vowel is also identified as the *trigger* of palatalization, but it does not have a significant effect (Bhat, 1978). In addition, he found that the stress in the vowel also affects the palatalization. The *trigger* with stressed pronunciation easily establishes tongue fronting whereas the *trigger* with non-stressed establishes tongue raising (Bhat, 1978:61).

Every study about palatalization reveals important generalizations about the consonants as the target sounds that undergo palatalization and the vowels that trigger it. The result from the previous studies showed some different finding patterns of palatalization and there are no specific sounds that can be fixed as a pattern in palatalization to many languages or dialects. The different findings in palatalization are caused by different factors such as the phonological system of society and historical linguistic factors.

2.2.2.3 The Full and Secondary Palatalization

The previous studies had mentioned about several terms related to palatalization especially the terms *full* and *secondary* palatalization. From those previous studies, the researcher found the dimensions of palatalization that need to understand before conducting this research. The dimension of palatalization has two types *Full* and *Secondary* palatalization (Chen, 1973; Bhat, 1978; Bateman, 2007).

Here, full palatalization is a consonant change from its primary place of articulation (its manner of articulation), while it is moving to the palatal region of the vocal tract when adjacent to a high or front vowel (Fromkin, 2011). The easiest

way to differentiate this type is by considering the palatalization form. For example, the changing of /t/ or /k/ as the target of palatalization is realized as [ts] or [tʃ].

Whereas, the second type is called as 'secondary' palatalization. Secondary palatalization is a consonant acquiring a secondary palatal articulation when adjacent to a high and ⁄ or front vocoid (Bateman, 2007; 2011). Here, the target palatalization obtains or acquires secondary palatal articulation sound (in this case glide [j] sound) that slips after the target sound when it is realized. The example of secondary palatalization is the changing of /r, l, n/ into [r^{j}], [l^{j}], and [n^{j}].

2.2.3 Transformational Generative Phonology

Transformational generative phonology or generative phonology is part of the generative grammar proposed by Chomsky (1957). Transformational generative phonology is used to describe a language through transformational rules. It aims to describe the phonological rules, the sound features by distinctive feature and rule ordering (Jensen, 2004:4).

Generative phonology aims to explain the phonology as the part of grammar structured by the elements and principles that govern how the sounds vary and pattern in a language or dialect (Zheng, 2013: 1681). This theory leads to think that allophones and syllables are changed with different context. According to Zheng (2013:1682), the different phones happen in different linguistics contexts and embody the same phoneme which is called as allophone of the phoneme. According to Crystal (2008: 361), phoneme is the minimal unit in the sound system of a language and it also has variation called as Allophone. Whereas phonetic is a term

used in government-binding theory for the output of the phonological component of a grammar, or the phonological component itself.

The generative phonology establishes a series of general rules to cover the phonemical change representation into phonetics representation. Therefore, generative phonology is valuable to describe the sound change, create the rule of the sounds change (phonological rule), show the features of the sounds (distinctive feature), and explain the condition of the sounds change (Schane, 1992:49).

2.2.4 Distinctive Features

The advancement of phonology experienced an innovation called *Generative Grammar* and firstly introduced by Chomsky in 1957. This innovation believes in a basic concept that each morpheme has a basic form inside the original form (Prastika, 2005: xi). Therefore, a morpheme is possible to have not only one phonetics form. Here, the generative phonology is no longer focused on phoneme because there is a smaller element in phoneme that is the features or the distinctive features. The *distinctive features* are the smallest property in phonetics (Odden, 2005:136). Through this feature, the researcher can define the possible phoneme and understand the phonological rules. The researcher also considers that distinctive feature is the smallest parts in phonetics and it is valuable to provide the accurate phonological transcription.

The distinctive features can be used to find the similarities or the differences of a segment in a language. It is a valuable tool to analyze the sound change or the assimilation process in pronunciation because it can provide the phonological

feature of the smallest unit (sound) in a language. This distinctive feature is beneficial to answer the research questions of this study that relate to sound change, deciding the pattern of word pronunciation, the sound representation and the boundary of sound emergence. There are eight features in distinctive theory: binary features, major class features, manner features, place of articulation features, body tongue feature, subsidiary feature, prosodic feature, and segment redundancy.

2.2.4.1 Binary feature

The implementation of distinctive feature especially in phonology uses *binary features*. It is used to differentiate the feature (the presence and the absenteeism) by using (+) to denote the presence feature and (-) for absenteeism (Katamba, 1989:40). Schane (1973:25) also stated that the use of the binary system is the best for all features to indicate the opposite qualities as [+ voiced] and [- voiced]. For example the differences between /b/ and /p/. To differentiate the qualities, we can use a table as the folowing table adopted from Odden (2005:151).

Table 2. 1 The distinctive feature of [b] and [p]

Feature	**[b]**	**[p]**
Syllabic	-	-
Consonantal	+	+
Sonorant	-	-
Anterior	+	+
Coronal	-	-

Continuant	-	-
Nasal	-	-
Strident	-	-
Voice	+	-

Schane (1973:26) also added that the benefits of using the binary system is to show explicitly how members of the pair as voiced-voiceless are characterized and differentiated as shown in the table above. The characterization features will show the group of consonants that has the same feature to classify the consonants and the vowel as the target and trigger of palatalization.

2.2.4.2 Major Class features

The major feature is divided into several categories. According to Schane (1973: 26), the similarities and the differences between consonant and vowel are categorized into several properties. Those properties relate to syllabicity, sonority, and type constriction. Those three features are also called and symbolized as Syllabic, Sonorant and Consonantal

The sounds with *Syllabic* characteristic include vowel, nasal and liquids sounds that have a position as the core or nucleus in the syllable. The vowels and the consonant (nasal and liquids) are (+syllabic) and the rest consonants are (-syllabic). This characteristic is valuable to distinguish the syllabic consonants from non syllabic consonants.

The next is the *Sonorant* characteristic. It is a sound produced with relative free air-flow and vocal fold position such as spontaneuos voicing is possible as in vowel, nasals, liquids, and laterals. This character is also cosnsidered as resonance quality of sounds (Schane, 1973:26). This character is required to distinguish the consonants that have (- sonorant) and (+ sonorant).

The last is the *Consonantal* characteristic. It is a sound produced with a major obstruction in the middle of the vocal tract, and it has low acoustic energy. Several sounds that include in (+consonant) are fricative, affricate, nasal, liquid, and laryngeal, glide. Whereas, the vowels and semi vowels include in (- consonantal). To give the best understanding, the researcher provides a table about the major class features adopted from Schane (1973: 27) in the following page.

Table 2. 2 Major class features

	Oral cavity obstruent	Nasal liquids	Syllabic nassal,liquids	Laryngeal gldes	Semi vowel	Vowels
Syllabic	-	-	+	-	-	+
Sonorant	-	+	+	-	+	+
Consonantal	+	+	+	-	-	-

2.2.4.3 Manner of Articulation

Other features relate to the manner in which a segment is produced beside the location. According to Odden (2005:145), there are four categories of the manner of articulation: 1) *Continuant* is a sound produced by flowing the air to

oralcavity freely, 2) *Delay Release* is a sound produced by obstructing the airflow but the most important is how the air is released. In these categories, there are two ways first by suddenly release (plossive) and second by slowly relase in order to create africate sound. The *delay release* tends to the second way, 3) *Nasal* sound is pronounced by lowering the velum to allow the airflow escape through the nose, and 4) *Lateral* sound is pronounced by lowering the mid section of the tongue at the side. Apart from these categories, there is one category called Strident. *Strident* is a group of sounds pronounced by high frequency and intensity (fricative and affricate sound). The following table is the example of manner articulation adopted from Schane (1973: 29).

Table 2. 3 The example of manner articulation Schane (1973)

	[p]	[b]	[m]	[l]	[d]	[f]
Sonorant	-	-	+	+	-	-
Consonant	+	+	+	+	+	+
Continuant	-	-	-	+	-	+
Delay release	-	-	-	-	-	-
Nasal	-	-	+	-	-	-
Lateral	-	-	-	+	-	-
Strident	-	-	-	-	-	+

From table 2.3, we can see that all of them are (+consonant) but only two of them that have (+sonorant) feature. The sounds [m] and [l] are plus consonant and also plus continuant. These two are nasal and lateral. Nasal and lateral features can differentiate sonorant consonants.

2.2.4.4 Place of articulation

Consonants have several principal categories based on the place of articulation. According to Oden (2005:39), the principal places for consonant articulation are bilabial, labiodental, dental,alveolar, post alveolar, palatal, velar and glottal. The following is the table adopted from Odden (2005:39) to show the place of articulation of each consonants.

Table 2. 4 Place of articulation (Odden, 2005)

	Bilabial	labiodental	dental	Alveolar	Post alveolar	retroflex	Palatal	Velar	uvular	pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k g	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ			N		
Thrill	B								R		
Tap or flap						ɾ					
Fricative	ɸ β	F v	θ ð	S Z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral Fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		l	ʎ	ʟ			

The table above shows the consonants sound based on the place of articulation. It can be seen from the table. The right column contains the place of articulation and the left row describes the manner of articulation. According to the table above, the bilabial place consists of [p], [b] and [m], the sounds in labiodental

position is [f] , the alveolar position consists of [t], [d], [n], [r], [s], and [l], the retroflex position belongs to [ʈ], [ɖ] sound, the palatal position belongs to [c], [ɟ], [ɲ] and [j], the sounds [k], [ɡ] and [ŋ] are in velar position, the sounds [ʔ] and [h] belong to glottal position.

2.2.4.5 Body Tongue Feature

The next is the body tongue, this part has an important relation with the vowel sounds. This does not mean that consonant sounds do not have a relation with the tongue position. Some consonants are also pronounced by involving the tongue position but the features (place and mannerof articulation) have explained clearly. Whereas, it is hard to explain the vowel feature. The tongue position becomes the most important part in order to differentiate the feature of vowel sounds. Schane (1973:30) classified the vowels based on several parameters; high, medium, low, front, rear (back), rounded and unrounded. These set up is an independent feature to interpret the binary. The following table is adopted from Schane (1973:30).

Table 2. 5 Sample body of tongue feature

	I	**Ü**	**u**	**ɨ**
Rear/Back	-	-	+	+
Round	-	+	+	-

The next parameter is the qualities. Schane (1973:31) classified this qualities into three types of vowels; high, medium, and low. This qualities represent the tongue position during the pronunciation process. Here is the table of the tongue position adopted from Schane (1973:31).

Table 2. 6 Tongue Position

	High vowel	Medium vowel	Low vowel
High	-	-	+
Low	-	+	+

This table shows the feature of the binary system todistinguish the four entities. The table shows an indication that tongue position cannot simultaneously be raised and lowered, in other words it should be a neutral position. Therefore, the segment should have a medium position that is not in the high or lower position and it is impossible for a segment to be high and low at the sametime.

2.2.4.6 Subsidiary Feature

Schane (1973:32) also explained about a subsidiary feature and gave a list of the features. Subsidiaries feature is the secondary feature apart from the primary features that have mentioned in the previous part. This feature occurs in both vowels and consonants. The primary features sometimes cannot show the detail of the binary system. For example the non-lateral liquids in order to differentiate a trill

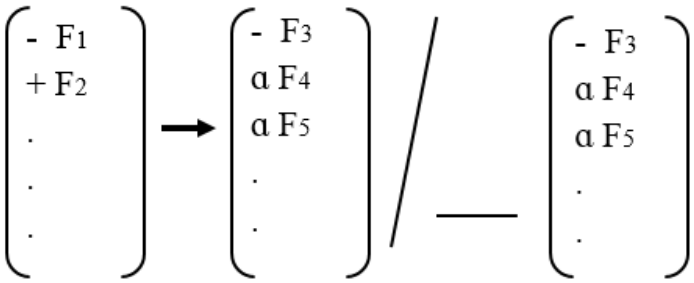
[+tense] from flap ([-tense]). The following is the subsidiary feature list adopted from Schane (1973:32).

Table 2. 7 Subsidiary feature

[+tense] = tense	[-tense] = Lax
[+voiced] = Voiced	[-Voiced] = Voiceless
[+aspirated] = Aspirated	[-aspirated] =Unaspirated
[+Glottalized] = Glottal	[- glottalized] = Nonglottalized

2.2.4.7 Formulation of Phonological Rules

In order to find the pattern of palatalization, the research uses the function of the distinctive features as the basis to formulate the rules of palatalization (Schane, 1992; Odden, 2005:155). Here, the rule of palatalization is also used to predict the appearance of palatalization and observe the changing features of the sounds. Below is the illustration of phonological rule from Odden (2005:157):



In the figure, there are some symbols F1, F2, F3, F4, F5 and minus (-) or plus (+) values. The F1, F2, F3, F4, F5 symbolize the sounds features. Whereas, the minus (-) or plus (+) values symbolize the presence of sounds features. The

matrix on the left arrow is the changed segment; that the segment is referred as the focus or the target of the rule. The matrix on the right side of the arrow is the structural changes and it describes the changing features of the target segment. The last matrix contains the rules trigger (also known as the environment or determinant). This last matrix describes the environment condition outside of the target segment which is necessary to the implementation of the rule.

Each element in the figure is a matrix which shows a junction of features. The matrices of the target and trigger means that all segments of the sounds which have the feature [αF4] as well as [αF4] in the other matrix. The matrix in the structural change means when the target segment undertakes a rule, the target receives whatever feature values are specified in the matrix.

In addition, there are some symbols which are also involved in the formulation. One of them is the word boundary symbolized as "#". A rule which is lengthens a sound before a word- final sonorant would be formulated as below.

[+syl] → [+long] /_ [+son] #

The rule which devoices a word- in initial consonant would be written as:

[-son] → [-voice] /_ #

The next symbol is null (Ø). It is used in the focus or structural change of a rule. When it is in focus matrix, it means that the segment described to the right of the arrow is input in the stated context; and in the structural change, it means that the particular segment is deleted. The rule below shows that a sound -final short high vowel which preceded by a sonorant is deleted. A word boundary is possible

to emerge between the target and the trigger segment which means when the trigger segment is in the next sound. The rule is written as follows adopted from Odden (2005:158);

$$\begin{bmatrix} +\text{syll} \\ -\text{high} \\ -\text{long} \end{bmatrix} \rightarrow \text{Ø} \; / \; [+\text{Son}] \_ \; \#$$

The next is the symbols α and β (Greek alphabet). These symbols indicate the same feature characteristics owned by the structural change matrix with the trigger matrix. For example, the assimilation of [ŋ] becomes [m] before the sound [p]. The following rule show how to govern the process of sound change adopted from Odden (2005:160).

$$\begin{bmatrix} +\text{ nasal} \\ -\text{ coronal} \\ -\text{ anterior} \end{bmatrix} \rightarrow \begin{bmatrix} \alpha \text{ coronal} \\ \beta \text{ anterior} \end{bmatrix} \Big/ \underline{\quad} \begin{bmatrix} +\text{ consonant} \\ -\text{ sonorant} \\ -\text{ continuant} \\ \alpha \text{ coronal} \\ \beta \text{ anterior} \end{bmatrix}$$

From the rule, the [ŋ] will change into [m] in the position before the sounds [p]. The [m] sound and the sound [p] have the same articulation features that are [-coronal] and [+anterior] or symbolized [α coronal] and [β anterior].

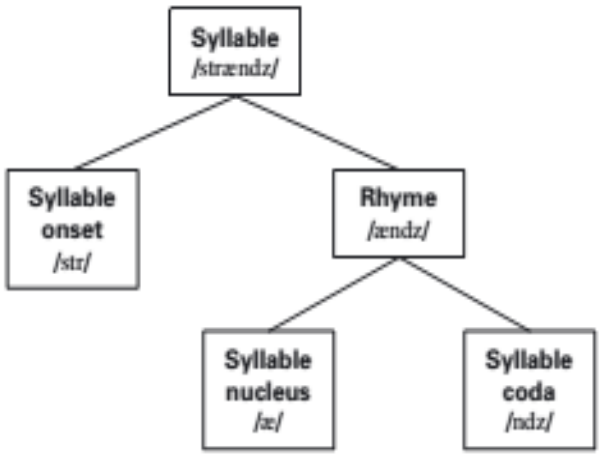
2.2.5 Syllable

To analyze the pattern of palatalization, the isolation sounds are needed to analyze the combination of some sounds in pronunciation. Therefore, the analysis of linking sounds is needed so the researcher also provides *syllable* analysis in this study. Crystal (2008:467) defined that *syllable i*s a unit of sound in a word. This unit is usually smaller than a word, but it is greater than a single sound. Another expert elaborates that it is one or more letters representing a unit of spoken language consisting of a single uninterrupted sound (Boyer, 2003:5).

From the definition above, we can guess that a word can be secluded into several syllables or only one syllable. To strengthen the statements above the researcher provides an explanation from an expert. Roach (1998:67) explains that a syllable can be a single vowel or called as a *minimum syllable*, some syllables possess one onset, some syllables may only have coda without onset, and some syllables may have both of them (coda and onset).

Another definition of the syllable structure comes from Collins (2013). Collins (2013:77) mentions that a syllable has two parts called *Syllable Onse*t and *Rhyme*. Here, *Rhyme* consists of syllable nucleus and syllable coda. Here is an example pf syllable structure adopted from Collins (2013:77).

Figure 2. 1 The structure syllable strands



He also explains that in a syllable. The obligatory element is a *nucleus* and it is usually vowel sound. The common convention in syllable uses small sigma (σ). Then, the branch of the syllable is symbolized by using (O) Onset, (R) Rhyme. As shown in the figure above, Rhyme consists of Nucleus (or Peak) and Coda symbolized by (P) and (Co).

2.2.4.1 Syllable Structure

A shown in the previous part, a syllable consists of onset and rhyme. In other words, a syllable must have a structure established by consonants and vowel. The convention symbol of a consonant is C and the vowel is V. As mentioned before, the structure of a syllable consists of Onset and Rhyme in which those two are established by consonant and vowel. In a syllable, Vowel is known as the *Nucleus* and it is the central part of syllable.

The syllable cat /kæt/ for the example, the structure of this word is CVC (Consonant, Vowel, Consonant). The vowel /æ/ is the nucleus and /k/ and /t/ are on either side of the nucleus. Both consonants are the releasing consonant and the arresting consonant. In a syllable, the word arrested by a consonant is called as closed syllable and on the contrary, the word arrested by no consonant is called open syllable (McMahon, 2002: 113).

The explanation above shows a monosyllabic structure. In this research, the researcher also uses the syllable structure Javanese in Malang isolect to simplify the explanation and give some examples. According to Kurniawati (2018), Javanese in Malang isolect has 5 types of syllable structure. Here is the example of the syllables in words adopted from (Kurniawati, 2018).

Table 2. 8 Consonant and vowel structure in syllable

	Syllable structure	Example of syllable
1	V	[i] in [i . ki]
2	CV	[ku] in [a . ku]
3	VC	[om] in [om . bo]
4	CVC	[lat] in [i . lat]
5	CCV	[mla] in [mla . ku]

The syllable structures above are the possible forms of the word based on the consonant and vowel placement. The finding in her research also proved Yule (2010) statement. Yule (2010:46) mentioned that the general type of syllable in language also has a consonant (C) before the vowel (V) and is typically represented as CV. This syllable structure contributes to analyze the emergence of palatalization in the *Osing* dialect by splitting a word into syllable.

2.2.4.2 Syllabification

Syllabification is part of the phonemic representation. Here, the syllabification helps to separate the sound and find the minimal form of a word. The process in dividing the syllable the analysis of words into syllable cannot be done instantly. Katamba (1996:196) elucidated that in syllabification we need to consider all vowels and some syllabic consonants from the beginning to the final sound. It is used to decide the onset, nucleus and coda position. The important thing to consider in the syllabification is the nucleus because a single nucleus can be a syllable. According to Hayes (2009), syllabification has different principles that depend on the language. the principle of syllabification can be seen through the segmental string of the words (Hayes, 2009:251).

Hayes (2009:252-253) also gave an explanation about the principle of syllabification in general. He elucidated three resemblances that give an approximation to syllabification in most language:

1. Finding the nucleus of the syllable

   The requirement in syllabification is the existence of the peak of sound (nucleus). In the previous part (2.6.1. Syllable Structure), the researcher has explained the formation of syllable that consists of Onset, peak (nucleus) and Coda. The nucleus of a syllable is generally vowel sound or diphthong sound. He also mentioned that the nucleus always has [+syllabic] feature, because sometimes the nucleus can be counted as one syllable.

2. Affiliation of the consonants

   Consonants usually occupy the onset and coda in a syllable. In the 2.6.2, the researcher has shown several combinations of consonants and vowels. The common combination of sounds considered as syllable consists of VCV (Vowel, Consonant and Vowel). The VCV can be syllabified into two possibilities [V]σ [CV]σ, not *[VC]σ [V]σ. Clement and Keyser (cited in Katamba, 1996:162) also have the same concept that V of CV is the underlying form because there are no syllables without V. The link of each C element to the nearest of V is when the C element is on the left side of the V.

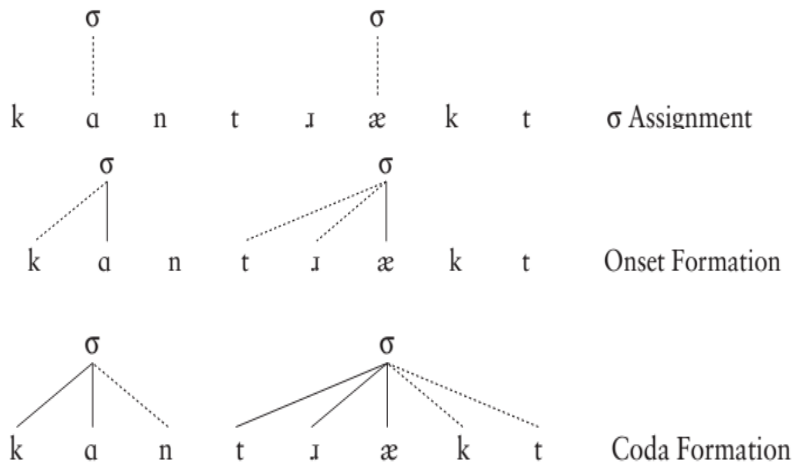
3. The scheme of syllabification

   As mentioned in the sub chapter 2.6, a syllable is constructed by Onset, nucleus and Coda. Hayes (2009) elucidates there are three component rules in a syllable. The first is the σ assignment. It shows the assignment symbol of one on one sound with [+syllabic]. The second is the Onset formation. It shows the joining consonants with the following syllable. A single consonant or consonant cluster occurs in the beginning position. The third is the Coda formation. It is joining the consonants that are not syllabified to the preceding syllable.

From the explanation before, the general principle is quite clear. What is the basic requirement in syllabification process and how to decide the relation between C and V in a syllable. To give a clear understanding, the researcher will give an

example of syllabification process of word *contract* adopted from Hayes (2009:254)

Figure 2. 2 The syllabification process of word 'contract'



2.2.6 Phonological Process

According to Bowen (2011), learning to speak properly is a complicated process that results in typical error pattern as children develop. Leung and Brice (2012:43) also agreed with (Bowen 2011). They explained that children specify the speech when they are learning to talk. Consequently, they produce some sounds error in the developing process. The following table several phonological processes adopted from Bowen (2011) in *https://www.speech-language-therapy.com.*;

Table 2.9 1The example of phonological process

Phonological process	Description	Example
Assimilation	When a consonant sound starts to sound like another sound in the word	“bub” for “bus”

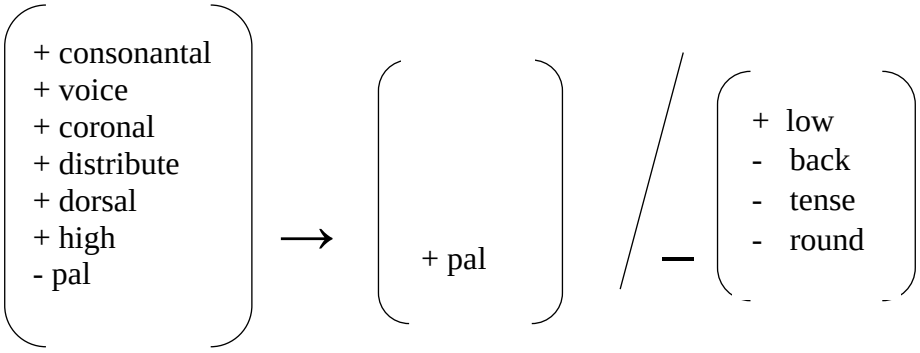
Denasalization	When a nasal consonant like /m/ or /n/ changes to a non-nasal consonant like /b/ or /d/	“doze” for “nose”
Final Consonant Devoicing	When a voiced consonant at the end of a word like /b/ or /d/ is substituted with a voiceless consonant like /p/ or /t/	“pick” for “pig”
Prevocalic Voicing	When a voiceless consonant in the beginning of a word like /k/ or /f/ is substituted with a voiced consonant like /g/ or /v/	“gomb” for “comb”
Coalescence	When two phonemes are substituted with a different phoneme that still has similar features	“foon” for “spoon”
Reduplication	When a complete or incomplete syllable is repeated	“baba” for “bottle”

In this study, the phonological process is palatalization. Palatalization includes in assimilatory process because this process involves the feature sharing between participating segments (Chomsky and Halle, 1968:424). Here the palatalization is marked by subscript symbol [ʲ]. In this study, the researcher has a difficulty to describe the analysis by using the common features. The palatal [j] sound has overlapped features with some consonants. For example, the [t], [d], [c], [ɟ] and [ɲ] have [+coronal] feature as [j] or the [k], [g], [w] sounds overlap [+high]

as [j]. Ćavar (2007) and Kochetov (2016) have same opinion about the palatalization analysis that the purely articulatory approach is offered by [-back] or with the coronal node has not enough explanatory power to account for the whole variety of palatalization process. Myers (1998) stated that it is possible and makes sense to adopt the general strategy in science of maximizing the generality of an explanation and seeking explanations based on independently motivated factors.

Ćavar (2007) mentioned a principle adopted by other linguistics researchers. The principle is the *principle of minimization of confusion*. Here, the researcher wants to be understood, thus, the perceptual output has to be as distinct and clear as possible. For instance, in terms of this principle – the adjacent segments that are too similar features cannot be distinguished from one to another and are avoided. The dissimilation enhances the distinctiveness of adjacent segment. Based on this principle, the researcher uses uncommon feature to indicate the palatalization feature that is [pal]. This symbol feature is adopted from Kochetov (2016). This [pal] feature means that the target sounds have palatal articulation. The following rule shows how to govern the process of palatalization.

/ɟ/ → [ɟʲ]/_ /a/



The first matrix indicates the feature of voiced palatal plosive sound or [ɟ] sound. The second matrix is the sound with the structural change. The last matrix is the environment of the changed sound. The rule shows that the [ɟ] sound is palatalized (change into [ɟʲ]) with which is followed by a low vowel sound [a]. The second matrix shows that the sound feature changes from [-pal] into [+pal] that means the sound is palatalized.

CHAPTER III

RESEARCH METHOD

This chapter contains the methods and approaches aimed to lead the researcher to focus on answering the research questions. The methodology and the approach are done in order to find suitable subject research and collect the data. Here, the researcher divides the elaboration into several stages; there are (1) research design, (2) data and source of the data, (3) data collection method, (4) data processing and (5) data analysis.

3.1 Research Design

This study uses a descriptive-qualitative approach. The availability of the manuscript or spoken tradition is possible to use as the object research (Alwasilah, 1993). Meanwhile, qualitative research is a study that does not use quantification or numerical technique in the data collection (Arikunto, 2013:12). In the first chapter, the researcher has explained implicitly that the goal of this research is to find out the pattern of palatalization in the *Osing* dialect. Therefore, the result of this research is not presented by using numerical data. This reason matches with Strauss et. al (2009:4) that qualitative is a type of research in which the finding is not obtained by calculation or statistical data.

In addition, this research employed the phonology generative approach. This approach is valuable to explain the distinctive features rather focused on phoneme (Simanjuntak, 1990:3-4). Here, the distinctive features provide the feature

of sound produced by the articulatory organ. The distinctive features will be used to classify the sound based on the similar feature into the target and the trigger sounds in palatalization.

For the analysis, the researcher used the phonetic acoustic and articulatory phonetic method analysis. The phonetics acoustic is used to show the properties in the sound production by showing the wave and intensity of the sound. Meanwhile, the articulatory phonetics analysis is an analysis that is done by investigating the unit of sound (phone, syllable, words, sentence, and discourse) to differentiate the sound production based on the organ of speech features (Sudaryanto, 2015:28). This analysis involves the *binary system* and *distinctive feature* to show the findings and create the pattern of palatalization.

3.2 Data and Source of the Data

This research was done in Banyuwangi region in East Java. Banyuwangi is a big city that is also known with its various local cultures and natural resources. One of the famous cultures and the object of this research is the *Osing* dialect used by the inhabitants in their daily communication.

The *Osing* dialect users are spread out in several villages and sub region. Soetoko (1981) pointed out several geographical locations of the *Osing* dialect users. He mentioned that Kemiren is one of the *Osing* dialect users in Banyuwangi. In this study, the researcher focuses on Kemiren village. Kemiren is a village that still preserve the local cultures such as traditional ritual, traditional house, traditional dance and the local language (Javanese with the *Osing* dialect). Kemiren

had been legitimated by the government as the tourism village because Kemiren represents the Banyuwangi tradition and culture.

In deciding the participants, the researcher collected some information from the chief of Kemiren about the population, social and economic condition. Then the researcher matched up the information with the criteria before deciding the participants. The general consideration of the qualification of the informant was proposed by Samarin (1967). His considerations are age, sex, cultural and psychological, and language. Similar to Samarin's qualifications, the researcher also adapted and modified the criteria from Zulaeha (2010). The qualifications of participants in this research consists of 1) women or men 2) aged 30 to 60, 3) born and grown up in their village (Kemiren), 4) speak Javanese (*Osing* dialect) as their mother tongue, and 5) never leave the village or live in other area for a long time (Zulaeha, 2010). All the participants had normal speech organ and they did not have psychological illness.

After deciding the criteria, gaining the information and deciding the participants, these steps spent two weeks before conducting the interview. The interviews were done at the participants' house and their workplace. The candidate of participants in this research is actually ten adult people who had profession as farmers, carpenters, housewives and merchants (retailer). All of the participants were qualified as the subject of the research. However, during the interview there were only 7 participants who were available and showed cooperative manner in the interview. Therefore, the researcher considered that those participants had given

sufficient data for this research and decided to employ the data in continuing process analysis.

3.3 Data Collection Method

In the previous part, the researcher has explained the subject research and some qualification of the participants. In this qualitative research, the object research or the data are some words collected from the participants (Merriam & Tisdel, 2016:6). The data were collected by interviewing the participants and the interviews were recorded. Recording is one of the data collection techniques by tapping the conversation between the participants and the interviewer (Sudaryanto, 2015: 204).

The interview was done by the researcher and his assistant. The researcher was helped by an assistant who was fluent with the *Osing* dialect and had been given some direction from the researcher about the procedure and the target data in the interview process. To support the assistant, the researcher made several questions about daily activity and word lists (Javanese with the *Osing* dialect) to facilitate the interview process. The interviews were done by using Javanese with *Osing* dialect. For each participant, the interview was done for more than two times, it depended on the participants' conditions. During the interview, the use of Javanese with *Osing* dialect is very helpful in the interview because the participants became more talkative to the researcher rather than using the Javanese dialect.

In addition, the researcher also applied the notetaking techniques as the continuing process after the recording process. Notetaking can be done during the recording process or after the recording process by using certain tools that support

providing data accurately (Sudaryanto, 2015: 204). This technique aimed to keeps the researcher focus on the collecting the data, emphasize and organize the information.

3.4 Data Processing

There are several processes in the data processing that had been done by the researcher. The first data are the recording of the interview with the participants. The recording file is the raw data of this research. The researcher had to eliminate some words in the conversation and mark some words pronounced by the participants containing palatalization.

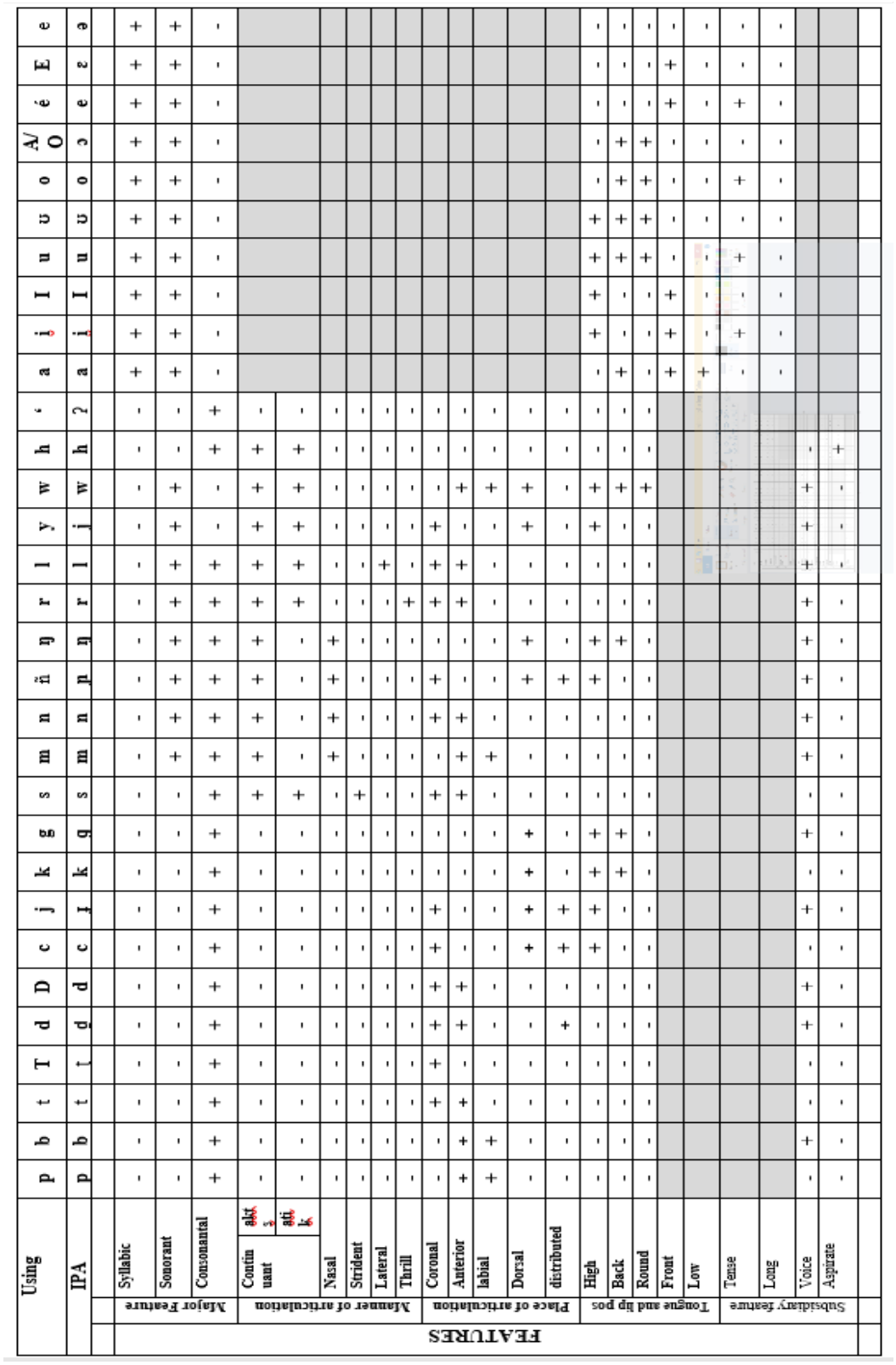
The object of this research is some words containing palatalization. The selected data in this research need to be transcribed. Before the transcription process, the researcher did some treatments such as edited (cutting the recording and converting the file), arranged, corrected and re-type in order to facilitate the explanation (Idrus, 2009:147). In the second chapter, the researcher has shown several phones that assumed as the target palatalization such as <b, d, dh, g, j, l, m, n, r, y, w> based on (Ali, 2002: vi-vii). In this study, the data are grouped based on the appearance of the target palatalization. The researcher had specified the raw data by eliminated some words in which there are no palatalization phenomena. The researcher collected 644 words with the transcription as the selected data.

Here, the data were specified into several words based on the *target* palatalization category then these data were transcribed by using IPA symbols. The researcher had transformed the *Osing* phonetic symbol into IPA. The

transformation is valuable to the analysis by using the convention symbols. In addition, the transformation is valuable to analyze the distinctive features of the sounds. IPA is the international convention symbols in phonetics transcription used by many researchers especially in phonology and phonetics studies. The IPA symbols are completed by several diacritics symbols to modify the consonant and vowel sounds. For these reasons, the researcher applied the IPA symbols to transcribe the *Osing* words pronunciation as the data in this research. The transformation symbols are also completed by the distinctive feature of the sounds.

The table of the *Osing* phonetics is adopted from Schane (1992), Simanjuntak (1990), Sasangka (2011) in http://www.linguistics.ucsb.edu/ to create the table features of Sanskrit and Javanese phonetics. The researcher shows the transformation of the *Osing* phonetics symbols into IPA symbols. The table only shows the original feature of the sound. This table supports the researcher in providing the distinctive features. It is useful for this analysis, considering that *Osing* is a dialect from the Javanese language. Therefore, the distinctive features of the *Osing* phonetics and the Javanese phonetics should not have significant differences. The table is on the next page.

Table 3 1 The distinctive features of Osing and IPA symbols



3.5 Methods of Analyzing Data

This research analyzes the appearance of palatalization based on the word transcription of the *Osing* dialect. The method of this research is the *articulatory phonetic*. This method is valuable to make the classification of the sounds in palatalization. Sudaryanto (2015:28) defined that this method deciphers the capability to differentiate the linguistics feature of a linguistic unit. The linguistics unit here can be sounds, syllables, words, sentences and discourses. He also provided several values on why this method should be conducted. This method is beneficial to find the change of vocal cord, and to find the other parts of the organ of speech except for the vocal cords. In this research, the researcher focuses on the sounds and the words that have the palatalization phenomena in pronunciation. The result of this method is aimed to differentiate the vowels and consonants features that establish the environment of palatalization. In addition, the researcher also employed the referential technique. This technique aimed to explain phonological process especially the process of palatalization in *Osing* dialect.

In chapter 4, the researcher will show the findings of the research. The presence of palatal sound was analyzed by using PRAAT software. PRAAT software is used to analyze the waveform and spectrum of the words containing palatalization to see specifically the position and waveform of the palatalization. Based on the data, the researcher also found that palatalization appears in different types.

The researcher conducted the syllabification analysis to see the environment of palatalization from the data transcription. The researcher classified the data based on the emergence of palatalization that appear in initial and middle positions. During the analysis, the researcher wanted to consider and determine the minimal segment that establish the palatalization in the *Osing* dialect.

The syllabification result used to conclude the minimal requirement if the palatalization environment. Then, the researcher did an analysis to find out the pattern of palatalization. In this process, the researcher combined the distinctive features of the *Osing* sounds and the syllabification process to determine the pattern of palatalization. The researcher considered that the data consist of some words which have one or more syllables. Here, the researcher also assumed that palatalization could be appeared more than once times in a single word.

CHAPTER IV

FINDINGS AND DISCUSSIONS

This part consists of two sections. The first section contains the finding of the palatalization phenomena in the *Osing* dialect. The researcher provides the explanations to answer the research questions in the first chapter. The explanations include the form of palatalization, the target of palatalization, the trigger of palatalization and the syllabification analysis related to palatalization. The second section is the discussion. Here, the discussion focusses on explaining the implementation of the finding pattern of palatalization in the *Osing* dialect.

4.1 Findings

There are 644 data collected in this research. Here, the data presentations are categorized by the combination of target and trigger palatalization. The list displays 2 main parts that contain the word (written form) and the phonetics transcriptions. Here the researcher does not show all the data but only uses several data to represent the whole data in Appendix 1.

In the previous chapter based on Chen (1973), Bhat (1978) and Bateman (2007), the palatalization involves two sounds called *Target* and *Trigger*. In the previous article, there are no researchers of the *Osing* who mentioned about the trigger sounds. Of the data, the researcher found that the palatalization happens

when some consonants (as the targets) are followed by certain vowels (as the triggers). In addition, the researcher also found out that there are some patterns of palatalization in the *Osing* dialect. The palatalization in the *Osing* dialect is not based on the target sounds only but also considers the adjacent sound of the target sound (trigger vowels). The palatalization only happens, if the target consonants are followed by the trigger vowels not vice versa.

To answer the research questions, this chapter is divided into four sub subchapters. The first sub chapter answers the form of palatalization. The data were analyzed by using PRAAT software. The second sub chapter answers what is the target sounds in *Osing* palatalization. The third sub chapter is explained about the trigger sounds and the fourth sub chapter is about the relation of syllabification and palatalization in order to find the pattern of palatalization.

4.1.1 The Form of *Osing* Palatalization

To prove the palatalization form in the *Osing* dialect, the analysis of phonetic acoustic must be conducted. In the previous section, the researcher mentioned that palatalization in *Osing* dialect is the changing of the target sounds into palatalized forms. In the real condition, the pronunciation of the *Osing* palatalization sounds like additional [i] after the target rather than the [j] sound. Based on the tongue position, the vowel [i] is achieved by a narrow constriction of the tongue body at the palatal region and it is the same as [j] sound. The differences between [i] and [j] in pronunciation are hard to discover without supporting tool.

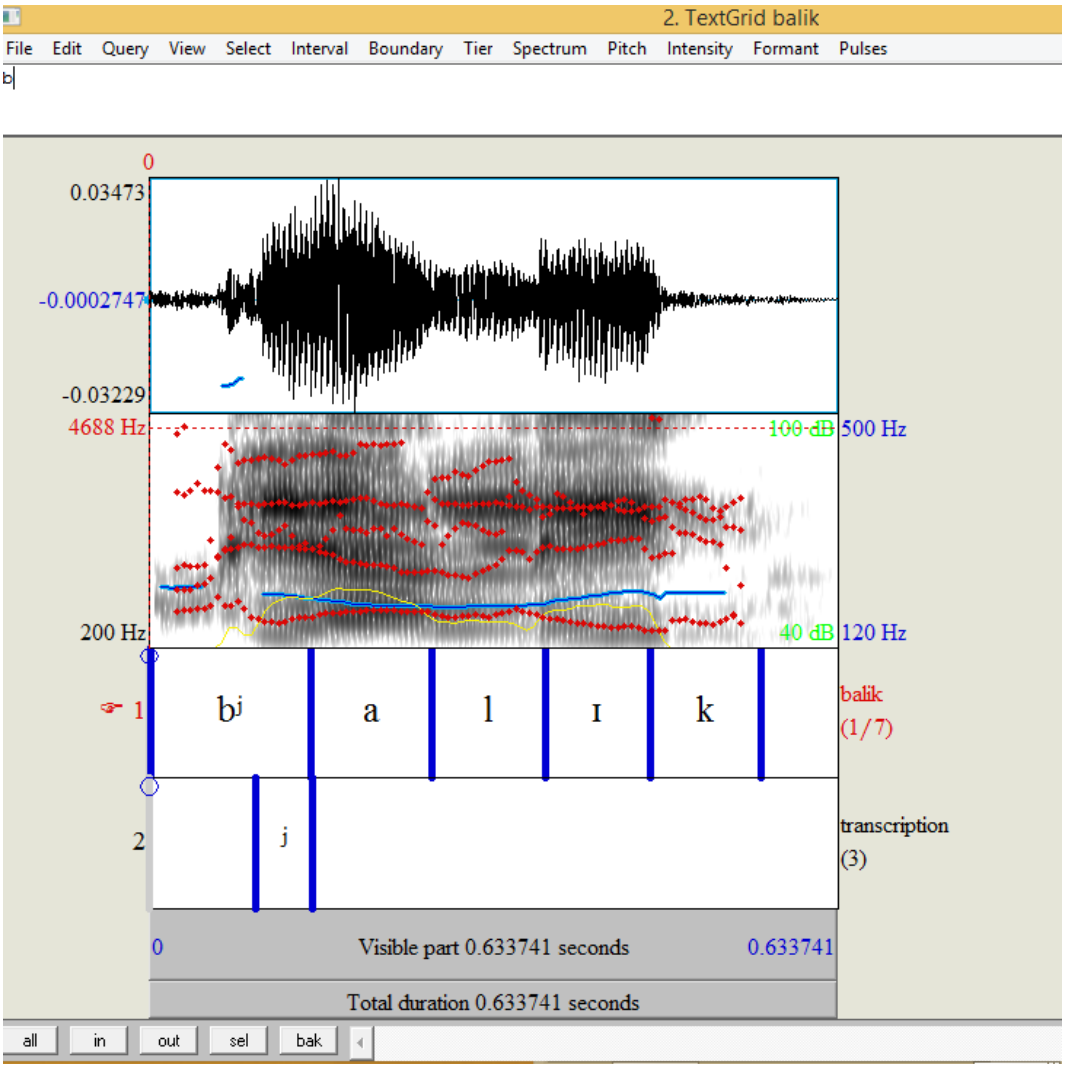
To find out the phonetic acoustic form of palatalization, the researcher employed PRAAT software to show the spectrum and wave during the sound production to find out the differences between [i], [I] and [j] sounds. The researcher can analyze several aspects of the sound in the palatalization such as the spectrum, the length, the sound density and the sound intensity. These aspects can show the differences between [i], [I] and [j] based on the sound wave and the spectrum.

The researcher took several examples from the data collection and compared the appearance between [i], [I] and [j] sounds. The important point here is to prove the palatalization form and to differentiate those sounds based on the intensity, the length (duration) and the waveform. The [i] and [I] sounds tend to have a longer duration in pronunciation because they function as the peak in the syllable that usually has stressed intonation. The stress in [i], [I] and [j] sound shows a different duration, especially in the palatalization case. The first sample is the word *balik* pronounced as [bʲalIk]. The analysis below shows the spectrum of the [I] and [j] sounds.

Before the analysis, it needs to understand the different settings in the software. This setting is an adjustment to specify the process analysis in finding the researcher's needs. The common settings are done in the *spectrum*, *pitch,* and *intensity*. Here, the *spectrum* was set in the maximum frequency of 5000 Hz and the minimum frequency was 200 Hz. The *pitch* was restricted in 120 Hz – 500 Hz. It is used to differentiate the frequency of female and male sounds. The pitch of man's voice is about 50 – 250 Hz and woman is 120 - 500 Hz. (Ladefoged and Disner, 2012: 94-95). This setting affects the presentation analysis because of the

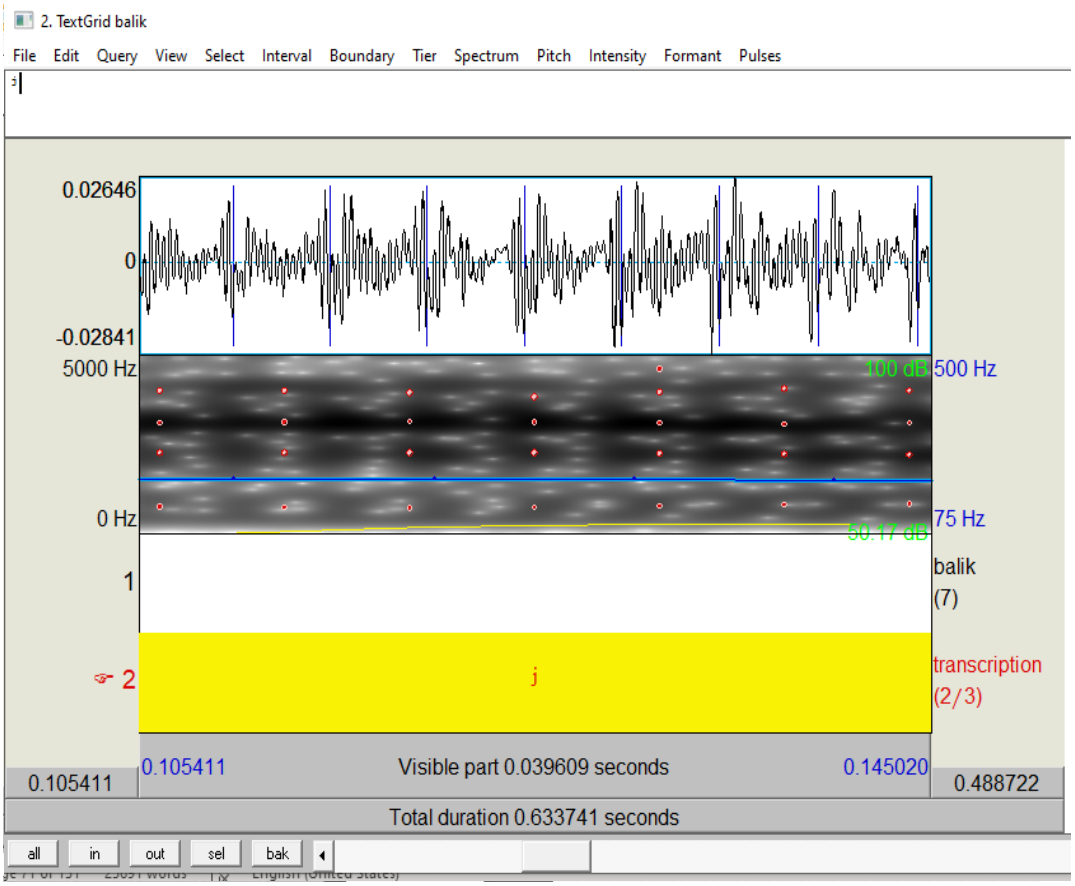
larger scale influences the pixel of the spectrum. Whereas the narrow scale presents a specific and accurate analysis. For the *intensity* setting, the researcher used the standard measurement between 40 dB – 100 dB. The researcher also added the *Text grid* menu in order to give a clear information of the sound position. In this menu, the researcher can combine the spectrum analysis and the marked position of sound by using phonetic symbols. Below is the analysis of palatalization in the *Osing* dialect.

Figure 4. 1 The PRAAT analysis of word 'balik'



On the figure, there are three parts that need to consider. The first column is the *wave* column (waveform), the second is the *spectrum* column (spectrogram) and the third is *Text Grid*. In the spectrum column there are yellow contour, blue contour and red dots. The yellow lines show the intensity of sound. The blue contour shows the pitch of sound that is the perceptual correlate of fundamental frequency which is the rate of vibration of the vocal folds (in speech). And the red dots show the formant to show the spectral peaks of sound spectrum, of the voice of a person. On the spectrogram, the indication of palatalization emergence is shown by the different pitch and intensity between [b] sound and [a] sound. The [b] sound has 206.293933 Hz and the intensity is 44.338949 dB. The [a] sound has pitch 198.941243 Hz and intensity 54.911420 dB. The oddity happens that the consonant has higher pitch than vowel whereas it should be the vice versa. Based on the figure above, we can also see that there is a big curve made by intensity contour after the [b] when it is reaching the [a] sound. This curve indicates a different sound between the [b] and [a] sound. The spectrogram shows darker spectrum in [b] that designates higher energy densities in [b] sound pronunciation. Here, the higher densities in [b] is caused by the existence of palatal sound [j]. To provide the evidence, the researcher has compared based on the waveform of [j] and [i] sound.

Figure 4. 2 The [j] sound in word *balik*



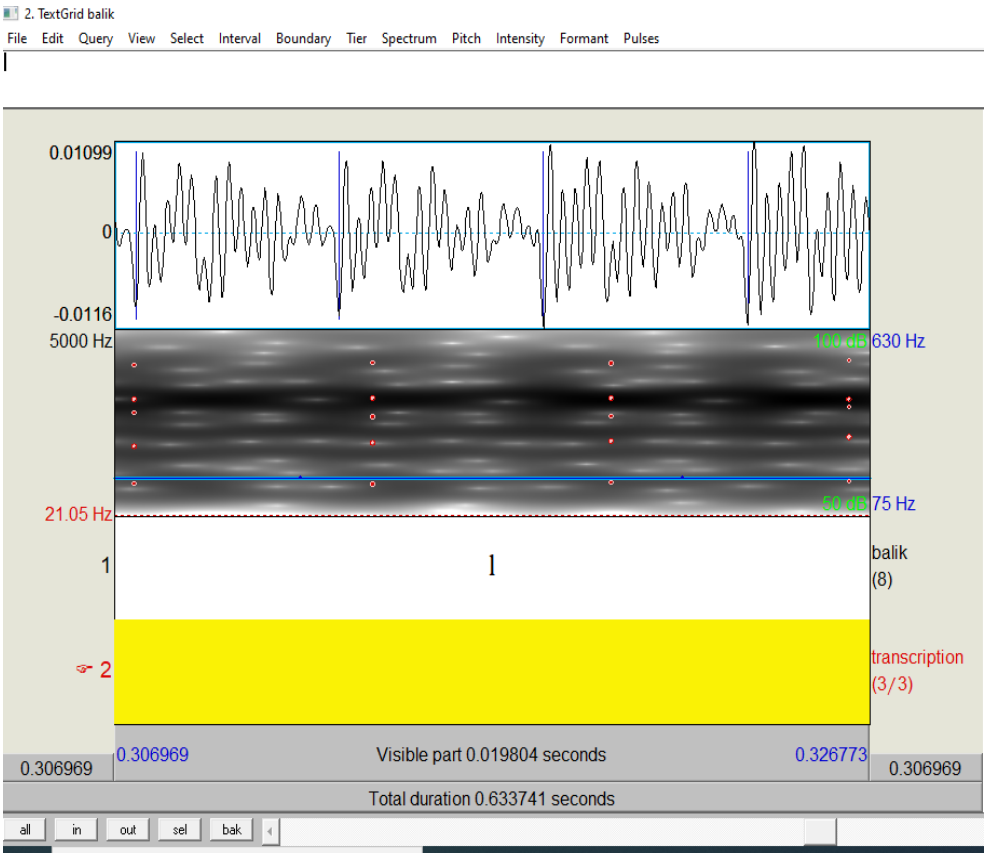
Of the figure above, the word *balik* has the total duration about 0.633741 seconds as shown in the figure 4.1. This word consists of two syllables *ba·lik*. The palatalized form appears in the first syllable that is the [bʲ] followed by [a] (see figure 4.1). In figure 4.1, the researcher has marked where is the palatal [j] position. The duration of palatalized form is shown in the figure 4.2 after zoomed in for several times and present the palatal sound [j] is pronounced in 0.039609 seconds.

The wave sound in the first syllable shows that [b] has low and short burst wave compared to [a]. The burst wave after [b] sound suddenly rises that indicates the next sound. The next region shows different waveform because those waveforms reach different peak frequency. The waveforms are the [j] and [a] as

marked in the text grid. This [j] sound has maximum pitch in 206.293933 Hz. Whereas the wave of [a] sound has maximum pitch in 198.941243 Hz. The intensity of [j] sound that has value in 52.746362 dB whereas the [a] sound has intensity value in 54.911420 dB. Based on the pitch value and the duration of pronunciation, the [j] sound is

In the second syllable in word *balik*, the vowel /i/ is pronounced as [I] sound (see figure 4.1). The researcher provided this sound because this sound also has the same feature as [i] and [j] that are [+high]. In the figure 4.5, it shows clear evidence that wave forms between [j] and [I] are different. We can consider that the wave of [j] sound is shorter and higher than the wave of [I] sound. The duration of the [I] sound is 0.112468l seconds. Here is the figure of [I] sound in word *balik*.

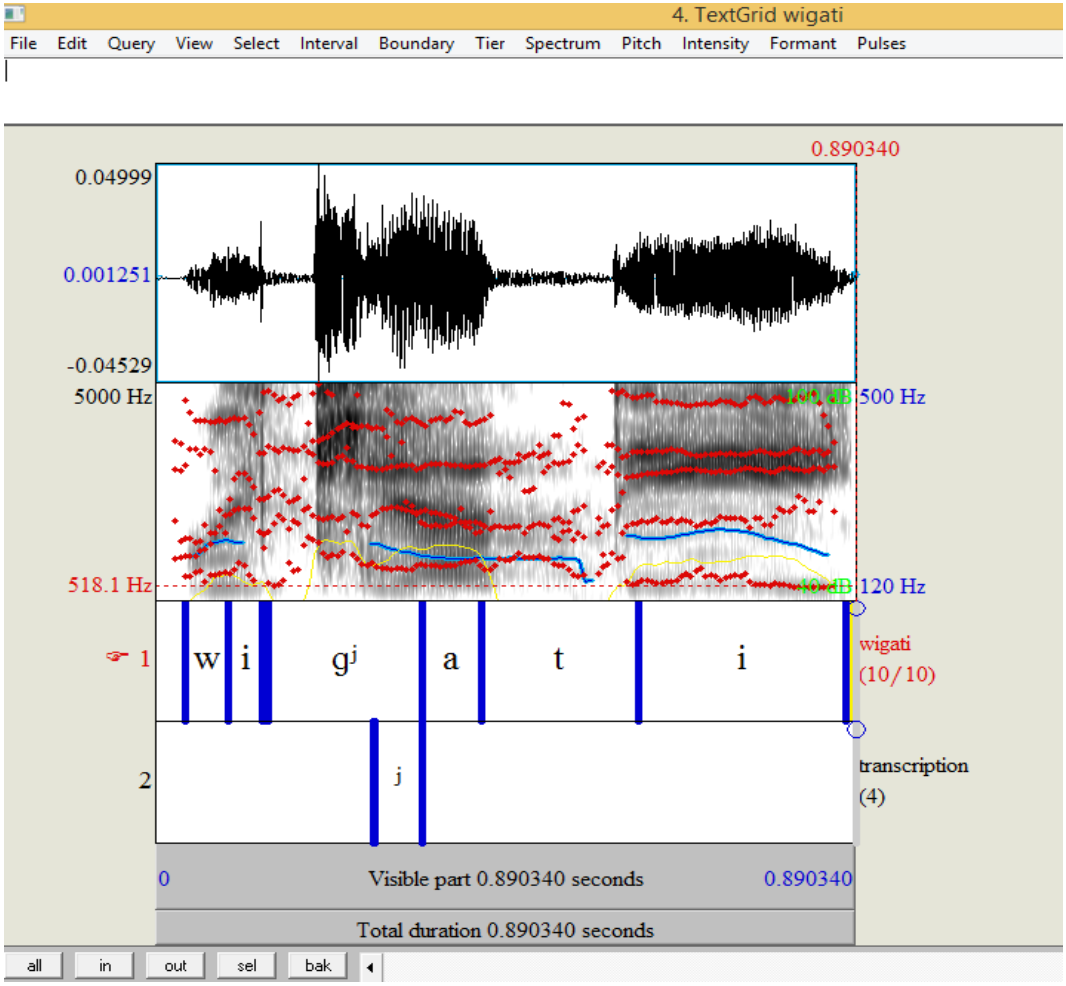
Figure 4. 3 The [I] sound in word *balik*



Of the figure, the wave form and the spectrum of [I] sound clearly showed the differences in length (duration) with [j]. The waveform of both sounds also indicated the different periodicity. The maximum pitch of [I] sound is 210.358328 Hz and the intensity of [I] sound is 50.795248 dB. Based on this analysis we can consider that [I] has lower in intensity but it is higher in pitch value. If we compare the figure in 4.2 and 4.3 on the waveform column, we can consider the periodicity of both sounds. Periodicity is repetitive segment constructed by the smallest repeating segment or cycle.

The next sample is the word *wigati.* In this analysis, the focus is on the [j] sound position and the comparison between [j] and [i] sounds. The word *wigati* has three syllables *wi· ga·ti.* Similar with the previous analysis, the focus is to consider the palatalization form and compare the [j] sound and [i] sound. In this sample, the palatalization appears in the middle syllable *ga.* The [g] sound is the target and it is followed by [a] sound as the trigger.

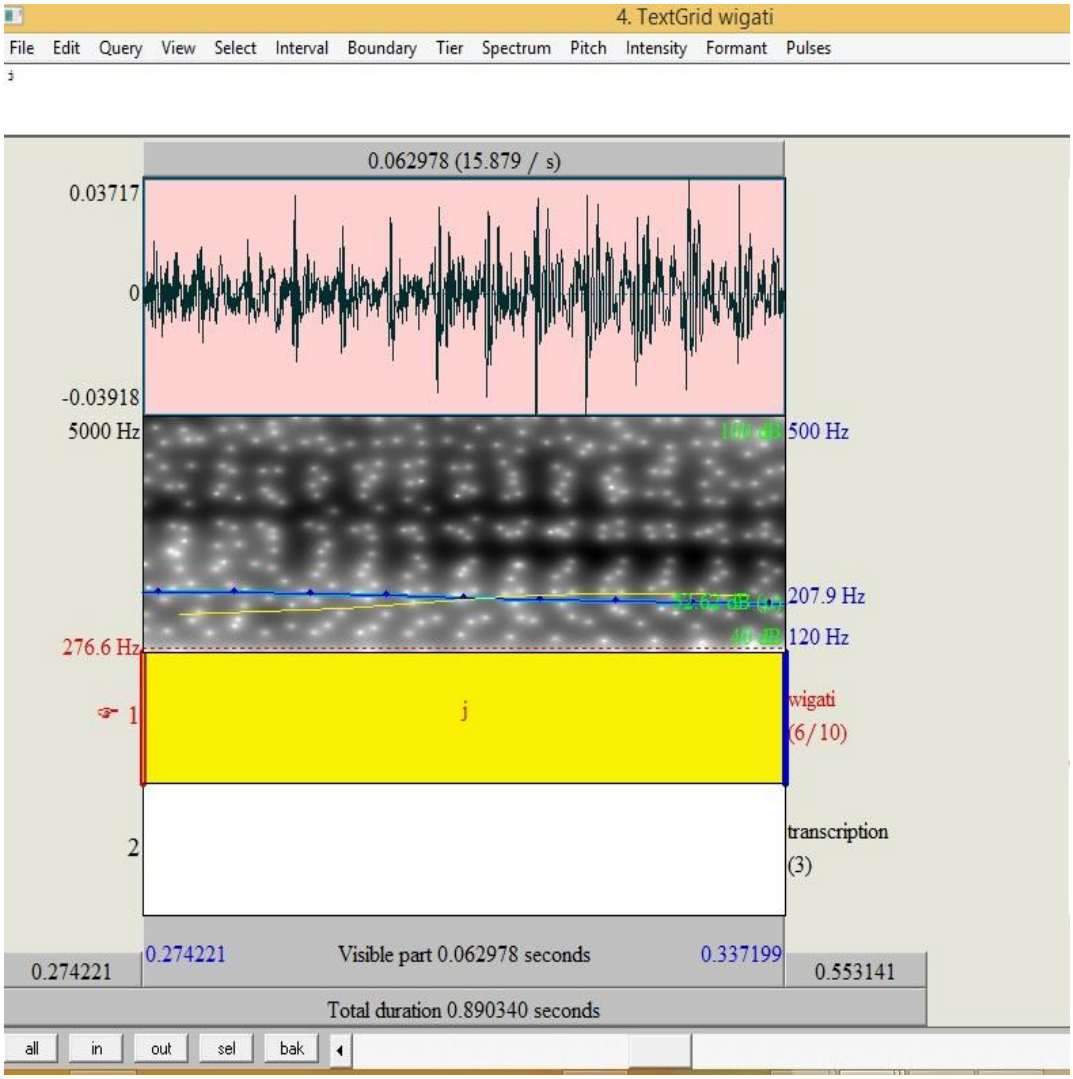
Figure 4. 4 The PRAAT analysis of word 'wigati'



On the analysis, the indication of palatalization emergence is shown by the different pitch and intensity between [g] sound and [a] sound. The [g] sound has 213.385477 Hz and the intensity is 81.986221 dB. The [a] sound has pitch 196.992048 Hz and intensity 81.101758. In this data, the intensity contour seems burst raising and create high curve. It is caused by the loud voice when the data were collected. However, it does not change the focus in the analysis. The [g] sound has the same phenomenon as [b] which is the consonant has higher pitch than vowel. Based on the figure above, we can also see that there is a big curve made by intensity contour

after the [g] when it is reaching the [a] sound. This curve indicates a different sound between the [g] and [a] sound. The spectrogram shows darker spectrum in [g] that designates higher energy densities in [g] sound pronunciation. Here, the higher densities in [g] is also caused by the existence of palatal sound [j]. To provide the evidence, the researcher has compared based on the waveform of [j] and [I] sound.

Figure 4. 5 The [j] sound in word *wigati*



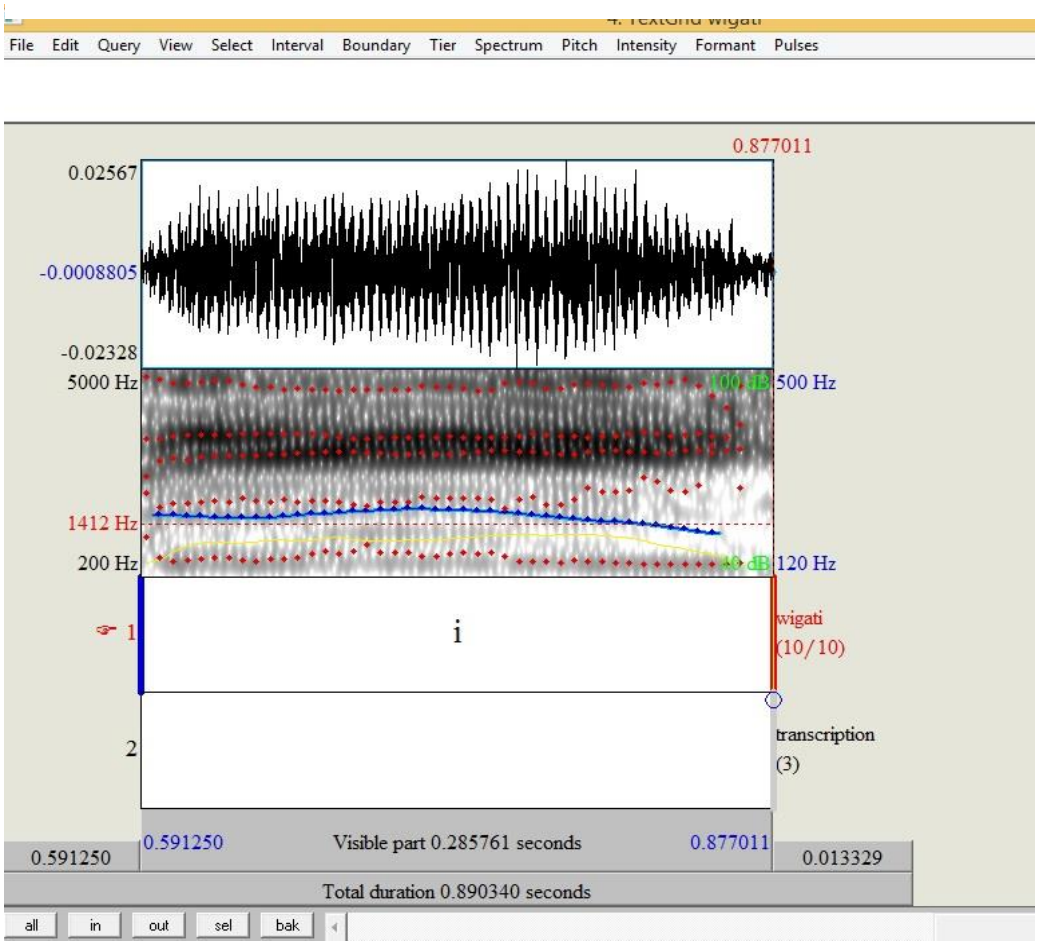
Of the analysis, the word *wigati* has the total duration 0.890340 seconds. The [j] sound is pronounced in 0.062978 seconds. The wave form of [g] sound

shows a closure form after the syllable */wi/*. The closure region is very low wave that indicates a silent. The duration of palatalized form is shown in the figure 4.5 after zoomed in for several times and present the palatal sound [j] is pronounced. The pitch value of [j] is 216.922515 Hz and the intensity 80.467819 dB. The next region shows different waveform because those waveforms reach different peak frequency. Then, the wave of [g] sound falls gradually before it rises into the next sound [j]. The duration of [j] sound is longer than the [j] sound in word *balik*. The minimum sound that can be analyzed here is in range 0.005 seconds but there is no limitation about the longest duration of a single sound. In the waveform, it shows the waveform of two sounds as marked in the text grid. The density and intensity contour also show different form. The spectrum of [j] are darker than the [a]. It means that both sounds have the different energy density between both sounds. There are also two curves in the intensity contour that indicate the appearance of [j] and [a] sounds.

The [i] sound in last syllable is the object analysis here. The [I] sound in the first syllable is the same with [I] in *balik*. The wave of the first [I] (-tense) and the [i] (+tense) is different. The analysis shows that [i] sound in the word *wigati* has long duration although it just a single sound. The duration of [i] sound is 0.285761seconds. The maximum pitch of [i] sound is 243.074721Hz. The wave and the spectrum [i] sound also has high energy density similar with the [j] sound but [i] shows a little bit darker spectrum than [j]. On the figure 4.6, the intensity value of [i] sound is 78.046628 dB. The intensity contour also does not show other

significant curves that indicate the appearance of more sounds. The following is the analysis of [i] sound in word *wigati.*

Figure 4. 6 The [i] sound in word 'wigati'



Based on the analysis of the words *balik* and *wigati.* The palatalization in Using is the palatal [j] sound only. It is proved by the different waveform between [i], [I] and [j]. Other evidences are the different density in the spectrum of [j] sound and [i] sound, and the existence of the intensity contour after the target sounds. The [j] sound shows darker spectrum between the target and the trigger sounds than the

[i] or [I] sounds. The darker spectrum means [j] has obstruent in the production that needs strong energy to produce.

4.1.2 Targets of *Osing* Palatalization

In the previous part, the researcher has mentioned about some target consonant taken from Ali (2002) and other researchers of *Osing* dialect. From 20 consonants in the *Osing* dialect, the researcher found 11 consonants which they are identified as palatalization targets. Before analyzing the target consonants, some explanation about the consonant distribution is needed to remember the exposure of *Osing* phonetic symbols and IPA symbols as shown in the third chapter (see table 3). Overall consonants in *Osing* phonetics are [p, b, t, T, d, D, g, h, c, j, k, ‘, l, m, n, ŋ, ñ, r, s, w, y] (see table 3).

Those phonetic alphabets are almost completely the same with IPA symbols but some of them are different. The same phonetics symbol between *Osing* and IPA are [p], [b], [t], [c], [k], [l], [m], [n], [ŋ], [r], [s], [w], [h]. These *Osing* phonetic symbols also have the same feature as [b], [p], [h], [k], [l], [m], [n], [ŋ], [r], [s], [w] in IPA. The different phonetics symbols are [T,d, D, g, j, ‘, ñ, y]. They are the same with [ʈ, ɖ, d, ɡ, ɟ, ʔ, ɲ, j] in IPA. The feature of these sound can be seen in table 3 and appendix 2.

As mentioned in the chapter 2, Bhat (1978) and Chen’s (1973) have same argument that the consonants from back to front or all places of articulation are possible to be palatalized and the chosen sounds are considered as the target palatalization. Based on their argument and the data, the researcher found that the

consonants in all place articulations of *Osing* have one representative as target sounds in palatalization.

From the table 3 in the third chapter, we can consider that all consonants signify to have different features. The major feature, manner of articulation and the place of articulation shows different marked on their feature. From all consonants in *Osing* phonetics, the researcher found specific feature that can categorize some consonants as the target palatalization. The specific feature does not exist in the primary features but it is on the subsidiary features. In the subsidiary feature there are 4 aspects that are *tense, long, voice* and *aspirate*. All the target consonants in *Osing* palatalization have [+ voice]. The [+voice] means that the sound is produced by involving vocal-fold. The sounds produced while the vocal folds are vibrating. The researcher concluded that this [+voice] feature is the reason of the categorization of target consonants in *Osing* palatalization. Because, other consonants with [-voice] are not palatalized.

Table 4. 1 The target consonants in Osing palatalization

	1	2	3	4	5	6	7	8	9	10	11
Symbols	b	d̪	d	g	ɟ	l	r	m	n	ŋ	w

These target consonants have two ways of pronunciation. The first pronunciations are the original sounds as [b], [d̪], [d], [g], [ɟ], [l], [r], [m], [n], [ŋ] and [w]. The second pronunciations are [bʲ], [d̪ʲ], [dʲ], [gʲ], [ɟʲ], [lʲ], [rʲ], [mʲ], [nʲ], [ŋʲ] and [wʲ] as presented in the subchapter 4.1.1. The palatalization sounds only happen in certain pattern and in this part the researcher only presents the distinctive

features of the target sounds with the non-target sounds. The researcher also gives the comparation features and examples of the target and some non-target sounds. The compared sounds are [b] - [p], [d] - [t], [g] - [k], [c] – [ɟ], [ŋ] –[ɲ], and [w] – [j]. the rest non-target sounds are not explained such as [s] and [h] because they have many differences based on their features and both of them are *voiceless*.

4.1.2.1 Palatalization of [b]

Of the eleven target sounds, the researcher starts to explain the target [b] sound in *Osing* palatalization. The [b] sound is *voiced bilabial plosive*. This sound is produced in labial position. Based on the distinctive features, the [b] sound has similar features as the [p] sound based on the place of articulation. The [p] sound is *voiceless bilabial plosive*. the list below shows and compares the distinctive features of [b] and [p].

Table 4. 2 The list features of [p] and [b]

[p]	voiceless bilabial plosive	stop	+ consonantal + labial + anterior
[b]	voiced bilabial plosive	Stop	+ consonantal + voice + labial + anterior

On the list, [b] has the same place feature of articulation as [p]. The table feature shows that both sounds have the same features as [+consonantal], [+labial] and [+anterior] but the palatalization only happens in [b] sound. As mentioned before, all the target sounds in *Osing* palatalization have a specific feature that is [+voice]. On the list features, the [b] sound has [+voice] feature that differentiates

[b] from [p] sound. The data palatalization of [b] sound are 125 words for the complete data see appendix 1. To prove the palatalization form, the researcher provides several data to contrast the both sounds.

(1)	The example of [b] sounds		The sample of [p] sound	
	badheg	[bʲadəg̟]	bapak	[bʲapak]
	badhèk	[bʲadɛk]	dapak	[d̪ʲapaʔ]
	balik	[bʲalık]	padhang	[padʲaŋ]
	cabang	[cabʲaŋ]	paribasan	[paribʲasan]
	dubang	[d̪ubʲaŋ]		

On the data, the [b] sound is consistent to be palatalized and the [p] is not palatalized. The word *bapak* is pronounced [bʲapak] and *paribasan* is pronounced [paribʲasan]. The palatalization only happens in [b] sound. The [b] sound changes into [bʲ] when the [b] is followed by a vowel sound. The [p] sound is unpalatalized although it is volowed by the same vowel sound as [b] sound.

4.1.2.2 Palatalization of [d]

The next explanation is the distinctive feature of [d] sound. The [d] sound is *voiced alveolar plosive*. According to the place of articulation, the [d] sound has the same feature with [t] sound. The [t] sound is *voiceless alveolar plosive*. Similar with [p] and [b] sounds, the [d] and [t] sounds have close similarities in the distinctive features. However, the [t] sound is *voiceless or* [-voice] whereas [d] sound is *voice*d or [+voice]. The list of distinctive features between [d] and [t] is on the following table.

Table 4. 3 The list features of [t] and [d]

[t]	voiceless alveolar plosive	Stop	+ consonantal + coronal + anterior
[d]	voiced alveolar plosive	Stop	+ consonantal + voice + coronal + anterior

In the table, [d] has the same place feature of articulation as [t]. The table feature shows that both sounds have some similar features as [+ consonantal], [+coronal] and [+anterior] but the palatalization only happens in [d] sound. On the list feature, the [d] sound has [+voice] feature that [t] sound does not have. The data palatalization of [d] sound are 70 words and for the complete data see appendix 1. the evidence of palatalization form, the researcher provides several data to contrast the both sounds.

(2)

The example of [d] sound		The example of [t] sound	
dhacin	[dʲacin]	berasta	[bərʲastɔ]
dhahar	[dʲahar]	tabrak	[tabrʲak]
dhanyang	[dʲanjaŋ]	tambal	[tambʲal]
dhaplang	[dʲaplaŋ]	tebas	[təbʲas]
dhawet	[dʲawət]	tibané	[tibʲane]

Of the data, [d] sound is consistent to be palatalized as [b] sound and the [t] is not palatalized or unpalatalized. The word *Dhaplang* is pronounced [dʲaplaŋ] and the word *Tabrak* is pronounced [tabrʲak]. The palatalization only happens in [d]. The [d] sound is palatalized into [dʲ] before a vowel sound. Compared to the [t] sound, the [t] sound is consistent unpalatalized although it is followed by various vowels.

4.1.2.3 Palatalization of [d̪]

Similar with [d] and [t], this sound is also produced in coronal position. This sound is symbolized as [d] and added by the diacritic symbol (̪) that means dental. The symbol is [d̪] and it is *voiced dental plosive*. According to the place of articulation, the [d̪] sound as [d]. Both of them have similar features but the [d̪] sound has additional features. The differences between [d̪] and [d] is on the [+distributed] feature. The distributed feature of [d̪] sound involves the dental position in its pronunciation. Here, the [d̪] sound is also the target consonant in *Osing* palatalization. The list below is the distinctive features of [d̪].

Table 4. 4 The list features of [d̪]

[d̪]	voiced dental plosive	Stop	+ consonantal + voice + coronal + anterior + distributed

The [d̪] sound has the same feature of articulation as [d] sound. The feature shows that [d̪] has some similar features with [d] as [+ consonantal] [+voice] [+coronal] and [+anterior] and the palatalization also occurs in [d̪] sound. Although, the [d̪] sound has [+ distributed] feature, but it is still palatalized. On the list feature, the [d] and [d̪] sound have [+voice] feature. The data palatalization of [d̪] sound are 49 words. The following list is the example palatalization of [d̪] sound.

(3) The examples of [d̪] sound

dalan	[d̪ʲalan]
damak	[d̪ʲamaʔ]
dangu	[d̪ʲaŋʊ]
dèrèng	[d̪ʲɛrɛŋ]
dèlèh	[d̪ʲɛlɛh]

Of the sample data, [d̪] sound is consistent to be palatalized. The word *dalan* is pronounced [d̪ʲalan] and the word *dèrèng* is pronounced [d̪ʲɛrɛŋ].]. The [d̪] sound is palatalized into [d̪ʲ] before two vowel sounds. The other examples on the list also show the same environment in the palatalization of [d̪] sound.

4.1.2.4 Palatalization of [ɟ]

The next explanation is the distinctive feature of [ɟ] sound. The [ɟ] sound is *voiced palatal plosive*. According to the place of articulation, [ɟ] sound is also produced in coronal position as [c]. The [c] sound is *voiceless palatal plosive.* Both of them have similar features and they are produced in palatal position. The differences between [ɟ] and [c] is in the subsidiary feature. The list on the next page shows the distinctive features of [ɟ] and [c].

Table 4. 5 The list features of [ɟ]

[c]	voiceless palatal plosive	Stop	+ consonantal + coronal + distributed + dorsal + high
[ɟ]	voiced palatal plosive	Stop	+ consonantal + voice + coronal + distributed + dorsal + high

In this part, [ɟ] has the same feature of articulation as [c]. Both of them also have the same features as [+ consonantal] [+coronal] [+distributed] [+dorsal] and [+high]. However, the [ɟ] sound has [+voiced] feature whereas the [c] is voiceless or [-voice]. The palatalization only happens in [ɟ] sound. Here the researcher collected 76 words about the palatalization of [ɟ] sound. Below, the researcher provides several data to contrast the both sounds.

(4)

The examples of [ɟ] sound		The examples of [c] sound	
ajang	[aɟʲaŋ]	bancar	[bʲancar]
jamak	[ɟʲamaʔ]	cadhas	[cadʲas]
pejah	[pəɟʲah]	caglak	[caglʲaʔ]
jantur	[ɟʲantʊr]	gacah	[gʲacah]
janur	[ɟʲanʊr]	gancang	[gʲancaŋ]

On the sample above, [ɟ] sound is consistent to be palatalized and the [c] is not palatalized. The word *Pejah* is pronounced [pəɟʲah] and *Gancang* is pronounced [gʲancaŋ]. The palatalization only happens in [ɟ] that changes into [ɟʲ]. The [ɟ] sound

changes into [ɟʲ] when the [ɟ] is followed by a vowel sound. The [c] sound is unpalatalized although it is volowed by a vowel sound.

4.1.2.5 Palatalization of [g]

The following target consonant is [g] sound. The [g] sound is voiced velar plosive. According to the place of articulation, the [g] sound is produced in *velar* position as [k]. The [k] sound is *voiceless velar plosive*. Both of them have similar features and they are produced in velar position. The differences between [g] and [k] is in the subsidiary feature. The list below shows the distinctive features of [g] and [k].

Table 4. 6 The list features of [g] and [k]

[k]	voiceless velar plosive	stop	+ consonantal + dorsal + high + back
[g]	voiced velar plosive	Stop	+ consonantal + voice + dorsal + high + back

The [g] sound has the same feature of articulation as [k]. Both of them have the same features as [+ consonantal] [+dorsal] [+high] and [+back]. From these two sounds, it is the [g] sound which has [+voiced] feature. The palatalization only happens in [g] sound. Here the researcher collected 88 words to provide the palatalization of [g] sound. Here, several data to contrast the both [k] and [g] sounds.

(5)

The example of [g] sound		The example of [k] sound	
gabel	[gʲabəl]	bakar	[bʲakar]
gabes	[gʲabəs]	bangkel	[bʲaŋkəl]
gèntèr	[gʲɛntɛr]	dèngkèk	[ɟʲɛŋkɛʔ]
tegal	[təgʲal]	kadhal	[kadʲal]
wigati	[wɪgʲati]	kembang	[kəmbʲaŋ]

The [k] is not palatalized meanwhile the [g] sound is consistent to be palatalized. The word *Gabes* is pronounced [gʲabəs] and *Wigati* is pronounced [wɪgʲati]. On the other hand, the word *Kembang* is pronounced [kəmbʲaŋ] and *Bangkel* is pronounced [bʲaŋkəl]. the same with the previous target consonants, the palatalization only happens in [g] which has the [+voice] feature. The [g] sound changes into [gʲ]. The changing sound occur when the [g] is followed by a vowel sound. whereas, the [c] sound is unpalatalized although it is volowed by different vowel sounds.

4.1.2.6 Palatalization of [l]

Similar with [d] and [t], this sound is also produced in coronal position. This sound is included as *liquid* sounds. In *Osing*, there are two liquid sounds [l] and [r]. In *Osing* palatalization, both of the liquid sounds are palatalized based on the data. In this part, the researcher only explains the first liquid sound that is [l] sound and the second liquid sound [r] is explained in the different part. The [l] sound is *voiced alveolar lateral approximant*. The following table shows the distinctive features of [l].

Table 4. 7 The list features of [l]

[l]	voiced alveolar lateral approximant	liquid	+ consonantal + voice + continuant + sonorant + approximant + lateral + coronal + anterior

The [l] sound has more features than other target consonants. The distinctive features of [l] are [+consonantal] [+voice] [+continuant] [+sonorant] [+approximant] [+lateral] [+coronal] and [+anterior]. Although, the [l] sound has [+ distributed] feature, but it is still palatalized. On the list feature, the [l] sound has [+voice] feature. The data palatalization of [l] sound are 94 words. The list below is the examples palatalization of [l] sound.

(6) The example of [l] sound

delamak	[d̪əlʲamaʔ]
ilang	[ilʲaŋ]
ilat	[ilʲat]
gelédhég	[gəlʲɛd̪ʲɛg]
jelèntrèh	[ɟəlʲɛntrɛh]

The [l] is palatalized as the other target sounds. The [l] sound has [+voice] feature. Based on the sample above, the word *ilang* is pronounced [ilʲaŋ] and *Gelédhég* is pronounced [gəlʲɛd̪ʲɛg]. Similar with the previous target consonants, the palatalization happens in [l] which changes into [lʲ]. The changing sound occur when the [l] is followed by vowel sounds.

4.1.2.7 Palatalization of [r]

The same with the [l] sound, the [r] sound is also liquid sound. The [r] sound is *voiced alveolar trill*. In this part, [r] has lot of similarities feature with [l]. The differences of both sounds are in [+lateral] and [+thrill] feature. The [l] sound has [+lateral] whereas the [r] sound has [+thrill]. Here, the [r] sound is also palatalized. Below is the table of distinctive features of [r].

Table 4. 8 The list features of [r]

[r]	voiced alveolar trill	Liquid	+ consonantal + voice + continuant + sonorant + approximant + trill + coronal + anterior

The [r] sound has more features as [l] than other target consonants. The distinctive features of [r] are [+consonantal] [+voice] [+continuant] [+sonorant] [+approximant] [+thrill] [+coronal] and [+anterior]. Both of these sounds are also palatalized in the pronunciation. On the list feature, the [r] sound has [+voice] feature. The data palatalization of [r] sound are 69 words. The list on the next page is the examples palatalization of [r] sound.

(7) The example of [r] sound

beranang	[bərʲanaŋ]
berèd	[bərʲɛd]
berèntèk	[bərʲɛntɛʔ]
derèdès	[d̪ərʲɛd̪ʲɛs]
derawas	[d̪ərʲawas]

Based on the list above, the word *beranang* is pronounced [bərʲanaŋ] and *d*erèdès is pronounced [d̪ərʲɛd̪ʲɛs]. Similar with the previous target consonant [l], The palatalization happens in [r] which changes into [rʲ]. The changing sound into palatalized form occurs when the [r] is followed by vowel sounds. The same with [l], the following vowels are [a] and [ɛ].

4.1.2.8 Palatalization of [m]

The following target sound is [m] sound. The [m] sound is *voiced bilabial nasal*. This sound is produced in labial position and also in nasal cavity. Based on the sonority, there are two consonants that includes nasal sonority. The sounds are [m] and [n]. The [m] sound has some features that similar with [n]. In this part, the researcher focuses on the distinctive features [m] and the [n] sound is explained in the next part. The distinctive features of [m] sound is explained on the following table.

Table 4. 9 The list features of [m]

[m]	voiced bilabial nasal	nasal	+ consonantal + voice + labial + sonorant + nasal + anterior

According to the table, the [m] sound has [+consonantal] [+voice] [+labial] [+sonorant] [+nasal] and [+anterior]. The [m] has [+voice] that categorizes [m] as the target sound in *Osing* palatalization. In this target sound, the researcher only collected 19 words as the data. The list below is the example palatalization of [m] sound.

(6) The example of [m] sound

gemati	[gəmʲatɪ]
gemantung	[gəmʲantʊŋ]
jelumat	[ɟəlʊmʲat]
demèk	[d̪əmʲɛʔ]
dumèh	[d̪umʲɛh]

The [m] is palatalized as the other target sounds. The [m] sound also has [+voice] feature. In the example list, the word g*emantung* is pronounced [gəmʲantʊŋ] and *dumèh* is pronounced [d̪umʲɛh]. The [m] sound are pronounced into [mʲ]. The changing sound into palatalized form occurs when the [r] is followed by vowel sounds. The same with [l], the following vowels are [a] an [ɛ].

4.1.2.9 Palatalization of [n]

As mentioned in the 4.1.2.8, the [n] sound has the same sonority types as [m] sound that is nasal. Some features between [m] and [n] are also the same. However, [n] has [-labial] feature whereas [m] has [+labial] feature. The [n] sound has [+coronal] whereas the [m] sound has [-coronal]. The [n] sound is *voiced alveolar nasal*. The distinctive feature of [n] is shown on the following page.

Table 4. 10 The list features of [n]

[n]	Voiced alveolar nasal	Nasal	+ consonantal + voice + sonorant + nasal + coronal + anterior

The distinctive features of [n] are [+consonantal] [+voice] [+sonorant] [+nasal] [+coronal] and [+anterior]. Both of these sounds are also palatalized in the pronunciation. On the list feature, the [n] sound has [+voice] feature. The data palatalization of [n] sound are 10 words. The list below is the example palatalization of [r] sound.

(9) The example of [n] sound

belunat	[bəlunʲat]
rengginang	[rəŋgɪnʲaŋ]
benèh	[bənʲɛh]
jenèwer	[ɟənʲɛwər]
unèk	[unʲɛʔ]

The [n] is palatalized as the other target sounds. The [n] sound also has [+voice] feature. In the example above, the word r*engginang* is pronounced [rəŋgɪnʲaŋ] and *unèk* is pronounced [unʲɛʔ]. The [n] sound are pronounced into [nʲ]. The changing sound into palatalized form occurs when the [r] is followed by vowel sounds. The same with [l], the following vowels are [a] an [ɛ].

4.1.2.10 Palatalization of [ŋ]

The next sound is [ŋ]. Similar with [m] and [n], this sound is included as nasal based on the sonority. The features of [ŋ] sound shows a lot of similarities with the sound [ɲ]. The [ŋ] sound is *voiced velar nasal* whereas the [ɲ] sound is *voiced palatal nasal*. To see the differences of these sounds, the list below shows the distinctive features of [ŋ] and [ɲ] sounds.

Table 4. 11 The list features of [ɲ] and [ŋ]

[ŋ]	voiced velar nasal	nasal	+ consonantal + voice + sonorant + nasal + dorsal + high + back
[ɲ]	voiced palatal nasal	nasal	+ consonantal + voice + sonorant + nasal + coronal + distributed + dorsal + high

On the list of distinctive features, the [ŋ] are [+consonantal] [+voice] [+sonorant] [+nasal] [+dorsal] [+high] and [+back]. The differences between [ŋ] and [ɲ] sounds are that the [ŋ] sound has [+back] whereas the [ɲ] sound has [+ [coronal] and [+distributed] features. Although, these sounds have [+voice] feature but the researcher only found the palatalization in [ŋ] sound. The data palatalization of [ŋ] sound are 8 words. The following list is the example palatalization of [ŋ] and the unpalatalized evidence of [ɲ] sounds.

(10)

The example of [ŋ] sound		The example of [ɲ] sound	
angèl	[aŋʲɛl]	dhanyang	[dʲaɲaŋ]
bengèn	[bəŋʲɛn]	nyadham	[ɲandʲam]
jengat	[ɟəŋʲat]	bènyès	[bʲɛɲɛs]
tungas	[tuŋʲas]		
ungak	[uŋʲaʔ]		

On the sample data, [ŋ] sound is consistent to be palatalized and the [p] is not palatalized. For example, the word *bengèn* is pronounced [bəŋʲɛn] and *nyadham* is pronounced [ɲandʲam]. The palatalization only happens in [ŋ]. The palatalization of [ŋ] changes into [ŋʲ] when the [ŋ] is followed by a vowel sound. The [ɲ] sound is unpalatalized although it is volowed by vowel sounds.

4.1.2.11 Palatalization of [w]

The last target sound in palatalization is [w] sound. [w] sound is considered as semi vowel sound it is not purely considered as consonant. Based on the sonority, [w] is *glide* sound and this classification is also the same with the [j] sound. The

[w] sound is *voiced labiovelar approximant* whereas the [j] sound is *voiced palatal approximant*. The table of distinctive features [w] and [j] sound is shown below.

Table 4. 12 The list features of [w] and [j]

[w]	voiced labiovelar approximant	Glide	+ voice + labial + round + continuant + sonorant + approximant + anterior + dorsal + high + back
[j]	voiced palatal approximant	glide	+ voice + continuant + sonorant + approximant + coronal + dorsal + high

In the list above, the feature articulation of [w] and [j] have some similar features such as [+voice] [+continuant] [+sonorant] [+approximant] [+dorsal] and [+high]. The differences between [w] and [j] sounds are that the [w] sound has [+labial] [+round] [+anterior] and [+back], whereas the [j] sound has [+coronal] features. In *Osing* phonetics, the [j] sound exists as a phone and the palatalized form symbol but the researcher did not find the palatalization of [j] on the data. The palatalization happens on [w] only. The researcher found that there are 19 words containing the palatalization of [w] sound. The following list is the example palatalization of [w] and the unpalatalized evidence of [j] sounds.

11	The example of [w] sound		The example of [j] sound	
	deluwang	[d̪əluwʲaŋ]	gelayat	[gəlʲajat]
	duwèni	[d̪uwʲɛni]	gerambyang	[gərʲambjaŋ]
	iwak	[iwʲaʔ]	gerayak	[gərʲajak]
	jèwèr	[ɟʲɛwʲɛr]		
	keluwèn	[kəluwʲɛn]		

On the sample data, [w] sound is consistent to be palatalized and the [j] is not palatalized. For example, the word *jèwèr* is pronounced [ɟʲɛwʲɛr] and *gelayat* is pronounced [gəlʲajat]. In the [ɟʲèwʲèr], the there are two palatalized target sounds that are [ɟʲ] and [wʲ]. The palatalization of [w] changes into [wʲ] when the [w] is followed by a vowel sound. The [j] sound is unpalatalized although it is followed by vowel sounds and it has [+voice] feature as shown in [gəlʲajat].

4.1.3 Triggers of *Osing* Palatalization

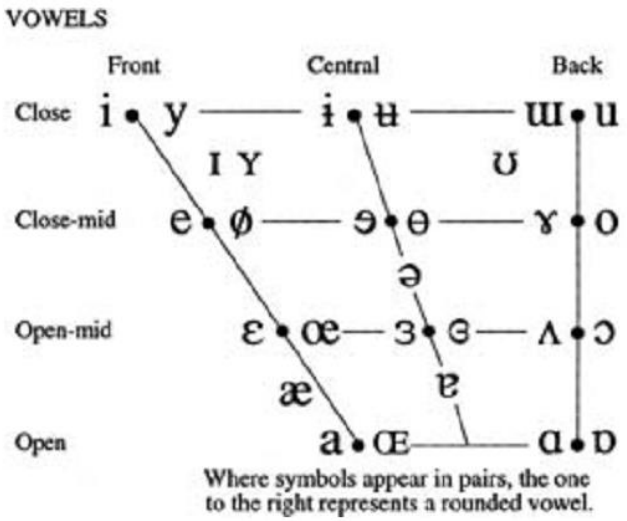
In the previous part the researcher has mentioned about the requirement of palatalization. The palatalization in *Osing* dialect happens when the stem is made by the target sounds and the trigger sounds. In the previous part (in 4.1.2), the researcher has explained some sounds considered as the target sound in *Osing* palatalization. In this part, the researcher will explain about the next sound called as trigger sound.

The trigger is contiguous with the target, the trigger commonly follows the target sound as the requirement of palatalization. The general implication stated by Chen (1973) and Bhat (1978) is suitable with the data in this research. They explained that palatalization is triggered by front vowels: if lower front vowels trigger palatalization, then so will higher front vowels. If a consonant palatalizes before the lower front vowel [ɛ], it should also palatalize before higher front vowels such as [e] and [i].

In *Osing* dialect, there are five basic vowels as the phoneme. However, in the transcription of *Osing*, there are 11 phonetics symbols. The phonetics symbols of Using vowels are [a, A, i, I, u, U, **é, E,** e, o, and O]. The transformation of *Osing* and IPA phonetic symbols can be seen in the third chapter (see table 3). Based on the 644 data, the researcher found that the palatalization always occurs when the target sounds are followed by two vowel sounds.

The implication from Chen about the trigger sound in palatalization is a clue to find the trigger in the *Osing* dialect palatalization. Similar with Chen's (1973) implication and Bateman's (2007) finding, the palatalization in the *Osing* dialect palatalization shows the same indication from the general assumption about the palatalization triggers. They said that the commonly the trigger of palatalization is front vowel sound. Here, *Osing* phonetics have 10 vowel sounds. The vowel sounds are [a], [i], [I], [u], [ʊ], [e], [ɛ], [ə], [o], and [ɔ]. The indication of trigger in palatalization is front vowel. To give clear explanation, here is the chart of the vowel sounds.

Figure 4. 7 The vowel chart by Odden (2005)

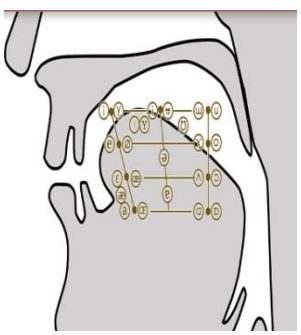


According to the vowel chart, there are only 5 vowels which are possible as the trigger. However, we need to eliminate [æ] because it does not exist in *Osing* phonetics. The front vowels are [i], [e], [[ɛ] and [a]. Of the data, the palatalization in Using commonly happens when the target sounds are followed by vowels [a] and [ɛ]. Both of the vowels are included as front vowel sound. Bhat (1978) stated that the general trigger in palatalization is the sound [i] and [e]. However, the data on this research shows different finding. The front vowels such as [i] and [e] by which they have [+front] feature but they do not trigger the palatalization in *Osing* dialect although they are adjacent with the target consonants.

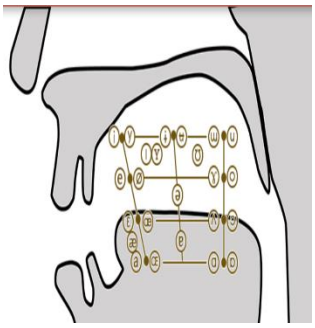
Considering the palatalization in the *Osing* dialect, the [j] sound as the secondary articulation in *Osing* pronunciation has similar sound with [i] rather than [ɛ] and [a]. Based on tongue position, the feature between [i] and [j] has same

[+high] or tongue raising whether [ɛ] and [a] do not have [+high] feature. The figure of tongue position and the feature of [i], [ɛ] and [a] is shown below.

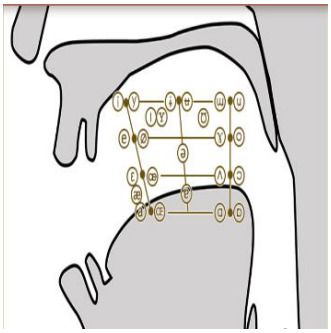
Figure 4. 8 The comparison of tongue position [i], [ɛ] and [a]



Articulation picture of [i]



Articulation picture of [ɛ]



Articulation picture of [a]

Table 4. 13 The distinctive features of [i], [ɛ] and [a]

Vowels							
	High	Back	Round	Front	Low	Tense	Long
[i]	+	-	-	+	-	+	-
[ɛ]	-	-	-	+	-	-	-
[a]	-	-	-	+	+	-	-

The palatalization in the *Osing* dialect shows different trigger sounds. The general triggers [i] and [e] proposed by Bhat (1978) fail in *Osing* dialect palatalization. However, the general implication stated by Chen (1973) and Bhat (1978) is correct. They said that the trigger of palatalization is usually front vowel sounds. Although, the [i] sound has closer feature with [j] sound rather than the other vowels but it does not guarantee [i] can trigger the palatalization. According to the data, there are 466 words with [a] sound as the trigger and 159 words with [ɛ] sound as the trigger in palatalization. These two sounds are included in front

vowel and they do not have [+high] feature. To provide the evidence, the list below shows some examples of *Osing* palatalization.

(12) The list example of trigger [a] in palatalization

badheg	[bʲadəg]	wédang	[weɖʲaŋ]
balik	[bʲalık]	tegal	[təgʲal]
dhanyang	[dʲaɲaŋ]	wigati	[wıgʲati]
gedhang	[gədʲaŋ]	janur	[ɟʲanʊr]
sewidak	[səwiɖʲak]	pejah	[pəɟʲah]

The focus in this part is on the vowels considered as the trigger sounds. On the sample above, some target sounds and non-target sound are adjacent with the trigger sound [a] and also some non-trigger sounds. The word *Badheg* is pronounced as [bʲadəg]. The [bʲadəg] has one palatalization form although it has three target sounds. The [b] is pronounced into [bʲ] followed by [a] sound. The [d] and [g] sounds include as the target sounds in palatalization but they are unpalatalized. The [d] sound is unpalatalized although it is followed by vowel because the vowel is non-trigger sound that is [ə]. The [g] is one of the target sounds but it is not palatalized without the trigger sound. The word *Balik* is pronounced as [bʲalık]. There are two target sounds in this transcription that are [b] and [l]. however, the palatalization only happens in [b]. The [b] is pronounced into [bʲ] followed by [a] sound. Whereas, the [l] sound is unpalatalized although it is followed by front vowel [ı]. Although [ı] is one of the front vowels but it does not seem as the trigger.

The next examples are the words *dhanyang* and g*edang*. Both of them are pronounced as [dʲanjaŋ] and [gədʲaŋ]. These words have [d] in the transcription compared with [bʲadəg]. The [d] sound is pronounced into [dʲ] followed by [a] sound. The [d] sound is palatalized as [b] sound in [bʲadəg] and [bʲalık]. The [g] sound in [gədʲaŋ] is unpalatalized because it is followed by [ə]. Actually, there is also one sound that is [ŋ] sound. The [ŋ] sound is also one of the target sounds but it is unpalatalized because it is not followed by the trigger sounds.

The words *sewidak* and *wedang* are pronounced as [səwiɖ̪ʲak] and [weɖ̪ʲaŋ]. From the transcription we can consider that there are 3 target sounds. The target sounds are [w], [ɖ̪] and [ŋ]. From these target sounds, the palatalization only happens in [ɖ̪]sound. The target sound [w] in [səwiɖ̪ʲak] and [weɖ̪ʲaŋ] is followed by front vowel sounds [i] and [e]. The [ŋ] sound is unpalatalized because it is not followed by the trigger sound. Although, the [i] and [e] are front vowel sounds and they are adjacent with the target sounds but they do not trigger the palatalization. On the other hand, the [d] sound is pronounced into [ɖ̪ʲ] followed by [a].

The words *tegal* and *wigati* are pronounced as [təgʲal] and [wɪgʲati]. From the example, there are two target sounds [w] and [g]. The [w] sound in this sample is the same with the [w] in [səwiɖ̪ʲak] for which the [w] is unpalatalized although it is followed by [ɪ]. On the contrary, the [g] sound is palatalized because it is followed by [a].

The last examples are the words *janur* and *pejah.* These words are transcribed as [ɟʲanʊr] and [pəɟʲah]. The target sound in this sample is only [ɟ] sound.

The [ɟ] sound changes into [ɟʲ] followed by [a] sound. From these sample, it proves that the [a] sound is the trigger in *Osing* palatalization.

The continuing vowel that indicates the trigger sound in the *Osing* dialect palatalization is the [ɛ] sound. Similar with the [a] sound, the [ɛ] sound belongs to front vowel sound. The researcher collected 159 data of palatalization in *Osing* dialect. The data are categorized based on the [ɛ] sound as trigger following the target sounds. The following table shows some examples of palatalization established by the combination of target sound followed by the [ɛ] sound as the trigger.

(13) The example of trigger [ɛ] in palatalization

bèji	[bʲɛɟi]	gudèl	[guɖʲɛl]
bènten	[bʲɛntən]	gènjèr	[gʲɛnɟʲɛr]
bedhèl	[bədʲɛl]	gèntèr	[gʲɛntɛr]
beledhèk	[bələdʲɛk]	jéjér	[ɟʲɛɟʲɛr]
dèngkèk	[ɖʲɛŋkɛʔ]	jénggér	[ɟʲɛŋgʲɛr]

Of the sample data, the words *bèji* and *bènten* are pronounced as [bʲɛɟi] and [bʲɛntən]. On the transcription of [bʲɛɟi] and [bʲɛntən], there are three target sounds [b], [ɟ] and [n]. In these word transcriptions, the palatalization only happens in [b] sound. The [b] sound is palatalized into [bʲ] sound followed by the [ɛ] sound. The pattern is exactly the same with the previous example of the trigger sound [a] (see the list 12). The other target sounds [ɟ] and [n], they are unpalatalized. The [ɟ] sound does not change into [ɟʲ] although it is followed by [i]. The [n] sound stands without followed by the trigger.

The next words are *bedhèl* and *beledhèk*. The words *bedhèl* and *beledhèk* are pronounced as [bədʲɛl] and [bələdʲɛk]. The transcriptions [bədʲɛl] and [bələdʲɛk] have three target sounds [b], [l] and [d]. Of these three target sounds, the palatalization happens in [d] only. The target sounds [b] and [l] are unpalatalized because they are not followed by the trigger sound. The [d] sound changes into [dʲ] followed by [ɛ] sound.

The words *dèngkèk* and *gudèl* are pronounced as [d̪ʲɛŋkɛʔ] and [gud̪ʲɛl]. there are four target sounds [d̪], [ŋ], [g] and [l]. The palatalization only happens in [d̪], The [d̪] sound changes into [d̪ʲ] followed by [ɛ] sound. The [ŋ] sound is unpalatalized because it is not followed by the trigger sound. In this sample, it also proves that palatalization cannot appear by a trigger sound only. In the sample transcription [d̪ʲɛŋkɛʔ], there is a non-target sound [k] followed by the trigger sound [ɛ]. As mentioned in the previous sub chapter, the [k] sound is non target sound because it does not have [+voice] feature. The non-target sound is still unpalatalized although it is followed by the trigger sound. The transcription [gud̪ʲɛl] has three target sounds [g] [d̪] and [l]. The palatalization only appears in [d̪] sound that changes into [d̪ʲ] followed by [ɛ] sound. The target sound [g] is not palatalized although it is followed by a vowel [u]. Whereas, the sound [l] is not palatalized because there is no trigger following the sound.

The words *gènjèr* and *gèntèr* are pronounced as [gʲɛnɟʲɛr] and [gʲɛntɛr]. In [gʲɛnɟʲɛr], we can consider that palatalization can appear twice in a word. The sample [gʲɛnɟʲɛr], it shows four target sounds [g], [n], [ɟ] and [r]. However, the palatalization only happens in [g] and [ɟ]. These two target sounds change into [gʲ]

and [ɟʲ] followed by [ɛ]. The [n] and [r] sounds are not followed by the trigger sound. In the next word transcription [gʲɛntɛr], there are three target sounds [g], [n] and [r]. here, the target sound [g] is palatalized into [gʲ] because it is followed by [ɛ] sound.

The last examples are the words *jéjér* and *jénggér*. The transcriptions of these words are [ɟʲɛɟʲɛr] and [ɟʲɛŋgʲɛr]. Fortunately, the examples also show double palatalization as shown in [gʲɛnɟʲɛr]. in the transcription [ɟʲɛɟʲɛr], there are two target sounds [ɟ] and [r]. Here, the [r] sound is unpalatalized because it is not followed by the trigger sound. The [ɟ] sound is palatalized into [ɟʲ] followed by [ɛ] sound. In the transcription [ɟʲɛŋgʲɛr], there are four target sounds [ɟ], [ŋ], [g] and [r]. The pattern of palatalized target sounds is the same. The [ɟ] and [g] change into [ɟʲ] and [gʲ]. Both of them are followed by [ɛ]. The target [ŋ] and [r] are unpalatalized because they are not followed by the trigger sound.

Of the sample data and the explanation, it proves that the trigger sounds affect the emergence of palatalization. The triggers are front vowel sounds. Although, *Osing* phonetics have several front-vowel sounds but the palatalization only happens when the target sounds are followed by [a] and [ɛ]. It is hard to find the reason and the similar features of these sounds that categorized them as the trigger in palatalization compared with the other front vowel sounds. On the next pages, the researcher shows the distinctive feature of [a] and [ɛ].

Table 4. 14 The distinctive features of the triggers [a] and [ɛ]

[a]	Open front central unrounded low vowel	Vowel	+ low - back - tense - round
[ɛ]	open-mid front unrounded middle vowel	Vowel	- high - back - tense - round

The distinctive features above show that both of these sounds have some same features [-back], [-tense], and [-round]. The difference is that [a] has [+low] feature and [ɛ] has [-high] feature. Here, the [-high] does not mean [+low]. There are some levels to explain [-high]. Odden (2005:39) explicitly explains on his figure about close-mid and open-mid. The [-high] can be considered as *close-mid* and *open-mid* that indicate mouth movement and the [-high] in [ɛ] sound means *open-mid* (see figure 4.8). The researcher cannot conclude why [a] and [ɛ] considered as the trigger vowel based on the distinctive feature, except they have [-back] feature or front feature. However, the researcher concluded from the data and the palatalization phenomena that the palatalized target sounds always appear when the target sounds are followed by [a] and [ɛ] sounds.

4.1.4 The Correlation of Syllabification in Palatalization

In the previous sub chapter, the researcher has shown about the form of palatalization, the target sounds and the trigger sounds in palatalization. The researcher found the same indication as stated by Chen (1973), Bhat (1978) and Bateman (2007). They indicated that palatalization involves two sounds called as target and trigger. Here, the researcher found that 11 consonants are palatalized (as the target sounds, they are [b], [d̪], [d], [g], [ɟ], [l], [m], [n], [ŋ], [r], and [w]. Whereas the trigger sounds are [a] and [ɛ].

The examples on sub chapter 4.1.2 and 4.1.3 have shown some data about palatalization phenomena. The palatalization in *Osing* is not based on the target sound only but also considering the adjacent sounds (trigger vowels). The palatalization only happens if the target consonants are followed by the trigger vowels not in vice versa. The sample data on sub chapter 4.1.2 and 4.1.3 also show that the palatalization can come up twice in a word as long as the target sounds are followed with the trigger sounds. Of the data, the researcher also found some inconsistency about the pattern establishing the palatalization. To give deeper analysis about the emergence of palatalization, the researcher used syllabification analysis to find out the pattern of palatalization in *Osing* dialect.

Of the data, the researcher found that the palatalization happens in several position. Palatalization can be in initial position (first syllable) or in the middle position (second syllable or more). In addition, the palatalization also happens twice in a word. It can be repeated target sound and different target sound in a word. The previous research about palatalization also did not mention about how many times

palatalized sound appear in a word. Here, the researcher found that palatalization in *Osing* dialect could appear one and two times in a word as long as it follows the palatalization pattern.

4.1.4.1 Syllabification in Palatalization

The syllabification is used to separate the sounds and find the minimal form of a word. Katamba (1996:196) and Hayes (2009:252-253) elucidated that the process of syllabification must consider the vowels and syllabic consonants from very first to the final sound in the word. The consideration of the vowels and consonants is used to decide the sound position. In the analysis, the researcher had assumption that the palatalization happens on several consonants without related to the other sounds as mentioned by Ali (2002) and Budiono (2015). They stated that consonants [b], [d], [g], [ɟ], change into [bʲ], [dʲ], [gʲ], [ɟʲ]. However, the researcher found out an article that said the changing sounds often appears containing [ba], [da], [ga] and [wa] (Ashar, 2018). Therefore, the researcher conducted the syllabification to test Ali and Ashar' statement.

In this part, the researcher separated some word transcription based on the syllables. Based on Ali and Budiono' statements, the researcher concluded that the target can be palatalized in all positions as the onset or the coda. However, this conclusion failed to prove and considered that Ashar' statement had the closest correct statement about palatalization. Moreover, the researcher found an additional finding different from Ashar' statement that some consonants as the target sounds

followed by [ɛ] sound are also palatalized. Here, there are some examples of syllabification from the data transcription.

Figure 4. 9 The syllabification of single palatalization

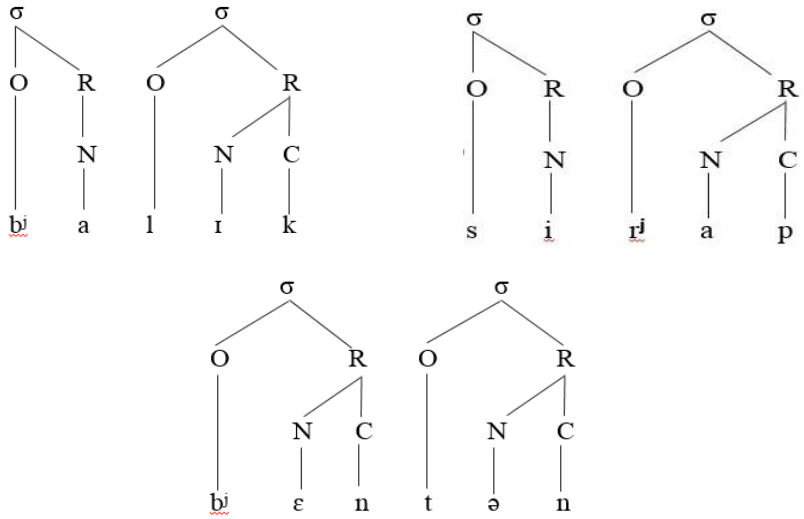
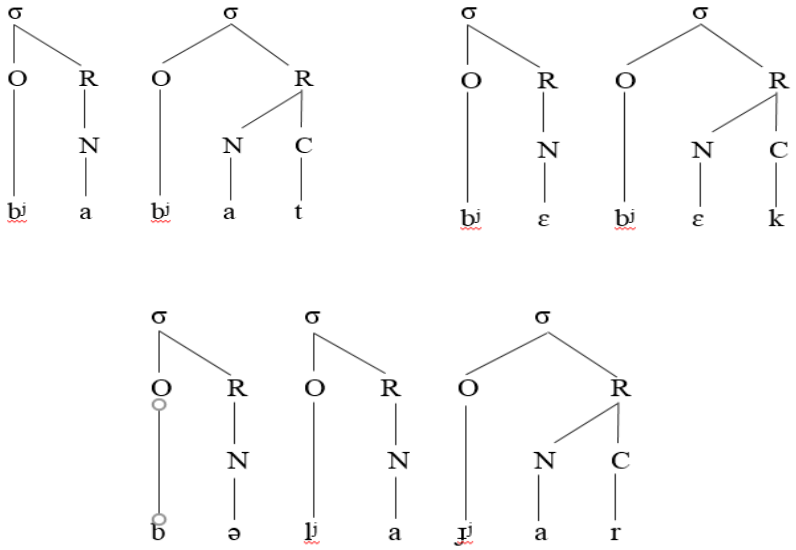


Figure 4. 10 The syllabification of double palatalization



From the syllabification process, the researcher found out that all the palatalized sounds are the onset of the syllable. The complete syllable structure consists of three items, they are Onset, Nucleus and Coda. Here, the complete or incomplete syllable structures do not affect the palatalization form. Based on the example above, the single or double palatalization always happens to the target in the onset position. The syllabification proves that the palatalization happens when the target sounds as the onset are followed by the trigger sounds as the nucleus in the syllable. The palatalization in the first syllable can appear between the onset and nucleus only or between the onset and nucleus ended by coda. The second syllables in the data of this research are mostly closed syllable. The close syllable means that the syllable ended by Coda (consonants).

The researcher also identified a certain pattern establishing the palatalization. The pattern of palatalization is explained in the next part. In addition, the researcher also found inconsistency form of palatalization. Several target sounds are inconsistent to be palatalized. There are four target sounds [l], [r], [m] and [n] that are not palatalized in the first syllable position. These target sounds are only palatalized in the middle position (second syllable).

The palatalization in *Osing* dialect also indicate that there is no morpho-phonemical relation. The existence of palatalization in *Osing* dialect is only phonemical phenomena that do not change the meaning or the part of speech. The palatalization in the *Osing* only differentiates how the *Osing* community pronounce the words from another dialects and it is also called as *secondary palatalization* (Bateman, 2007).

4.1.4.2 Pattern of Palatalization

Regarding the position of the palatalization, the palatalization in *Osing* dialect always happens when the triggers follow the targets, but some other palatalization research says the vice versa. The palatalization phenomena in different language or dialect bring different rules from one to another. For this reason, it is imprudent to justify the best pattern of palatalization for all the palatalization phenomena.

Here, the previous researchers of *Osing* only mentioned that some consonant sounds can change into palatalized form. Whereas, the reality is different and the palatalization is not as easy as they stated. Here, the researcher found out 11 consonants (target sounds) and 2 vowels (trigger sounds) that relate to the palatalization in the *Osing* dialect (see subchapter 4.1.2. and 4.1.3). Moreover, the researcher also identified that there is certain pattern in palatalization establishment.

Of the data, the palatalization happens when the trigger sounds follow the target sounds only. To find the palatalization pattern, the process was done by splitting the words into syllables as explained in (see subchapter 4.1.4.1). The syllables should be established by target and trigger as the environment of palatalization the palatalization. The combination of sound as a syllable can be used to see the consistent pattern of palatalization in *Osing* dialect.

The syllabification yields several segments of the words, which are successive points in the complex sequence of movements of which the syllable consists. Odden (2005) stated that we cannot define sounds in a hard-and-fast way. Instead, we can use the different definitions for different languages. Here, to find

out the relation between segment, the syllable structures need to be analyzed and marked. This identification depends on the data from the language or dialect analyzed. Since, the *Osing* dialect does not have an article or research about the palatalization, the researcher is bravely to initiate the new definition by adopting theory from the previous research.

The basic structure of palatalization is symbolized into a formulation. According to Schane (1992), four phonological rules in generative phonology are 1) feature changing, 2) deletion and insertion, 3) Permutation and coalescence and 4) rules with variable (Schane, 1992:65-77). In this study, the phonological rule is used to show the palatalization process (as explained in the chapter 2). The target sounds are changed into the palatalized form based on certain pattern, for example the [b] sound changes into [b^j]. The target sounds are always palatalized when the trigger sounds follow the target sounds. The palatalization rule is formulated as in the following part.

$$/b/ \rightarrow [b^j] \;/\; \left\{ \begin{array}{ll} \#\_ & \left\{ \begin{array}{l} a \\ \varepsilon \end{array} \right\} \; \$ \\ \$\_ & \left\{ \begin{array}{l} a \\ \varepsilon \end{array} \right\} \; \# \end{array} \right\}$$

All target sounds have two ways pronunciation. The first is the original pronunciation and the second is the palatalized form. For example, the phoneme /b/ can be pronounced as [b] (natural pronunciation) and [bʲ] (palatalized form), the phoneme /d/ can be pronounced as [d] (natural pronunciation) and [dʲ] (palatalized form). The original pronunciation of the target sounds is pronounced when they are followed by other vowels (except the trigger) and all consonants. The researcher also uses another sign that is ($). The symbol ($) means the syllable. This symbol is used to specify the segment in a single syllable. In this palatalization, this symbol valuable to mark the position of the syllable in the analysis, if the word consists of more than one syllables.

On the formula above, the researcher takes one of the target sounds that is [b] sound to simplify the explanation as the representative of all target sounds. The figure means that the target sound /b/ is pronounced into [bʲ] when it is in two conditions. The first condition that the /b/ is pronounced into [bʲ] in the initial position and it must be followed by the trigger sounds [a] or [**ɛ].** The initial position means the first syllable. The second condition means that [b] changes into [bʲ] in the middle position when it is followed by the trigger sounds [a] or [**ɛ].** The middle position means the second syllable.

In this part, the researcher provides the analysis of the palatalization process. There are two conditions of palatalization based on the syllabification. The first is the palatalization that appears in the first syllable or the second is the palatalization that occurs in the second syllable of a word. In addition, the palatalization also

happens in both of positions. The following process is the single palatalization in the first syllable position.

First syllable position

$$/b/ \rightarrow [b^j] \; / \; \#\_ \begin{Bmatrix} a \\ \varepsilon \end{Bmatrix} \; \$$$

$$\begin{bmatrix} + \text{consonantal} \\ + \text{voice} \\ + \text{labial} \\ + \text{anterior} \\ - \text{pal} \end{bmatrix} \rightarrow \begin{bmatrix} \\ \\ \\ \\ + \text{pal} \end{bmatrix} \; / \; \#\_ \begin{Bmatrix} \begin{bmatrix} + \text{low} \\ - \text{back} \\ - \text{tense} \\ - \text{round} \end{bmatrix} \\ \begin{bmatrix} - \text{high} \\ - \text{back} \\ + \text{tense} \\ - \text{round} \end{bmatrix} \end{Bmatrix} \; \$$$

Of the rule above, it shows that the phoneme /b/ is pronounced into [bʲ] in the position followed by the trigger [a] and [ɛ] at the first syllable of a word. The symbol # means that there is no precede syllable before (the first sound of a word). The target [b] has the characteristics: [+consonant], [+voice], [+labial] and [+anterior], while the [bʲ] has [+pal] characteristic. For example, [bʲabʲad̪] and [bʲabʲar].

Second syllable position:

/b/→ [b^{j}] / $_ { a, ε } #

(+ consonantal, + voice, + labial, + anterior, - pal) → (+ pal) / $_ { (+ low, - back, - tense, - round, + voiced), (- high, - back, + tense, - round, + voice) } #

The rule above, it shows that the phoneme /b/ is pronounced into [b^{j}] in the position followed by the trigger [a] and [ε] at the second syllable of a word. The symbol # means that there is final position of a word. The target [b] has the characteristics: [+consonant], [+voice], [+labial] and [+anterior], while the [b^{j}] has [+pal] characteristic as in [b^{j}ab^{j}at] and [b^{j}ab^{j}ar]. In this second syllable, the syllable mostly has close syllable rather than open syllable.

The data on this research have various forms. There are many words on the data that consist of one syllable or more than one syllable. In this research, most of the data have two syllables. By this condition, the pattern on the figure above also

can be used for the words that have more syllables as long as the minimal requirement is fulfilled that is the target sounds are followed by the trigger sounds.

In addition, the researcher also found some inconsistencies on the data. The researcher has concluded the pattern of palatalization as explained above. However, some data show that the target sounds are not palatalized or inconsistent to be palatalized. The inconsistencies of palatalization above have not been analyzed by the researcher in detail. The raw indication had been made by the researcher. The researcher found that several target sounds are only palatalized in the second syllable. The characteristic of this target is [+sonorant]. This indication is not strong enough without supported by theory and proved by many data. This part is a gap of this research that needs to be observed in specific research. More data collection and theories about palatalization will bring more findings about palatalization. The further research will be valuable as the continuing research about palatalization in *Osing* dialect.

4.2 Discussions

In the previous parts, the researcher has shown and explained about the form of palatalization, the target, the trigger of palatalization and the syllabification in palatalization. In this section, the researcher serves the discussion to test the pattern of palatalization in the *Osing* dialect.

The palatalization in *Osing* dialect requires two elements called as *target* and *trigger*. The target sounds are several consonants with [+voice] feature. The trigger sounds are some vowels especially [a] and [ɛ] sounds. The palatalization

happens by changing the target sounds into palatalized form. To simplify the explanation, the researchers shows the palatalization output on the table below.

Table 4. 15 The palatalization output

No	Target sounds	Trigger sounds		Palatalization forms	
		[a]	[ɛ]		
1	[b]	ba	bɛ	**bʲa**	**bʲɛ**
2	[ɖ]	ɖa	ɖɛ	**ɖʲa**	**ɖʲɛ**
3	[d]	da	dɛ	**dʲa**	**dʲɛ**
4	[ɡ]	ɡa	ɡɛ	**gʲa**	**gʲɛ**
5	[ɟ]	ɟa	ɟɛ	**ɟʲa**	**ɟʲɛ**
6	[l]	la	lɛ	**lʲa**	**lʲɛ**
7	[m]	ma	mɛ	**mʲa**	**mʲɛ**
8	[n]	na	nɛ	**nʲa**	**nʲɛ**
9	[ŋ]	ŋa	ŋɛ	**ŋʲa**	**ŋʲɛ**
10	[r]	ra	rɛ	**rʲa**	**rʲɛ**
11	[w]	wa	wɛ	**wʲa**	**wʲɛ**

The researcher found out that the palatalization in the *Osing* dialect has two forms. The first form is single palatalization and the second is double palatalization. The researcher has made a pattern as mentioned before (see 4.1.4.2) that is applicable for these forms.

4.2.1 Single Palatalization

The palatalization in the *Osing* dialect appears in two positions. The first position is initial position and the second is in the middle position. The initial position means, the palatalization appears in the first syllable. The middle position means, the palatalization appears in the second syllable. This categorization is done because some target sounds are unpalatalized when they are in initial positions. To simplify the explanation, the researcher categorizes them into two groups. The first group is [b], [d̪], [d], [g] and [ɟ]. The second group is [l], [r], [m], [n], [ŋ] and [w]. The first group of the target sounds is possible to be palatalized in all position. The example of the first group is shown below.

Table 4. 16 The example of the target sounds (first group)

	First syllable	
	[a]	[ɛ]
[bʲ]	[bʲadəg̣]	[bʲɛɟi]
	[bʲalık]	[bʲɛntən]
[d̪ʲ]	[d̪ʲaŋʊ]	[d̪ʲɛŋkɛʔ]
	[d̪ʲapaʔ]	[d̪ʲɛwi]
[dʲ]	[dʲahar]	[dʲɛk]
	[dʲawət]	[dʲɛrɛt]
[gʲ]	[gʲablək]	[gʲɛntɛr]
	[gʲablɔk]	[gʲɛpɛŋ]
[ɟʲ]	[ɟʲagır]	[ɟʲɛntrɛʔ]
	[ɟʲagʊŋ]	[ɟʲɛmbləm]

	Second syllable	
	[a]	[ɛ]
[bʲ]	[bibʲar]	[ambʲɛn]
	[d̪ubʲaŋ]	[d̪ələbʲɛr]
[d̪ʲ]	[səwid̪ʲak]	[gud̪ʲɛl]
	[wed̪ʲaŋ]	[lad̪ʲɛn]
[dʲ]	[gədʲag]	[gədʲɛk]
	[gədʲaŋ]	[gəgədʲɛn]
[gʲ]	[bədıgʲas]	[kagʲɛt]
	[bərgʲas]	[ləgʲɛn]
[ɟʲ]	[bəɟʲat]	[goɟʲɛk]
	[bəɟʲaɟı]	[suɟʲɛn]

The table 4.16 shows that the first group of the target sounds is palatalized when the target consonants are in the first syllable and the second syllable. The position of the target sounds is always as the onset and followed by the trigger as the nucleus in the syllable. The example in the table proves that the first group of the target sounds is flexible to get the palatalization. The palatalization consistently happens as long as the rules are palatalized when they are adjacent with the trigger sounds.

The researcher considers that the first group of the target sounds is flexible to be palatalized in initial position or middle position. Here, the researcher considered that this first group of sounds belongs to plosive consonants. The researcher has an assumption based on the data that the plosive target sounds in the *Osing* dialect can be palatalized when they are followed by the trigger sounds in all positions.

The continuing target sound or the second category of the target sounds are [l], [r], [m], [n], [ŋ] and [w]. These target sounds have the unique cases for which they are mostly palatalized in the middle position (second syllable). Based on the data, the researcher cannot find the palatalization of this target sounds when they are in the initial position (first syllable). Although, these target sounds follow the rule of palatalization but they are still unpalatalized. In addition, these target sounds also show the inconsistency form frequently compared with the previous target sounds (targets with plosive feature). They are not only unpalatalized in the initial position but also unpalatalized in the middle position sometimes. The following

table shows some examples of the palatalized target sounds in the second syllable position.

Table 4. 17 The example of the target sounds (second group)

	Second syllable	
	[a]	[ɛ]
[lʲ]	[ɖ̪əlʲamaʔ]	[gəlʲɛɖ̪ʲɛg]
	[ɖ̪ilʲah]	[ɟəlʲɛntrɛh]
[rʲ]	[bərʲanaŋ]	[bərʲɛd]
	[ɖ̪ərʲawas]	[bərʲɛntɛʔ]
[mʲ]	[gəmʲantʊŋ]	[ɖ̪əmʲɛʔ]
	[rumʲat]	[ɖ̪umʲɛh]
[nʲ]	[rəŋgɪnʲaŋ]	[bənʲɛh]
	[gənʲah]	[unʲɛʔ]
[ŋʲ]	[ɟəŋʲat]	[bəŋʲɛn]
	[pəniŋʲal]	[aŋʲɛl]
[wʲ]	[ɖ̪əluwʲaŋ]	[kəluwʲɛn]
	[iwʲaʔ]	[tuwʲɛʔ]

Of the example above, the target sounds are palatalized in the middle position. However, some of the target sounds are also unpalatalized although they are in the middle position such as the syllable [ma] in [ɖ̪əlʲamaʔ], the syllable [rɛ] in [ɟəlʲɛntrɛh], the syllable [na] in [bərʲanaŋ] and the syllable [wa] in [ɖ̪ərʲawas]. From the example, the transcription of [ɖ̪əlʲamaʔ] has two target sounds [l] and [m] followed by [a] sound. Both of the target sounds qualify the rule of palatalization. However, the palatalization is only happened on the [l] sound. Whereas, the [m] sound is still unpalatalized. The transcription of [ɟəlʲɛntrɛh], [bərʲanaŋ] and

[ɖərʲawas] also show the same condition. The target [r] followed by [ɛ], the target [n] followed by [a] and the target [w] followed by [a] are unpalatalized although they fulfill the requirement of palatalization. For more evidence, the researcher provides some more sample about the inconsistency of the target sounds with different trigger sounds.

Table 4. 18 The example of unpalatalized forms

	First syllable		Second syllable	
	[a]	[ɛ]	[a]	[ɛ]
[lʲ]	[lanɟʲar]	[lɛmbʲɛŋ]	[ɖilʲalah]	[bʲɛlɛʔ]
	[laŋgʲar]	[lɛɖʲɛp]	[bəlakrʲaʔ]	[bʲɛlɛr]
[rʲ]	[raɟʲaŋ]	-	[ɟəlʲaraŋ]	[ɖʲarɛs]
	[ragʲat]	-	[bʲaŋkraʔ]	[gʲambrɛŋ]
[mʲ]	[madʲaŋ]	[mɛnɖʲah]	[ɟʲamaʔ]	[ɖʲamɛn]
	[manɖʲar]	[mɛglʲɛŋ]	[ɖʲamar]	[ɖəmʲɛmɛh]
[nʲ]	[naɟʲan]	-	[waɖʲanan]	-
	[naɟʲak]	-	[bərʲanaŋ]	-
[ŋʲ]	-	-	[abʲaŋan]	[bʲɛŋɛs]
	-	-	[bʲambʲaŋan]	[ɟʲaŋɛr]
[wʲ]	[waɟʲan]	-	[ɟʲawar]	[ɖərʲɛwɛs]
	[waɟʲar]	-	-	[ɟʲawɛn]

This second group of the target consonant also has specific feature that the first group does not have. Based on the distinctive features, the second group of the target sounds has sonorant feature. Unfortunately, the researcher cannot find the reason why these target sounds are inconsistent to be palatalized although they are followed by the trigger sounds.

In the table 4.18, the researcher has marked the unpalatalized form by using red color in the phonetics symbols. All the target sounds in the second group are consistently unpalatalized when they are in the first syllable. Although, the position of the target sounds is as the onset and followed by the trigger but they are not palatalized. The researcher cannot explain this inconsistent form by analyzing the syllable. Compared with the previous table, the table of inconsistency violates the rule of palatalization. In this study, the researcher does not focus to reveal the inconsistent forms of palatalization. Here, the researcher just restricts the goal of this research to find out the targets of palatalization, the triggers of palatalization, and the pattern of palatalization.

4.2.2 Double Palatalization

As mentioned in the previous parts, the palatalization in the *Osing* dialect does not only appear once time in a single word but also twice. In this part, the researcher presents several data that contain double palatalization. There are two types of double palatalization. The first is the palatalization in a single word which has the same target sounds (two target sounds) followed by the trigger sounds and the second is the palatalization in a single word which has different target sounds followed by the trigger sounds.

Table 4. 19 The example of first type in double palatalization

The first type of double palatalization		
	[a]	[ɛ]
[b]	[bʲabʲat] [bʲabʲar]	[bʲɛbʲɛk] [bʲɛbʲɛr]
[d̪]	[d̪ʲad̪ʲar] [d̪ʲad̪ʲɛʔ]	[dʲɛdʲɛg] [dʲɛdʲɛl]
[g]		[gʲɛgʲɛr] [gʲɛtgʲɛtən]

Table 4. 20 The example of second type in double palatalization

The second type of double palatalization	
[gʲandʲaŋ] [gʲandʲɛŋ] [ɻʲagʲaŋ] [ɻʲagʲat] [gəlʲad̪rʲah] [gəlʲadʲag] [bəlʲambʲaŋan] [bəlʲand̪ʲar] [bʲambʲaŋan]	[bʲɛdʲɛŋ] [bʲɛndʲɛt] [d̪əlʲɛnd̪ʲɛŋ] [dʲɛbrʲɛs] [gʲɛnɻʲɛr] [ɻʲɛŋgʲɛr] [gəlʲɛd̪rʲɛg] [gəlʲɛd̪ʲɛg] [gərʲɛndʲɛl] [gərʲɛnɻʲɛŋ]

In the table above, the double palatalization frequently happens when the targets sounds are followed by the same trigger sounds. From the data collection, the palatalization does not happen more than two times in a single word. In addition,

the researcher considered that the double palatalization happens when the target sounds are triggered by the same trigger in a word, for the examples [bʲabʲat], [gʲɛgʲɛr], [ɟʲagʲat] and [bʲɛdʲɛŋ]. The [bʲabʲat] and [gʲɛgʲɛr] transcription indicate that both of the target sounds [b] and [g] are palatalized twice and followed by the same trigger sound. In addition, the [ɟʲagʲat] and [bʲɛdʲɛŋ] transcription also show the same pattern. The [ɟʲagʲat] transcription has two different target sounds [ɟ] and [g]. Both of them are palatalized and followed by the same trigger sound [a]. The [bʲɛdʲɛŋ] transcription has same pattern with the [ɟʲagʲat] transcription. Both of them are palatalized and followed by the same trigger sound [ɛ].

The researcher postulated that the double palatalization can show up as long as the rule is abided by the target and the trigger sounds. The double palatalization happens when the targets are followed by different trigger sounds. Here, the researcher cannot give strong evidence that the double palatalization of the target sounds followed by different trigger in single words exists. Even though, the researcher has some evidence about this type but the researcher still needs more data to be more confident about this type. The researcher has two examples in the table of double palatalization.

The [ɖʲaɖʲɛʔ] and [gʲandʲɛŋ] transcriptions shows that the double palatalization of the different or same targets followed by different trigger sounds. The [ɖʲaɖʲɛʔ] transcription has two same target sounds followed by different trigger sound. Both of the target sounds are palatalized. The [gʲandʲɛŋ] transcription has two different target sounds followed by different trigger sound in a word. All the different target sounds are palatalized.

Based on the findings of the study, the researcher believes that the palatalization in the *Osing* dialect consists of two elements. The requirement of palatalization is the combination target sounds and the trigger sounds. Here, the researcher concludes that the palatalization does happen more than two times. The rule of palatalization in *Osing* dialect is when the target sounds followed by the trigger sound then the target sounds should be palatalized. The target sounds with the plosive feature can be palatalized in all position (the first syllable and the second syllable). On the other hand, the target sounds with sonorant feature can be palatized in the middle position only. Moreover, the target sounds with sonorant feature frequently violate the rule of palatalization.

CHAPTER V

CONCLUSION AND SUGGESTION

The last chapter, the researcher presents two sections of the present study. The first is conclusion. This section dealing with the resume of the finding in this study. The second section is suggestion. The suggestion contains some limitations of this study that can be continued by other researchers.

5.1 Conclusion

This research aimed to analyze the palatalization phenomena in *Osing* dialect. The researcher was triggered by some previous research that simply mentioned several palatalized consonants. Here, the researcher set this study to reveal the pattern of palatalization in the *Osing* dialect. And, the researcher found that the presence of palatalization in *Osing* dialect has a specific rule. The palatalization of *Osing* dialect is a secondary form that does not change the basic features of the target sounds. The palatalization in *Osing* dialect is marked with subscript [ʲ] symbol. The requirement of palatalization in *Osing* is the existence of target sounds and followed by the trigger sounds. The trigger sounds are front vowel sounds [ɛ] and [a]. The target sounds are [b], [d̪], [d], [ɡ], [ɟ], [l], [r], [m], [n], [ŋ] and [w]. These consonants have [+voice] feature as the characteristic of the target sounds in the *Osing* dialect. Moreover, these targets sound are also classified into two categories. This classification is based on the appearance of palatalization. The

first group of the target sounds is [b], [ɖ], [d], [g], and [ɟ] included as plosive sounds. The second of the target sounds is [l], [r], [m], [n], [ŋ] and [w] included as sonorant sound.

The rules pattern of palatalization in the *Osing* dialect is that when the target sound followed by the trigger sounds, the target sounds are palatalized in the initial (first syllable) or middle position (second syllable or more). The presence of palatalization in the *Osing* dialect is grouped into single (first syllable or second syllable) and double presences (the same target consonant or mixed target consonant). Based on the data and analysis, the consonants in the plosive group are flexible to be palatalized in all position wherever they are (in first or second syllable position) as long as the target and the trigger are in one stem. However, the second group of target sounds is only palatalized in the second syllable position. The inconsistency in palatalization also happens and it is dominated by the second group of the target sounds [l], [r], [m], [n], [ŋ] and [w].

The palatalization in the *Osing* dialect is categorized as secondary palatalization and the palatalization is only affect the phonemical domain. It happens in syllable interaction (combination between trigger and target palatalization) and this palatalization does not affect the words in morphemic or morpho phonemical condition. It tends to the allophonic variation of the *Osing* dialect. Palatalization in the *Osing* dialect only differentiates how *Osing* people pronounce a word rather than constructing or changing the meaning of words. Because most of the vocabularies have similar meaning as Javanese.

5.2 Suggestion

Palatalization is one of the interesting topics in phonology. There are still more cases inside the palatalization topic. The different subject research and object research can give larger discovery and valuable finding in phonological studies especially in palatalization topic. This research only tried to discover the palatalization in the *Osing* dialect in Kemiren village and it is just a small part from over all phonology research.

Here, the researcher left several cases open for the next researcher to find out the answer. The researcher found several gaps that are the factor of inconsistency palatalization and why the consonants with [+sonorant] feature cannot be palatalized in first syllable. In different scope of study, an observation about historical linguistics of the *Osing* dialect seems very interesting for the next researcher to find out the origin of *Osing* communities and their dialect.

The last, the researcher realizes that this study is not the perfect one. Suggestion and critics will be very helpful for the continuing research especially in palatalization studies.

REFERENCES

Ali, Hasan. 2002. *Kamus Bahasa Daerah Using - Indonesia.* Banyuwangi: Dewan Kesenian Belambangan.

—. 2006. *Pedoman Umum Ejaan Bahasa Using.* Banyuwangi: Pemerintah Kabupaten Banyuwangi.

Alwasilah, A Chaedar. 1993. *Linguistik: Suatu Pengantar.* Bandung: Angkasa.

Arikunto, Syahid. 2013. *Prosedur Penelitian Suatu Pendekatan Praktik.* Jakarta: Rineka Cipta.

Arps, Bernard. 2010. "Geliat Bahasa Selaras Zaman Perubahan Bahasa -bahasa di Indonesia Pasca-Orde Baru." *Research Institutes for languages and cultures of Asia and Africa (ILCAA)* (Tokyo University o Foreign Studies).

Ashar, Moh Syaifudin Hanis. 2018. "A Preliminary Study on The Phonology of The Osing Language Spoken in Banyuwangi." *International Research Journal of Human Resources and Social Sciences.*

2008. *Bahasa dan Peta Bahasa di Indonesia.* Jakarta: Pusat Bahasa .

Bateman, Nicoleta. 2007. *A Crosslinguistic Investigation of Palatalization.* San Diego: University of California.

Bateman, Nicoleta. 2011. "On the Typology of Palatalization." *Language and Linguistics Compass.* doi:DOI: 10.1111/j.1749-818X.2011.00294.x .

Bhat, D. N. Shankara. 1978. "A General Study of Palatalization." Edited by Greenberg. *Universal of human language* 47-92.

Blevin, Juliette. 2004. *Evolutionary Phonology: The Emergence of Sound Patterns.* Cambridge: Cambridge university press.

Bowen, Caroline. 2011. "Phonological_Processes.pdf." *https://www.speech-language-therapy.com.* Accessed January 20, 2020.

Boyer, Susan. 2003. *Spelling and Pronunciation for English Language Learners.* Gleenbrook: Boyer Educational Resource.

Browman, C., and L. Goldstein. 1990. "Tiers in Articulatory Phonology, with some Implications for Casual Speech."

Budiono, Satwiko. 2015. *Variasi Bahasa di Kabupaten Banyuwangi: Penelitian Dialektologi.* Thesis, Depok: Universitas Indonesia.

Calabrese, Andrea. 2005. *Markedness and Economy in a Derivational Model of Phonology. Studiesin Generative Grammar 80.* Berlin/New York: Mouton de Gruyter.

Ćavar, Małgorzata. 2007. "Palatalization Effects as A Result of Articulatory- and Perceptually-Driven Mechanisms." *GK: Ökonomie und Komplexität in der Sprache* (Universität Potsdam/Humboldt Universität zu Berlin).

Chen, Matthew. 1973. "Predictive Power in Phonological Description." *Lingua 32* 173-191.

Chomsky, Noam, and Morris Halle. 1968. *The Second Sound Pattern of English.* New York: Harper & Row Publisher.

Clark, J., and C. Yallop. 1990. *An Introduction to Phonetics and Phonology.* U. K.: Basil.

Collins, Beverley, and Inger M. Mees. 2013. *Practical Phonetics And Phonology.* 3rd. New York: Routledge.

Crystal, David. 2008. *A Dictionary of Linguistics and Phonetics.* Oxford: Blackwell publishing.

n.d. *Departement of Linguistics university of California, Santa Barbara.* Accessed January 11, 2018. www.linguistics.ucsb.edu.

Disner, Peter Ladefoged and Sandra Ferrari. 2012. *Vowel and Consonant.* USA: Blackwell Publishing Ltd.

Dyk, Siebren. 2011. "Palatalization of The Glide in Frisian Raising Diphthongs as A Case of Shift." *ESUKA – JEFUL* 125 – 139.

Ekpe, Mfon Brownson. 2013. "Articulatory Analysis of Palatalization in Anaang." *International Journal of Applied Linguistics & English Literature.*

Franendya, Retno Ajeng. 2014. *Phonological and Lexical Exploration on Dialect Differences Between Kemiren and Tampo Osing.* Malang: Universitas Brawijaya.

Fromkin, Victoria, Robert Rodman, and Nina Hyams. 2011. *An Introduction to Language 9e.* Boston: Wadsworth.

Hall, T. A. 2000. "Typological Generalizations Concerning Secondary Palatalization." *Lingua* 1-25.

Hamidi. 2010. *Metode Penelitian Kualitatif.* Malang: UMM Press.

Hayes, Bruce. 2009. *Introductory Phonology.* UK: Blackwell Publishing.

Herusantosa, Suparman. 1978. *Bahasa Using di kabupaten Banyuwangi: Penelitian Dialektologi.* Dissertation, Jakarta: Universitas Indonesia.

Hoek, Michel Van Der. 2010. *Palatalization in West Germanic.* PhD thesis, Minnesota: University of Minnesota.

2018. *http:Petabahasa.Kemendikbud.go.id.* February 14. Accessed December 11, 2020. https://petabahasa.kemdikbud.go.id/provinsi.php?idp=Jawa%20Timur.

Idrus, M. 2009. *Metode penelitian Ilmu Sosial; Pendekatan Kualitatif dan kuantitatif.* Jakarta: Penerbit Erlangga.

Jensen, T. 2004. *Principle of Generative Phonology.* Amsterdam: Jhon Benjamin Publishing Company.

Katamba, F. 1989. *An Introduction to Phonology.* New york: Addison Wesley Longman Limited.

Kochetov, Alexei. 2016. "Palatalization and Glide Strengthening as Competing Repair Strategies: Evidence from Kirundi." *GLOSSA: a journal of general linguistics* 1-31.

Kurniawati, Wisma. 2018. "Struktur silabis Bahasa Jawa Isolek Malang." *Jurnal Ilmiah Program studi Pendidikan Bahasa dan Sastra Indonesia* (Universitas Muhammadiyah Jember) 3 (1): 103-112.

Ladefoged, P. 1982. *A Course in Phonetics. 2nd edition.* New York: Harcourt Brace Jovanovich.

Leung, C., and A. Brice. 1983. "An anaysis of Phonological Process Involved in Spoken English of Hong Kong Primary Pre-Service Teacher." *Language Testing in Asia* 42-60.

McMahon, April. 2002. *An Introduction to English Phonology.* Edinburgh: Edinburgh University press.

Merriam, B. Sharan, and Elizabeth J Tisdell. 2016. *Qualtative Research: A Guide to Design and Implementation.* 4. San Francisco: Jossey-Bass.

Myers, S. 1997. "Expressing Phonetic Naturalness in Phonology. In: I. Rocca (ed) Derivations." *Rocca (ed) Derivations and Constraints in Phonology* (Clarendon Press).

Odden, David. 2005. *Introducing Phonology.* Cambridge: Cambridge University press.

n.d. *Omniglot.* Accessed January 11, 2019. www.omniglot.com/writing/sanksrit.htm.

Prastika, I. W. 2005. *Fonologi Bahasa Bali: Sebuah pendekatan Generatif transformatif.* Bali: Pustaka Larasan.

Roach, Peter. 1998. *English Phonetics and Phonology: A practical course.* 2nd. Cambridge: Cambridge University Press.

Samarin, William J. 1967. *FIELD LINGUISTICS: A Guid to Linguistics fields work.* New York: Holt, Rinehart and Winston inc.

Schane, S. A. 1973. *Generative Phonology.* New Jersey: Prentice Hall Inc.

Simanjuntak, Mangantar. 1990. *Teori Fitur Distingtif dalam Fonologi Generatif:Pengembangan dan Penerapannya.* jakarta: Gaya Media Pratama.

Soetoko, and et al. 1981. *Geografi Dialek Banyuwangi.* Jakarta: Pusat Pembinaan dan Pengembangan Bahasa Departemen Pendidikan dan Kebudayaan.

Sudaryanto. 2015. *Metode dan Aneka Teknik Analisis Bahasa: PengantarPenelitian Wahana Kebudayaan secara Linguistis.* Yogyakarta: Sanata Dharma University Press.

Wedhawati. 2006. *Tata Bahasa Jawa Mutakhir.* Yogyakarta.: Kanisius.

Yule, George. 2010. *The Study of Language.* Fourth Edition. New York: Cambridge University Press.

Zen, Abdul Latif. 2016. *Perubahan Fonologis Kosakata Sanskerta Dalam Bahasa Jawa (Analisis Fitur Distingtif Dalam Fonologi Transformasi Generatif).* Thesis, Semarang: Universitas Diponegoro.

Zheng, Y. 2013. "The application of Individual Teaching Based on Generative phonology in the University." *Theory and Practice in Language Studies* 1680-1684.

Zulaeha, Ida. 2010. *Dialektologi; Dialek Geografi dan Dialek Sosial.* Yogyakarta: Graha Ilmu.

APPENDICES

Appendix 1. The data of palatalization in the *Osing* dialect

The palatalization of [bʲ]_[a] and the palatalization of [bʲ]_[ɛ]

No	Words	Transcription	Meaning	No	Words	Transcription	Meaning
1	Abane	[abʲane]	sound	1	Ambèr	[ambʲɛr]	overflow
2	Abanana	[abʲanɔnɔ]	tell	2	Bèbèk	[bʲɛbʲɛk]	duck
3	Abab	[abʲab]	breath	3	Bèbèr	[bʲɛbʲɛr]	rollout
4	Abad	[abʲad]	century	4	Bèdhèng	[bʲɛdʲɛŋ]	place for plantation
5	Abah	[abʲah]	father	5	Bèji	[bʲɛʄi]	iron cutter
6	Abang	[abʲaŋ]	red	6	Bèk	[bʲɛʔ]	surprised expression
7*	Abangan	[abʲaŋan]	a kind of fish	7	Bèker	[bʲɛkər]	alarm clock
8	Babad	[bʲabʲad̪]	history	8	Bèl	[bʲɛl]	bell
9	Babar	[bʲabʲar]	everything	9	Bèleng	[bʲɛləŋ]	stubborn
10	Babas	[bʲabʲas]	gone too far	10*	Bèlèk	[bʲɛlɛʔ]	bleary eyes
11	Badheg	[bʲadəg]	smelly	11*	Bèlèr	[bʲɛlɛr]	score
12	Badhé	[bʲade]	about to	12	Bèndeng	[bʲɛndəŋ]	connect
13*	Badhèk	[bʲadɛk]	liquid fermentation	13	Bèndhèt̪	[bʲɛndʲɛt̪]	turtle egg
14	Badher	[bʲadər]	a kind of fish	14	Bènt̪en	[bʲɛntən]	different
15	Badhik	[bʲadık]	big knive	15	Bènt̪èng	[bʲɛnt̪ɛŋ]	fortress
16	Badhog	[bʲadɔg]	eat	16	Bèng	[bʲɛŋ]	term for a girl
17	Badhong	[bʲadɔŋ]	basin from bamboo	17*	Bèngès	[bʲɛŋɛs]	use lipstick
18	Bagor	[bʲagɔr]	mesh fabric from palm	18*	Bènyès	[bʲɛɲɛs]	rotten and wet
19	Bagu	[bʲagu]	a kind of leaves	19*	Bèrèt	[bʲɛrɛt̪]	scratch
20	Bah	[bʲah]	never mind	20	Bèrko	[bʲɛrko]	electric generator
21	Bain	[bʲaın]	merely	21	Bèt	[bʲɛt]	symbol on clothes
22*	Bajag	[bʲaʄag]	robber	22	Bèthèt	[bʲɛt̪ɛt̪]	a kind of birds
23*	Bajang	[bʲaʄaŋ]	stunted	23	Delebèr	[d̪ələbʲɛr]	melt
24	Bajeng	[bʲaʄəŋ]	eldest	24	Embèl	[əmbʲɛl]	worthless
25	Bajeg	[bʲaʄəg]	many	25	Embèn	[əmbʲɛn]	tomorrow
26	Bajul	[bʲaʄʊl]	crocodile	26	Embèng	[əmbʲɛŋ]	calf
27	Bak	[bʲak]	tub	27	Gembèng	[gəmbʲɛŋ]	whining
28	Bakal	[bʲakal]	candidate	28	Jebèng	[ʄəbʲɛg]	a term for girl

29	Bakar	[bʲakar]	burn
30	Bakat	[bʲakat̪]	talent
31*	Balak	[bʲalak]	disaster
32	Balik	[bʲalık]	back
33*	Balang	[bʲalaŋ]	fling
34*	Balap	[bʲalap]	race
35	Baluk	[bʲalʊʔ]	merchant
36	Balok	[bʲalɔʔ]	log
37	Balong	[bʲalɔŋ]	pond
38	Balsem	[bʲasəm]	ointment
39	Bambang	[bʲambʲaŋ]	slim
40*	Bambangan	[bʲambʲaŋan]	a kind of fish
41	Bancak	[bʲancaʔ]	cone basket
42	Bancang	[bʲancaŋ]	design
43	Bancar	[bʲancar]	fluent
44	Banci	[bʲanci]	sissy
45	Bander	[bʲand̪ər]	release
46*	Bandhèt	[bʲandɛt̪]	hook
47	Bandhung	[bʲandʊng]	double up
48*	Bandrèk	[bʲand̪rɛʔ]	break a lock
49*	Bandhèt	[bʲandɛt̪]	turtle egg
50	Bangkak	[bʲaŋkaʔ]	a kind of frogs
51	Bangkang	[bʲaŋkaŋ]	nude
52	Bangkat	[bʲaŋkat̪]	strong
53	Bangkel	[bʲaŋkəl]	angry
54	Bangké	[bʲaŋke]	waist
55	Bangket	[bʲaŋkət̪]	a kind of cakes
56	Bangklet	[bʲaŋklət̪]	attach
57*	Bangkrak	[bʲaŋkraʔ]	a kind of birds
58	Bangkuk	[bʲaŋkʊʔ]	a kind of fish
59	Bangle	[bʲaŋle]	a kind of tubers
60	Bapak	[bʲapak]	father
61	Bibar	[bibʲar]	end
62	Cabang	[cabʲaŋ]	branch
63	Dubang	[d̪ubʲaŋ]	red spit
64	Ebah	[əbʲah]	let it be
65	Ebak	[əbʲaʔ]	full
66	Embah	[əmbʲah]	grandfather or grandmother
67	Emban	[əmbʲan]	maid

29	Jebèh	[ɟəbʲɛh]	tasteless
30	Lèmbèng	[lɛmbʲɛŋ]	pampered
31	Ombèn	[ombʲɛn]	drink
32*	Rabèk	[rabʲɛk]	married
33	Tèmbèl	[t̪embʲɛl]	patch

68	Embat	[əmbʲaʈ]	move up and down
69	Gebang	[gəbʲaŋ]	a kind of palm tree
70	Gebas	[gəbʲas]	flap
71	Gibab	[gibʲab]	lie
72	Jebak	[ɟəbʲak]	trap
73	Jembar	[ɟəmbʲar]	large
74	Kembang	[kəmbʲaŋ]	flower
75*	Laban	[labʲan]	a kind of tree
76	Lebak	[lebʲaʔ]	valley
77*	Lambar	[lambʲar]	piece
78	Obat	[obʲat}	medicine
79	Obah	[obʲah]	move
80	Ombak	[ombʲak]	wave
81	Paribasan	[paribʲasan]	proverb
82	Risbang	[rɪsbʲaŋ]	long bench
83	Rabas	[rabʲas]	clear away
84	Sebah	[səbʲah]	filled (sickness)
85	Sebar	[səbʲar]	spread
86	Semebar	[səməbʲar]	fragrant
87	Simbar	[simbʲar]	hair on chest
88	Tambal	[tambʲal]	mend a leak
89	Tebas	[təbʲas]	purchase all
90	Tibané	[tibʲane]	obviously
91*	Waribang	[waribʲaŋ]	a kind of plant

The palatalization of [ɖʲ]_[a] and the palatalization of [ɖʲ]_[ɛ]

No	Words	Transcription	Meaning	No	Words	Transcription	Meaning
1	Adab	[aɖʲab]	politeness	1	Delèndèng	[ɖəlʲɛnɖʲɛŋ]	damaged
2	Adan	[aɖʲan]	call for prayer	2	Dèn	[ɖʲɛn]	scare
3	Adang	[aɖʲaŋ]	cooking rice	3	Dèngkèk	[ɖʲɛŋkɛʔ]	stretched
4	Adat	[aɖʲat]	tradition	4*	Dèrèng	[ɖʲɛrɛŋ]	not yet
5	Dableg	[ɖʲabləg]	naughty	5	Dèbrès	[dʲɛbrʲɛs]	grumble
6	Dadal	[ɖʲaɖʲal]	serious attempt	6	Dèlèh	[ɖʲɛlɛh]	to put
7	Dadar	[ɖʲaɖʲar]	fried egg	7	Dèrèng	[ɖʲɛrɛŋ]	not yet
8	Dadèk	[ɖʲaɖʲɛʔ]	create	8	Dèwi	[ɖʲɛwi]	goddess
9	Dadèn	[ɖʲaɖʲɛn]	made up	9	Gudèl	[ɡuɖʲɛl]	calf
10	Dados	[ɖʲadɔs]	happen	10	Ladèn	[laɖʲɛn]	serve
11*	Dadrah	[ɖʲaɖrʲah]	whole	11	Lèdèp	[lɛɖʲɛp]	bleary eyes
12	Dagang	[ɖʲagʲaŋ]	sell	12	Wedèn	[wəɖʲɛn]	afraid

13*	Dalah	[ɖʲalah]	anyway				
14	Dalan	[ɖʲalan]	road				
15*	Damak	[ɖʲamaʔ]	amaze				
16*	Daman	[ɖʲaman]	notice				
17*	Damar	[ɖʲamar]	lantern				
18*	Damèn	[ɖʲamɛn]	straw				
19	Dané	[ɖʲane]	Although				
20*	Danganan	[dʲaŋanan]	Stem				
21	Dandan	[ɖʲanɖan]	make up				
22*	Dandap	[ɖʲanɖap]	Hasty				
23	Dangu	[ɖʲaŋʊ]	long time				
24	Dapak	[ɖʲapaʔ]	if				
25*	Dares	[ɖʲarɛs]	crow				
26	Daugan	[ɖʲaʊgʲan]	young coconut				
27	Edal	[əɖʲal]	take out				
28	Edang	[əɖʲaŋ]	hinder				
29*	Mandar	[manɖʲar]	hopefully				
30	Mendah	[mɛnɖʲah]	how (expression)				
31	Sewidak	[səwiɖʲak]	sixty				
32	Sodakoh	[sɔdʲakɔh]	charity				
32	Udan	[uɖʲan]	rain				
33*	Wadanan	[waɖʲanan]	alias				
34	Wédang	[weɖʲaŋ]	coffee				
36	Wedal	[wəɖʲal]	get out				
37	wekdal	[wəkɖʲal]	time				

The palatalization of [dʲ]_[a] and the palatalization of [dʲ]_[ɛ]

No	Words	Transcription	Meaning	No	Words	Transcription	Meaning
1	Andhan	[andʲan]	wavy	1	Adhèng	[adʲɛŋ]	slow
2	Andhang	[andʲaŋ]	high bench	2	Bedhèl	[bədʲɛl]	dissection
3	Bedhah	[bədʲah]	torn	3	Beledhèk	[bələdʲɛk]	lightning
4	Bedhal	[bədʲal]	freed	4	Beledhèt	[bələdʲɛt]	bounced
5	Bedhat	[bədʲat]	tossed away	5	Cedhèt	[cedʲɛt]	bulging
6	Bidhal	[bidʲal]	depart	6*	Dhèrès	[dʲɛrɛs]	sapping
7	Bidhag	[bidʲag]	shed	7	Dhèdhèg	[dʲɛdʲɛg]	broke
8	Bidhang	[bidʲaŋ]	area	8	Dhèdhèl	[dʲɛdʲɛl]	torn
9	Cadhang	[cadʲaŋ]	stock	9	Dhèglèk	[dʲɛglʲɛg]	lame
10	Cadhas	[cadʲas]	rock	10	Dhèk	[dʲɛk]	barrier
11	Dhabul	[dʲabul]	grubby	11	Dhèmpèt	[dʲɛmpɛt]	crammed
12	Dhacin	[dʲacin]	scale	12	Dhèmpèl	[dʲɛmpɛl]	stick
13	Dhahar	[dʲahar]	eat	13	Gedhèg	[gədʲɛg]	bamboo wicker

14	Dhandhang	[dʲandʲaŋ]	crow
15	Dhangak	[dʲaŋa’]	look up
16	Dhangir	[dʲaŋIr]	clean out weeds
17	Dhanyang	[dʲaŋaŋ]	ghost
18	Dhaplang	[dʲaplaŋ]	strain
19	Dhaplok	[dʲaplɔʔ]	old
20	Dhaup	[dʲaʊp]	marry
21	Dhawet	[dʲawət]	kind of dink
22	Edhang	[ədʲaŋ]	ambush
23	Endak	[əndʲaʔ]	latter
24	Endhang	[endʲaŋ]	visit
25	Endhas	[əndʲas]	head
26	Endhat	[əndʲat]	pause
27	Gedhag	[gədʲag]	bluff
28	Gedhang	[gədʲaŋ]	banana
29	Gelédhag	[gəledʲag]	put
30	Godhag	[gɔdʲag]	run after
31	Kadhal	[kadʲal]	lizard
32	Kadhas	[kadʲas]	blotch
33*	Kadhang	[kadʲaŋ]	sometimes
34*	Lodhang	[lodʲaŋ]	take from
35*	Madhang	[madʲaŋ]	eat
36	Makadham	[makadʲam]	rough road
37	Mandhap	[mandʲap]	drop
38	Nyadham	[ɲandʲam]	almost ripe
39	Padhang	[padʲaŋ]	bright
40	Pindhah	[pindʲah]	move to another place
41	Pindhang	[pindʲaŋ]	a kind of fish
42	Pundhak	[pundʲaʔ]	shoulder
43	Rodhat	[rɔdʲat]	a kind of dance
44	Sandhal	[sandʲal]	slipper
45	Sandhang	[sandʲaŋ]	clothing
46	Tadhah	[tadʲah]	cistern
47	Tandhak	[tandʲaʔ]	javanese dancer
48	Tandhan	[tandʲan]	a bunch
49	Udhal	[udʲal]	remove
50	Undhak	[undʲak]	rise
51	Undhat	[undʲat]	bring up

14	Gedhèk	[gədʲɛk]	to make big
15	Gegedhèn	[gəgədʲɛn]	too big
16*	Godhèg	[gɔdʲɛg]	sideburns
17*	Gudhèl	[gudʲɛl]	calf of buffalo
18	Lèdhèh	[lɛdʲɛh]	Rot
19	Lèndhèh	[lɛndʲɛh]	lean on
20	Pendhèk	[pəndʲɛʔ]	Short
21	Pedhèt	[pədʲɛt]	calf
22	Sadhèng	[sadʲɛŋ]	a kind of palm tree
23	Sudhèt	[sudʲɛt]	Dissect

The palatalization of [gʲ]_[a] and the palatalization of [gʲ]_[ɛ]

No	Words	Transcription	Meaning
1	Agagé	[agʲage]	hurry up
2	Bedhigal	[bədigʲal]	impolite
3	Bedhigas	[bədɪgʲas]	rude
4	Bergas	[bərgʲas]	fit
5	Cegat	[cəgʲat]	block
6	Egap	[əgʲap]	gasping breath
7	Egar	[əgʲar]	open
8	Enggang	[əŋgʲaŋ]	loose
9	Gabag	[gʲabʲag]	a kind of diseases (itchy)
10	Gabah	[gʲabʲah]	unhusked rice
11	Gabel	[gʲabəl]	hug
12	Gabes	[gʲabəs]	dry
13*	Gablag	[gʲablag]	hit
14	Gablek	[gʲablək]	have
15	Gablok	[gʲablək]	blunt
16	Gabul	[gʲabʊl]	dirty
17	Gacah	[gʲacah]	annoy
18	Gadhel	[gʲadəl]	soybean
19*	Gadhèn	[gʲadɛn]	mortgage
20	Gadhing	[gʲadɪŋ]	yellowness
21	Gadho	[gʲado]	eat
22	Gajul	[gʲaɟʊl]	substitute
23*	Galar	[gʲalar]	bamboo board
24	Galer	[gʲalər]	welt
25	Gales	[gʲaləs]	young
26	Galih	[gʲalɪh]	feeling
27	Galir	[gʲalɪr]	spiral scratch
28	Galok	[gʲalɔʔ]	Stir
29	Galur	[gʲalʊr]	trench
30*	Gambrèng	[gʲambrɛŋ]	hitting by hand
31	Gambrès	[gʲambrʲɛs]	reap
32	Gambuh	[gʲambʊh]	traditional art
33	Gamoh	[gʲamɔh]	Weak
34	Gampèng	[gʲampɛŋ]	niche

No	Words	Transcription	Meaning
1	Begègèg	[bəgʲɛgʲɛg]	straddle
2	Begèr	[bəgʲɛr]	blossom
3	Drèg̲ drèg̲an	[d̪rʲɛg d̪rʲɛgʲan]	decadence
4	Egèt	[əgʲɛt]	to make fast
5*	Gèdhèk	[gʲɛdɛk]	head shake
6	Gègèr	[gʲɛgʲɛr]	riot
7	Gètgètən	[gʲɛtgʲɛtən]	easily scared
8	Gèglèk	[gʲɛglʲɛʔ]	tilting head
9	Gègrèk	[gʲɛgrʲɛʔ]	show off
10	Gendhong	[gʲɛndɔŋ]	carrying on back
11	Gènjah	[gʲɛnɟah]	concise
12	Gèthèk	[gʲɛtɛʔ]	raft
13	Gèngsèr	[gʲɛŋsɛr]	move
14	Gènjèr	[gʲɛnɟʲɛr]	a kind of vegetable
15	Gèntèr	[gʲɛntɛr]	long pole
16	Gèpèng	[gʲɛpɛŋ]	flat
17	Gèsèh	[gʲɛsɛh]	shift
18	Jogéd	[ɟogʲɛd]	dance
19*	Kagét	[kagʲɛt]	shock
20	Legèn	[ləgʲɛn]	a kind drink
21	Metenggèng	[mətəŋgʲɛŋ]	a kind of bugs
22	Ragén	[ragʲɛn]	yeast
23	Setagén	[sətagʲɛn]	waist band
24	Sogél	[sogʲɛl]	bushy fruit

35	Gancang	[gʲancaŋ]	handy
36	Gancèt	[gʲancɛt]	stick
37	Gandhang	[gʲandʲaŋ]	sing
38	Gandhèng	[gʲandʲɛŋ]	arm in arm
39	Gandrung	[gʲandɻʊŋ]	a kind of dance
40	Gangsar	[gʲaŋsar]	smooth
41	Ganjor	[gʲanɟɔr]	wooden craft (wicket)
42	Gantang	[gʲantaŋ]	interval
43	Gantar	[gʲantar]	traditional game
44	Gantèk	[gʲantɛʔ]	substitute
45	Gathik	[gʲatɪʔ]	touching
46	Gathuk	[gʲatʊk]	combine
47*	Gawèl	[gʲawɛl]	wrap
48	Gigah	[gɪgʲah]	wake
49	Gugah	[gugʲah]	to wake up
50	Jogan	[ɟogʲan]	floor
51*	Langgah	[laŋgʲah]	impolite
52*	Langar	[laŋgʲar]	mosque
53	Lenggah	[ləŋgʲah]	sit
54	Longgar	[lɔŋgʲar]	loose
55	Logat	[lɔgʲat]	dialect
56	Minggat	[miŋgʲat]	run away
57	Ndhugal	[ndugʲal]	disobedient
58	Ragat	[ragʲat]	wealth
59	Setunggal	[sətuŋgʲal]	one
60	Tegal	[təgʲal]	garden
61	Tunggak	[tuŋgʲaʔ]	stump
62	Wegah	[wəgʲah]	unwilling
63*	Weragat	[wəragʲat]	expense
64	Wigati	[wigʲati]	purpose
65	Wugal	[wugʲal]	rigid

The palatalization of [ɟʲ]_[a] and The palatalization of [ɟʲ]_[ɛ]

No	Words	Transcription	Meaning	No	Words	Transcription	Meaning
1	Ajak	[aɟʲaʔ]	invite	1	Ajèni	[aɟʲɛnɪ]	respect
2	Ajang	[aɟʲaŋ]	plate	2*	Belèjèt	[bəlɛɟʲɛt]	naked
3	Ajar	[ajʲar]	teach	3	Gojèk	[goɟʲɛk]	kid around
4	Bejat	[bəɟʲat]	immoral	4	Ijèn	[iɟʲɛn]	alone
5	Bejaji	[bəɟʲaɟɪ]	proper	5	Jèh	[ɟʲɛh]	surprise expression
6	Ejak	[əɟʲaʔ]	invite	6	Jéjén	[ɟʲɛɟʲɛn]	scare

7	Ejar	[əʄʲar]	allow
8	Gejag	[gəʄʲag]	fruit season
9	Gejah	[gəʄʲah]	to hammer
10	Gijal	[gɪʄʲal]	struggle
11	Ginjah	[gɪnʄʲah]	bear fruit
12	Ginjal	[gɪnʄʲal]	strive
13	Jagèk	[ʄʲagʲɛʔ]	guarding
14	Jagèn	[ʄʲagʲɛn]	guarding
15	Jagang	[ʄʲagʲaŋ]	support stand
16	Jagat	[ʄʲagʲat]	universe
17	Jagal	[ʄʲagʲal]	butcher
18	Jagrang	[ʄʲagrʲaŋ]	support stand
19	Jagir	[ʄʲagɪr]	calf (buffalo)
20	jag-jagan	[ʄʲag ʄʲagʲan]	insolent
21	Jagung	[ʄʲagʊŋ]	corn
22	Jagur	[ʄʲagʊr]	tall and big
23	Jajil	[ʄʲaʄɪl]	slander
24	Jamak	[ʄʲamaʔ]	common
25	Jambal	[ʄʲambʲal]	to call
26	Jambet	[ʄʲambət]	sagged
27	Jamblem	[ʄʲambləm]	a kind of cakes
28	Jampleng	[ʄʲampləŋ]	up to the limit
29*	Jangèr	[ʄʲaŋɛr]	traditional drama
30	Janggel	[ʄʲaŋgəl]	corn cob
31	Jangget	[ʄʲaŋgət]	stick to
32	Janggol	[ʄʲaŋgol]	wait
33	Janggut	[ʄʲaŋgʊt]	chin
34	Janom	[ʄʲanɔm]	poop
35	Jantur	[ʄʲantʊr]	hang
36	Janur	[ʄʲanʊr]	coconut leaves
37	Japin	[ʄʲapɪn]	a kind of ryhtm
38	Japit	[ʄʲapɪt]	pinch
39*	Jaran	[ʄʲaran]	rare
40	Jarem	[ʄʲarəm]	stiff (muscle)
41	Jaré	[ʄʲare]	gossip
42	Jaring	[ʄʲarɪŋ]	net
43	Jarit	[ʄʲarɪt]	garment
44	Jatèn	[ʄʲatɛn]	true

7	Jéjér	[ʄʲɛʄʲɛr]	side by side
8*	Jénggér	[ʄʲɛŋgʲɛr]	comb
9*	Jéntrék	[ʄʲɛntrɛʔ]	line up
10	Jémbél	[ʄʲɛmbʲɛl]	shabby
11*	Jémblem	[ʄʲɛmbl]	a kind of cakes
12	Léjék	[lɛʄʲɛʔ]	muddy
13	Séjék	[sɛʄʲɛʔ]	set aside
14	Sujén	[suʄʲɛn]	skewer
15	Tajén	[taʄʲɛn]	cock fighting
16	Sajèn	[saʄʲɛn]	offering ritual

45	Jaton	[ɟʲatɔn]	a kind of dried herbs
46	Jatos	[ɟʲatɔs]	true
47	Jatu	[ɟʲatu]	a kind of dried herbs
48*	Jawar	[ɟʲawar]	a kind of palms
49	Jawél	[ɟʲawel]	dab
50*	Jawèn	[ɟʲawɛn]	outside
51*	Lanjar	[lanɟʲar]	widow
52	Najan	[naɟʲan]	although
53*	Najak	[naɟʲak]	died
54	Pejagan	[pəɟʲagan]	post guard
55	Panjak	[panɟʲaʔ]	traditional music orchestra
56*	Pejah	[pəɟʲah]	dead
57	Rajang	[raɟʲaŋ]	to mince
58	Rujak	[ruɟʲak]	a kind of food
59	Sejati	[səɟʲati]	genuine
60	Wajan	[waɟʲan]	frying pan
61	Wajar	[waɟʲar]	natural
62	Wejang	[wəɟʲaŋ]	advice

The palatalization of [m]_[a] and The palatalization of [m]_[ɛ]

No	Words	Transcription	Meaning	No	Words	Transcription	Meaning
1	Dimakené	[d̪ɪmʲaʔəne]	let	1	Demèk	[d̪əmʲɛʔ]	touch
2	Gemableg	[gəmʲabləg]	hit by hand	2	Demèmèh	[d̪əmʲɛmɛh]	frivolous
3	Gemambreng	[gəmʲambrəŋ]	cheated	3	Dumèh	[d̪umʲɛh]	because
4	Gemampang	[gəmʲampaŋ]	belittle	4	Jemèk	[ɟəmʲɛʔ]	wet
5	Gemandhol	[gəmʲand̪ol]	hanging (fruit)				
6	Gemati	[gəmʲatɪ]	friendly				
7	Gemantung	[gəmʲantʊŋ]	hanging (things)				
8	Jelumat	[ɟəlʊmʲat]	sew				
9	Makené	[mʲakəne]	for				
10	Rumat	[rumʲat]	taking care				
11	Tuman	[tumʲan]	habit (negative)				
12	Tumang	[tumʲaŋ]	fireplace				
13	Umah	[umʲah]	house				
14	Uman	[umʲan]	receive				

The palatalization of [n]_[a] and The palatalization of [n]_[ɛ]

No	Words	Transcription	Meaning	No	Words	Transcription	Meaning
1	Belunat	[bəlunʲat]	break the law	1	Benèh	[bənʲɛh]	kind
2	Genah	[gənʲah]	clear	2	Jenèwer	[ɟənʲɛwər]	a kind of alcohol
3	Rengginang	[rəŋgɪnʲaŋ]	a kind of food	3	Unèk	[unʲɛʔ]	to ring/ activate
4	Sunat	[sunʲat]	circumcision	4	Unen	[unʲɛn]	to ring/ activate
5	Sunar	[sunʲar]	shine				
6	Sunan	[sunʲan]	honorific in java				

The palatalization of [ŋ]_[a] and The palatalization of [ŋ]_[ɛ]

No	Words	Transcription	Meaning	No	Words	Transcription	Meaning
1	Jengat	[ɟəŋʲat]	teeter	1	Bengèn	[bəŋʲɛn]	nightfall
2	Peningal	[pəniŋʲal]	sight	2	Angèl	[aŋʲɛl]	difficult
3	Tungal	[tuŋʲal]	rafter	3	Singèn	[siŋʲɛn]	previously
4	Tungas	[tuŋʲas]	tip	4*	Jengèngèh	[ɟəŋʲɛŋɛh]	raise up
5	Ungak	[uŋʲaʔ]	look into	5*	Jengèngèk	[ɟəŋʲɛŋɛʔ]	laugh
6	Jengangah	[ɟəŋʲaŋah]	teeter				
7	Jengah	[ɟəŋʲah]	astonished				

The palatalization of [l]_[a] and The palatalization of [l]_[ɛ]

No	Words	Transcription	Meaning	No	Words	Transcription	Meaning
1	Amblas	[amblʲas]	disappear	1	Belèbèr	[bəlʲɛbʲɛr]	overflow
2	Belabar	[bəlʲabʲar]	overload	2	Belèjèd	[bəlʲɛɟʲɛt]	plunder
3	Belabak	[bəlʲabʲak]	black board	3	Belèd	[bəlʲɛd]	prudence
4	Belabur	[bəlʲabʊr]	flood	4	Belèh	[bəlʲɛh]	slaughter
5	Belabas	[bəlʲabʲas]	ruler	5	Belèk	[bəlʲɛʔ]	canned of food
6	Belacu	[bəlʲacʊ]	fabric	6	Belèngsèt	[bəlʲɛŋsɛʈ]	peel
7	Belat	[bəlʲat]	divider	7	Belèr	[bəlʲɛr]	scratch
8	Beladhur	[bəlʲaɖʊr]	hazy	8	Gelèdrèg	[gəlʲɛɖrʲɛg]	loiter
9	Belah	[bəlʲah]	divide	9	Gelédhég	[gəlʲɛdʲɛg]	push
10	Belahi	[bəlʲai]	accident	10	Gelèngsèr	[gəlʲɛŋsɛr]	slide
11	Belajar	[bəlʲaɟʲar]	study	11	Gelèntèr	[gəlʲɛntɛr]	long pole
12	Belambangan	[bəlʲambʲaŋan]	name of a kingdom	12	Gèblèk	[gʲɛblʲɛk]	hit by hand
13	Belandar	[bəlʲanɖʲar]	a part of house	13	Jelèntrèh	[ɟəlʲɛntrɛh]	explain

14	Belandhong	[bəlʲandɔŋ]	lumberjack
15	Belandhos	[bəlʲandɔs]	accident
16	Belandur	[bəlʲanḏʊr]	slip
17	Belang	[bəlʲaŋ]	blemish
18*	Belangat	[bəlʲaŋat]	reddish
19	Belanggur	[bəlʲaŋgʊr]	firecracker
20	Belangkèt	[bəlʲaŋkɛt]	adjacent
21	Belangko	[bəlʲaŋko]	blank form
22	Belantik	[bəlʲantɪʔ]	animal merchant
23*	Belarak	[bəlʲaraʔ]	coconut dried leaf
24	Belas	[bəlʲas]	numbers
25	Belasak	[bəlʲasaʔ]	go in the jungle
26	Belaster	[bəlʲastər]	hybrid
27	Belasuk	[bəlʲasʊʔ]	lost
28	Belatèr	[bəlʲatɛr]	friendly
29	Belaur	[bəlʲaur]	bleary
30	Belawu	[bəlʲawu]	bluish
31	Bolak	[bolʲak]	thread
32	Caglak	[caglʲaʔ]	join in
33	Delamak	[ḏəlʲamaʔ]	palm/sole
34	Dilah	[ḏilʲah]	light
35*	Dilalah	[ḏilʲalah]	coincidentally
36	Dilat	[ḏilʲat]	lick
37*	Dulang	[ḏulʲaŋ]	feeding
38	Emblang	[əmblʲaŋ]	open wide
39	Eblat	[əblʲat]	border
40	Geblak	[gəblʲak]	fall
41	Geladrah	[gəlʲaḏrʲah]	deviate
42	Geladhag	[gəlʲadʲag]	bridge
43	Gelagah	[gəlʲagʲah]	a kind of grass
44	Gelagap	[gəlʲagʲap]	hard to breath
45	Gelagar	[gəlʲagʲar]	grip
46	Gelandar	[gəlʲanḏʲar]	support stand
47	Gelandhang	[gəlʲandʲaŋ]	drag
48	Gelandhot	[gəlʲandɔt]	hang down
49	Gelanggang	[gəlʲaŋgʲaŋ]	arena
50	Gelangsar	[gəlʲaŋsar]	outfit
51	Gelathè	[gəlʲaʈɛ]	grasped
52	Gelawat	[gəlʲawat]	body movement
53	Gelayat	[gəlʲajat]	body movement

14	Jelèrèt	[ɟəlʲɛrɛt]	swerve
15*	Jugèr	[ɟugʲɛr]	dig
16*	Gèglèk	[gʲɛglʲɛʔ]	tilting head
17	Gejlèg	[gəɟlʲɛg]	close
18	Mèglèng	[mɛglʲɛŋ]	perch

54*	Gemelantong	[gəməlʲantɔŋ]	dangle
55	Gemelar	[gəməlʲar]	extended
56	Gemulak	[gəmulʲaʔ]	boil
57	Gilap	[gɪlʲap]	sparkling
58	Gulap	[gulʲap]	rag
59	Ilang	[ilʲaŋ]	lost
60	Ilat	[ilʲat]	tongue
61	Ilèn	[ilʲɛn]	flow
62	Jelamit	[ɟəlʲamɪt]	nibble
63	Jelantuk	[ɟəlʲantʊʔ]	collided
64	Jelarang	[ɟəlʲaraŋ]	squirrel
65	Jelarit	[ɟəlʲarɪt]	scratch line
66*	Jemblang	[ɟəmblʲaŋ]	open widely
67	Jomblang	[ɟomblʲaŋ]	match maker
68	Juglang	[ɟʊglʲaŋ]	pit
69	Seblang	[səblʲaŋ]	a kind of dance
70	Ulan	[ulʲan]	moon
71	Ulang	[ulʲaŋ]	teach

The palatalization of [r]_[a] and The palatalization of [r]_[ɛ]

No	Words	Transcription	Meaning	No	Words	Transcription	Meaning
1	Abrag	[abrʲag]	to be hurried up	1	Berèd	[bərʲɛd]	scratch
2	Adrah	[ad̪rʲah]	a music instrument	2	Berèntèk	[bərʲɛntɛʔ]	spread
3	Anjrah	[anɟrʲah]	common	3	Derèdès	[d̪ərʲɛd̪ʲɛs]	dripped
4*	Belakrak	[bəlakrʲaʔ]	going anywhere	4	Derèèl	[d̪ərʲɛɛl]	odd
5	Beléndrang	[bəlendrʲaŋ]	akind of foods	5*	Derèwès	[d̪ərʲɛwɛs]	dripped
6	Berabak	[bərʲabʲaʔ]	cry	6	Dèbrès	[d̪ʲɛbrʲɛs]	blabber
7	Beragas	[bərʲagʲas]	snobbish	7	Dèrès	[d̪ʲɛrʲɛs]	heavy (rain)
8	Berah	[bərʲah]	laborer	8	Drèg drègan	[d̪rʲɛg d̪rʲɛgʲan]	decadence
9	Berajag	[bərʲaɟʲag]	term for criminal	9	Drèl	[d̪rʲɛl]	concomitant
10*	Beranang	[bərʲanaŋ]	bright	10	Gebrèd	[gəbrʲɛd]	rush
11	Berancuh	[bərʲancuh]	say frankly	11	Gerègèl	[gərʲɛgʲɛl]	shiver
12	Berandhing	[bərʲandɪŋ]	strap from bamboo	12	Gerèjèg	[gərʲɛɟʲɛg]	taken all
13	Berangus	[bərʲaŋus]	animal muzzle	13	Gerèndhèl	[gərʲɛndʲɛl]	a door bolt
14	Berantun	[bərʲantun]	brave	14	Gerènjèng	[gərʲɛnɟʲɛŋ]	a kind of sounds
15	Berasak	[bərʲasaʔ]	trace a path	15	Gerèpès	[gərʲɛpɛs]	small chunks

16	Berasta	[bərʲastɔ]	abolished
17	Derajat	[ɖərʲaɟʲat]	status
18*	Derawas	[ɖərʲawas]	dangerous
19	Gebrag	[gəbrʲag]	hit hardly
20	Geracah	[gərʲacah]	encourage
21	Geradag	[gərʲaɖʲag]	done quickly
22	Geragal	[gərʲagʲal]	medium stone
23	Geragep	[gərʲagəp]	rash
24	Garaging	[gərʲagIŋ]	slim
25	Gerago	[gərʲagɔ]	small shrimp
26	Gerajag	[gərʲaɟʲag]	sound of waterfall
27	Gerajèk	[gərʲaɟʲɛʔ]	to saw
28	Geraji	[gərʲaɟi]	saw
29	Gerambyang	[gərʲambjaŋ]	estimation
30	Gerang	[gərʲaŋ]	adult
31	Geranggang	[gərʲaŋgʲaŋ]	bamboo spear
32	Gerangsang	[gərʲaŋsaŋ]	greedy
33	Gerantang	[gərʲantaŋ]	a kind of music instruments
34	Gerasak	[gərʲasak]	sand
35	Gerat	[gərʲat]	infertile (woman)
36	Gerathul	[gərʲaʈul]	stammer
37	Gerati	[gərʲati]	a kind of ducks
38	Gerayak	[gərʲajak]	seize
39	Girah	[gɪrʲah]	gargle
40	Gujrah	[guɟrʲah]	shake
41	Gurah	[gurʲah]	gargle
42	Gurat	[gurʲat]	line out
43	Jerambah	[ɟərʲambʲah]	wooden stage
44	Jerangking	[ɟərʲaŋkɪŋ]	sweet potato
45	Labrag	[labrʲag]	insult
46	Pirak	[pIrʲak]	sort out
47	Sirap	[sirʲap]	wooden board
48	Tabrak	[tabrʲak]	crash
49	Urap	[urʲap]	ointment
50	Welirang	[wəlIrʲaŋ]	sulfur
51	Wirang	[wirʲaŋ]	shame

16	Gègrèk	[gʲɛgrʲɛʔ]	dressy
17	Jembrèt	[ɟəmbrʲɛt]	dirty
18	Jombrèt	[ɟombrʲɛt]	bushes

The palatalization of [w]_[a] and The palatalization of [w]_[ɛ]

No	Words	Transcription	Meaning
1	Deluwang	[d̪əluwʲaŋ]	paper
2	Gemiwang	[gəmɪwʲaŋ]	skewed
3	Iwak	[iwʲaʔ]	fish
4	Juwadah	[ɟuwʲadʲah]	a kind of cakes
5	Juwari	[ɟuwʲarI]	shameless
6	Liwat	[lɪwʲat]	pass
7	Luwak	[luwʲaʔ]	civet
8	Luwang	[luwʲaŋ]	pit
9	Penguwal	[pəŋuwʲal]	tree bark
10	Ruwat	[ruwʲat]	cleansing ceremony
11	Uwan	[uwʲan]	gray hair
12	Wuluhan	[wuluwʲan]	small hole
13	Tiwas	[tiwʲas]	killed

No	Words	Transcription	Meaning
1	Delèwèr	[d̪əlʲɛwʲɛr]	sluggish
2	Duwèni	[d̪uwʲɛni]	have
3	Jèwèr	[ɟʲɛwʲɛr]	tweak
4	Keluwèn	[kəluwʲɛn]	hungry
5	Wèr	[wʲɛr]	a kind of fruit
6	Tuwèk	[tuwʲɛʔ]	old

Appendix 2

The feature information of vowel in the *Osing* dialect

	Vowels	**Phonetics description**	**Sonority**	**Feature information**
1	[a]	open front central unrounded low vowel	vowel	+ low - back - tense - round
2	[i]	close front unrounded high vowel	vowel	+ high - back + tense - round
	[I]	near-close near-front unrounded high vowel	vowel	+ high - back - tense - rounded
4	[u]	close back rounded high vowel	vowel	+ high + back + tense + rounded
5	[ʊ]	near-close near-back rounded high vowel	vowel	+ high + back - tense + rounded
6	[o]	close-mid back rounded middle vowel	vowel	+ high + back + tense + rounded
7	[ɔ]	open-mid back rounded middle vowel	vowel	- high + back

				- tense + rounded
8	[e]	close-mid front unrounded middle vowel	vowel	+ high - back + tense - rounded
9	[ɛ]	open-mid front unrounded middle vowel	vowel	- high - back - tense - rounded
10	[ə]	open-mid central unrounded middle vowel	vowel	+ central - back - tense - rounded

The Feature of Consonants in The *Osing* Dialect

	Consonant	**Phonetic description**	**Sonority**	**Feature information**
1	[p]	voiceless bilabial plosive	stop	+ consonantal + labial + anterior
2	[b]	voiced bilabial plosive	stop	+ consonantal + voice + labial + anterior
3	[d̪]	voiced dental alveolar plosive	stop	+ consonantal + voice + coronal + anterior + distributed

4	[d]	voiced alveolar plosive	stop	+ consonantal + voice + coronal + anterior
5	[t]	voiceless alveolar plosive	stop	+ consonantal + coronal + anterior + distributed
6	[ʈ]	voiceless retroflex plosive	stop	+ consonantal + coronal
7	[c]	voiceless palatal plosive	stop	+ consonantal + coronal + distributed + dorsal + high
8	[k]	voiceless velar plosive	stop	+ consonantal + dorsal + high + back
9	[ɟ]	voiced palatal plosive	stop	+ consonantal + voice + coronal + distributed + dorsal + high
10	[g]	voiced velar plosive	stop	+ consonantal + voice + dorsal + high + back

11	[ʔ]	glottal plosive	stop	+ consonantal + constricted glottis
12	[m]	voiced bilabial nasal	nasal	+ consonantal + voice + labial + sonorant + nasal + anterior
13	[n]	voiced alveolar nasal	nasal	+ consonantal + voice + sonorant + nasal + coronal + anterior
14	[ɲ]	voiced palatal nasal	nasal	+ consonantal + voice + sonorant + nasal + coronal + distributed + dorsal + high
15	[ŋ]	voiced velar nasal	nasal	+ consonantal + voice + sonorant + nasal + dorsal + high + back

16	[s]	voiceless alveolar fricative	fricative	+ consonantal + continuant + strident + coronal + anterior
17	[h]	voiceless glottal fricative	fricative	+ consonantal + spread glottis + continuant
18	[w]	voiced labiovelar approximant	glide	+ voice + labial + round + continuant + sonorant + approximant + anterior + dorsal + high + back
19	[j]	voiced palatal approximant	glide	+ voice + continuant + sonorant + approximant + coronal + dorsal + high
20	[l]	voiced alveolar lateral approximant	liquid	+ consonantal + voice + continuant + sonorant + approximant

				+ lateral + coronal + anterior
21	[r]	voiced alveolar trill approximant	liquid	+ consonantal + voice + continuant + sonorant + approximant + trill + coronal