Phonological Rules on Tamil Language Absorption into Bahasa Indonesia  
(Study of Transformational Generative Phonology)

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Abstract

Phonology of Tamil language and Indonesia is very different. Several words are loanwords that are taken from Tamil language. Approximately 30 loanwords of Indonesian are taken from Tamil language. It is possible phonological changes occurred when the words is absorbed into Indonesian language. This study aims to investigate phonological changes that occur in the process of Tamil language absorption into Indonesia language and explains the phonological rules of the changes sound. In this study the writer uses the list of loanwords contained in the article owned by Russel Jones entitled “Loan Word in Contemporary Indonesia”. In method of collecting data, the writer is using noting technique and observation. Then in analyzing the data, the writer uses theory of transformational generative phonology. The result of this study proves that in a loanword there is more than one sound change. The writer found vocal and consonant sound changes in the process of Tamil absorption. There are three types of vocal changes sound; they are assimilation vocal sound, deletion vocal sound and coalescence of vocal sound. Therefore, in consonant sound changes the writer found only two types of sound changes; they are assimilation consonant and deletion consonant. The writer hopes this study will be useful for the next researcher who wants to do a research on foreign language especially in Tamil language.

Keywords: Phonological rules, phonological process, distinctive feature, generative phonology, loanword

Introduction

Language is a sound system. One branch of linguistics that studies the sound system called phonology. Phonology discusses the formation of sounds and sounds that are heard and concerned with the function of sound as a means of communication. Generative phonology was first introduced by Avram Noam Chomsky, in generative phonology we learned about the process of changes sound so that we know about phonological rules. In the study of generative phonology, the writer wanted to review about the phonological process that occurs in the process of Tamil
language absorption into the Indonesian language.

In this study the writer interesting to do a research between Tamil and Indonesia because both of those languages are quite different, but there some similarities can occur when Tamil language is absorbed into Indonesia language. Tamil language is one of the languages that affect the word of Indonesian. There are about 70 load words of Tamil in Indonesia. In Indonesian itself the writer found some loan words that come from Tamil language. For example “gembala” is a loan word from tamil “gopalan”, then in indonesia “belenggu” is a loan from tamil “vilanku” and etc. Lehman described Tamil language has ten vocals, five short and five long: /a/, /ä/, /ɪ/, /i/, /u/, /ul/, /el/, /o/, /öl/. The seventeen consonants include six stops: /k/, /c/, /t/, /r/, /l/, /p/; five nasals: /ŋ/, /ɲ/, /ɳ/, /n/, /m/; two laterals: /l/, /ḷ/; two glides /y/, /v/; one tap /ɾ/; and one approximant /z/ (1997:76). Based on the information above, the writer has been made table of vowel and consonant in Tamil Language as follows:

Vowel in Tamil Language

<table>
<thead>
<tr>
<th>Tamil</th>
<th>Consonant</th>
<th>IPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>அ</td>
<td>a</td>
<td>[ʌ]</td>
</tr>
<tr>
<td>ஆ</td>
<td>ā</td>
<td>[ɑː]</td>
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<td>இ</td>
<td>i</td>
<td>[i]</td>
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<tr>
<td>ஈ</td>
<td>ī</td>
<td>[iː]</td>
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<td>உ</td>
<td>u</td>
<td>[u], [ɯ]</td>
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<tr>
<td>ஊ</td>
<td>ū</td>
<td>[uː]</td>
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<td>எ</td>
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<td>௃</td>
<td>ô</td>
<td>[oː]</td>
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<tr>
<td>ள</td>
<td>au</td>
<td>[ʌu]</td>
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</tbody>
</table>
### Consonant in Tamil Language

<table>
<thead>
<tr>
<th>Tamil</th>
<th>Consonant</th>
<th>IPA</th>
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<tbody>
<tr>
<td>ம</td>
<td>m</td>
<td>[m]</td>
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<tr>
<td>ய</td>
<td>y</td>
<td>[j]</td>
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<tr>
<td>ர</td>
<td>r</td>
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<td>வ</td>
<td>v</td>
<td>[v]</td>
</tr>
<tr>
<td>த, ற, ர</td>
<td>z, l, r</td>
<td>[i]</td>
</tr>
<tr>
<td>ற</td>
<td>l</td>
<td>[l]</td>
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<tr>
<td>ற, R</td>
<td>r, t, d</td>
<td>[n]</td>
</tr>
<tr>
<td>க</td>
<td>k, g, x, ķ, h</td>
<td>[k], [g], [x], [ס], [ח]</td>
</tr>
<tr>
<td>ங</td>
<td>ŋ</td>
<td>[ŋ]</td>
</tr>
<tr>
<td>சச</td>
<td>ṭ, ḍ</td>
<td>[ʈ], [ɖ]</td>
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<tr>
<td>ண</td>
<td>Ṉ</td>
<td>[ɳ]</td>
</tr>
<tr>
<td>த</td>
<td>t, ṭ</td>
<td>[t], [ʈ], [ɾ]</td>
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<td>ந</td>
<td>n</td>
<td>[n]</td>
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<td>ப</td>
<td>p</td>
<td>[p]</td>
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<td>ஜ</td>
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<td>[ʤ]</td>
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<td>ஷ</td>
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<td>[ʂ]</td>
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<td>ஸ</td>
<td>s</td>
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<td>ஹ</td>
<td>h</td>
<td>[h]</td>
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<tr>
<td>ஷ</td>
<td>kṣ</td>
<td>[k,s]</td>
</tr>
</tbody>
</table>

From the table above we can see the differences of vowel and consonant between Tamil and Indonesian Language. Tamil language has ten vowels while Indonesia only has five vowels. Then in consonant, Tamil only has eighteen consonants and Indonesia has twenty-six of consonants. The difference may be one of the factors of sound changes in every word of Indonesia which is absorbed from Tamil. In addition, the vowel and consonant differences of the two languages make one of loan word can have more than sound changes.

**Problem Statement**
By looking at some differences above, the writer wants to examine both those languages in terms of phonological aspects. So, the writer makes statement of the problem as follows:

1. What are phonological changes that occur in Tamil language absorption into Indonesian language?
2. What phonological rules are used to describe the process of sound change in the loan word of Tamil language into Indonesian?

**Objectives of the Study**

Based on the problem statement above, the aims of the study are as follows:

1. Describe phonological process and phonological rules in Tamil language absorption into Indonesian.

**Review of Related Theories**

**Previous Study**

First previous studies derived by Lodia Amelia Banik (2017) entitled “Fonologi Bahasa Kanaumana Kolana”. This study describes the phonemic system and phonological processes found in the kanaumana kolana language. The method used by the writer is descriptive qualitative research. This study helps the writer to know more about the phonological process of various languages. The difference between these previous studies with the writer’s project is the data. In this study discusses the phonology of Kanaumana language, whereas in the latest research the writers wanted to study about the phonological process in Tamil to Indonesian. I suggest complete her research by adding the vowels and consonants of Kanaumana Kolana language, so that the readers will be more understand the differences between Kanaumana Kolana language and Indonesia language.

Second previous studi derived by Nafisah Saidatun (2017) entitled “Proses Fonologi Dan Pengkaidahannya Dalam Kajian Fonologi Generatif”. This study discusses the phonological process of several languages, including Java language, Arabic language, and Zoque language. The results of this study show that sound changes occur because they are influenced by affixation. This research helps the writer know more about the phonology of other languages. In this latest study, the writer wants to focus on the phonological process.
contained in loan word of Tamil into Indonesian. But, I think there is no complexity of the data, so the reader will more easily identify sound changes without having to do further research. I suggest to the author to use data that has a unique level of complexity so that the readers will be more interested to know the process of sound changes. Besides, the complex data will entice other researchers to be interested in further studying the unidentified sounds of the language.

Another previous study derived from Abdul Latif Zen (2016) in his thesis entitled “Perubahan Fonologis Kosakata Serapan Sansekerta Dalam Bahasa Jawa (Analisis Fitur Distingtif Dalam Fonologi Transformasi Generatif)”. This study aims to investigate the sound change process of the Sanskrit words, the rules, and factors causing the sound changes. His research provides some benefits to the next research. Through research, I become more understand that there are certain factors can influence the sound changes. In this study, the previous researcher has explained in detail the factors that influence the sound effect in the word absorption. So, in the next research the writer take the same topic but in different data. In this new research the writer will analysis about phonological process in Tamil loan words.

Last previous study is cited from Arbiter Journal (2016) by Asida Wahyu A.P entitled ‘Pola-pola Perubahan Fonem dan Konsonan dalam Penyerapan Kata-Kata Bahasa Asing ke dalam Bahasa Indonesia: Kajian Fonologi. This study aims to knowing the phonemic changes that occur in Indonesian language absorption words from a foreign language. The sound changes are seen from vowel phonemes changes and consonant phonemes changes. The result of this research concludes that every sound of language influences each other because of the same position and environment, as well as pattern of symmetry of sounds that are related to each other. I think the writer has done the analysis well. But, I suggest that the writer can simplify the phonological rules on the set of words which have same phonological changes. So, the writer does not need to describe one by one the rules of sound changes in every loanword.

**Generative Phonology**

Odden (2005:2) describes phonology as one of the linguistic sciences that examines the structure of language. In 1957, Chomsky developed
a theory of phonology which became known as generative phonology. The theory examines language in grammar so that it contains phonological rules to prove the occurrence of sound changes. The basic concept of generative phonology is that each morpheme has a basic form in its original from though it may have more than one phonetic form. All variation in different environments can be derived from the original form with phonological rules.

Generative phonology has the most outstanding advanced method. It combines the morphology and syntax with phonology. Some linguists would say that it is the phoneme [t] that occur finally in both Rad and Rat in German, and account for the change of [d] to [t] in this relation, which describes the intermediate between morphology and phonology, namely so-called morphophonemic. All of the theories on allophones, syllables, and suprasegments prove the generative phonology in the context. With the introduction of transformational grammar came the generative phonology which establishes series of universal rules for conversing for the phonemic representation into phonemic representations into phonetic representations. So the generative phonology focuses on the process of conversion from abstract to concrete and vice versa. The phonemic features and suprasegmental features make further evident for generative phonology because they can help summarize the phonological rules.

Phonological Process

According to Schane (1973: 49) “when morphemes are combined to form words, the segments of neighboring morphemes become juxtaposed and sometimes, undergo change... All such changes will be called Phonological processes”. There are some types of phonological processes. They are insertion, deletion, coalescence, and assimilation. Every each type of phonological process has own rules. In general the rules have formula as follows:

1. Insertion
   Insertion takes place when one or more segments are added to a morpheme or a word. Example of the rules can be described as follows:
   \[ \emptyset \rightarrow A / B \_ \_ C \]

2. Deletion
   Deletion takes place when a segment is elided in a given context. Example of the rules described as follows:
   \[ A \rightarrow \emptyset / B \_ \_ C \]

3. Coalescence
Coalescence takes place when two segments are fused to give rise to a third segment. Example of the rules can be described as follows:

\[ xy \rightarrow z / # \]

4. Assimilation

When a sound takes the features of a neighboring sound, the process is known as assimilation. Example of the rules can be described as follows:

\[ [+sil] \rightarrow [+nas] / ___ [+nas] \]

**Loan Words**

A loan word or borrowing is a word adopted from a source language and incorporated into a recipient language without translation with rapid process of globalization, interconnections among countries in areas of economics, politics, culture, science, and technology get strengthened. Hockett (1958:402) describes a loanword as the borrowed form that has function in the usual grammatical processes, with nouns taking plural or possessive forms of the new language and with verbs and adjectives receiving native morphemes as well. As an example is Indonesia, in Indonesian there are many words that are absorbed from several foreign languages. Among them are Dutch, English, Arabic, Sanskrit, Portuguese, Tamil and Indian. In this study the writer will focus on the word absorption in Tamil language. In the Indonesian language there are about 30 loanwords taken from the Tamil language.

**Distinctive Features**

Schane (1992) describes the phoneme is not the smallest unit. There is a smaller unit called a distinctive feature or sound distinguishing features. Distinctive features in phonology are physical reality and psychological reality in phonemes. Physical reality is the reality associated with the articulation and / or acoustics of the phonemes, whereas the psychological reality is the reality associated with the perception of the phonemes. Schane (1992: 28-34), classifies distinctive features in 5 groups. They are main class features (syllabic, sonoran, consonantal); characteristic of articulation (continuous, delayed del.rel, striden, nasal, lateral); characteristic of articulation area (Anterior, coronal); features tongue and lip shapes (high, low, back, round); and features additional (tense, voiced, aspirated, glottal).
Research Methodology

The method used in this research is descriptive qualitative approach. Descriptive means describe, make note then analyze the condition that occur. Isaac & Michael argue that descriptive method is systematic, factual, and accurate in describing a situation of area (1987:42). The writer applies qualitative approach because the data are consisting of words not numbers.

Data

Data of this research is loan words of Indonesia that was taken from Tamil language. This data, the writer get from an article that discusses the loanword in Indonesian language by Russel Jones entitled “Loan Word in Contemporary Indonesia”.

Method of Data Collection

In collecting the data, the writer is doing some steps. First, the writer listing the Indonesian loan word that get from the article by Russel Jones entitled “Loan Word in Contemporary Indonesia”. Second, the writer noting the vocal and consonant of Tamil language then input it into a table and complete with International Phonetic Alphabet. Last, the writer put the data into a table, and gives the IPA transcription by listening the way of Tamil’s native speaker speaks in online dictionary.

Method of Data Analysis

After get the transcription of Tamil loan word, the writer does some steps in analyzing the data. First, the writer observes the changes sound that occur in Tamil loan word either from vocal or consonant. Second, the writer makes a list of loan word that has the same changes. Last, the writer classifies the loan words based on their phonological processes. The writer categorizes the sound changes into two groups. They are vocal sounds changes and consonant sound changes. Keep in mind that each word can have more than one sound change. After that, the writers formulate the rules of the sound change process by using a generative phonological approach and describe it with distinctive features.
Findings and Discussion
Assimilation Vocal
Vocal Sound Changes [+high,-low] into Vocal Sound [-high,-low]

In this process, there is a change of vocal sound with [+ high, -low] character to sound [-high, -low] in the first syllable and the second syllable. This is shown by the following sample data:

- a) /ʧuɾʊ/ → cerutu
- b) /kulam/ → kalam
- c) /mutal/ → modal
- d) ka[utai] → keledai
- e) /vila:tjku/ → belenggu

From the data above, there is a vocal change from [+ high] to [-high] at different positions. Some of these changes appear at the beginning of the syllable and some appear in the second syllable between consonants sound. In samples (a), (b), (c) and (e) the process of vocal change from [+ high] to [-high] occurs in the first syllable. In the sample (a) the change occurs at the vocal sound /u/ into the vocal sound /e/, the sample (b) and (c) the change occurs at the vocal sound /u/ into the vocal sound /o/, while in sample (e) there is a change of vocal sound /i/ into vocal sound /e/. In the sample (d) the change of the vocal sounds with the character [+ high] to [-high] occurs in the second term in the middle of the consonant sound as the vocal sound /u/ into the vocal sound /e/. Based on the description above, the writer formulates the phonological rules as follows:

\[ \begin{align*}
\begin{array}{c}
\text{sil} \\
\text{sil}
\end{array} & \quad \begin{array}{c}
\text{sil} \\
\text{sil}
\end{array} \\
\text{+ high} & \quad \text{-high} \\
\text{low} & \quad \text{low}
\end{align*} \]

The rule states that a vocal with distinctive features [+ high, -low] will turn into a sound with [-high, -low] if it lies at the beginning of the syllable or in the second syllable.

Changes From Vocal Sound [+ round] to Vocal Sound [-round] in the First Syllable
In the following process there is a vocal change from [+ round, -low] to [-round, -low]. This change occurs in the first syllable described in the following sample data:

\[ a) /go:pa:lan/ \rightarrow gembala \]

In the data, there is a change of vocal sound with [+ round, -low] character to [-round, -low] in the first syllable. In the data (a) the change takes place in the vocal sound /u/ into the vocal sound /e/. So the writer concludes the phonological rules as follows:

\[ \begin{align*} +\text{sil} \\
-\text{low} \\
+\text{round} \\
+\text{tense} \end{align*} \rightarrow \begin{align*} +\text{sil} \\
-\text{low} \\
-\text{round} \\
+\text{tense} \end{align*} \]

The rule above describes that a vocal sound with distinctive features [-low, + round, +tense] will change to [-low, -round, +tense] if it lies in the first syllable.

**Vocal Sound Changes [+ Long] into Vocals [-Long] in the First Syllable and Last Syllable.**

In the Tamil language there is a long vocal sound change into a short vocal sound when it is absorbed into Indonesian. The change of vocal sound [+ long] into vocal [-long] occurs in the first syllable and the last syllable. The following sample is an example of a vocal sound change with distinctive features [+ syl, + long] into a vocal sound [+ syl, -long]. Look at the data below:

\[ \begin{align*} a) /va: \text{tal}/ \rightarrow \text{badai} \\
b) /va: \text{ti}/ \rightarrow \text{basi} \\
c) /go:pa:la:n/ \rightarrow \text{gembala} \\
d) /\text{k}:\text{a:val}/ \rightarrow \text{kawal} \\
e) /\text{k}:\text{a:zi}/ \rightarrow \text{kedai} \\
f) /\text{ulo}:\text{k}:\text{a}/ \rightarrow \text{Logam} \end{align*} \]

In the data, can be seen the change of sound [+ long] in the Tamil language into the vocal sound [-long] when it is absorbed into the Indonesian language. At (a) through (d) there is a change in the vocal sound /a:/ into the vocal sound /ʌ/ in the first syllable. In the data (e) there is a sound change of vocal sound /i:/ into vocal sound /I/ in the last syllable. Then in data (f) the sound changes can be found in vocal sound /o:/ into vocal sound /o/. by looking at the data above, the writer
concludes the phonological rule as follows:

\[
\begin{align*}
+\text{sil} &\rightarrow +\text{sil} \\
+\text{long} &\rightarrow -\text{long}
\end{align*}
\]

In the rule above, it states that the vocal sound [+ sil, + long] changes to the vocal sound [+ sil, -long] only if the vocal sound lies in the first syllable or last syllable.

**Vocal Deletion**

In Tamil word absorption, the writer found a process of vocal deletion. Vocal deletion is a process whereby phonemes in certain syllable are removed. In the following data the writer found the process of vocal deletion.

\[/u:o:k\rightarrow logam\]

\[
\begin{align*}
+\text{sil} &\rightarrow +\text{sil} \\
+\text{high} &\rightarrow +\text{high} \\
-\text{low} &\rightarrow -\text{low} \\
+\text{round} &\rightarrow +\text{round}
\end{align*}
\]

The rule describes that the sound [u] with distinctive features [+ sil, + high, - low, + round] will be deleted when the sound appears at the beginning of the word.

**Vocal Coalescence**

In the Tamil language that is absorbed into the Indonesian language, the writers found word absorption that there is a coalition process. The process of coalition occurs in the fused diphthong sounds then turns into monophthong sound. In the following data there is a change in the sound of the diphthong [ai] into the sound [e] which has distinctive features [-high, -low, - back, -round].

\[/f\text{tai}\rightarrow sate\]

In the data the diphthong [ai] changes into a single vowel sound [e] at
the end of the syllable. Then the writers formulate the phonological rules as follows:

\[
\begin{align*}
\text{[+high]} & \rightarrow \text{[+high]} \\
\text{[-low]} & \rightarrow \text{[-low]} \\
\text{[-back]} & \rightarrow \text{[-back]} \\
\text{[-round]} & \rightarrow \text{[-round]} \\
\end{align*}
\]

The rule describes that the diphthong sound [a] [i] with distinctive features [-high, + low, + back, -round] [+ high, -low, -back, -round] will change into monophtong sound [e] with distinctive features [-high, -low, -back, -round] only if the sound is in the last position of the syllable after consonant sound.

**Assimilation Consonant**

**Plosive Voiceless Consonant change into Plosive Voiced Consonant**

In the Tamil language that is absorbed into the Indonesian language there is a consonant voiceless change into a voiced consonant on the following data:

a) /vaːtai/ → badai  
b) /kʌntai:/ → kedai  
c) /kʌntai:/ → keledai  
d) /pʌntai/ → pandu  
e) /muːtal/ → modal  
f) /kuŋtu/ → gundu  
g) /veːtʌ/ → weda

In the data we can see that there is a change in the voiceless sound of consonant [t] with distinctive features [-son, -strid, -voiced] into consonant voiced sound [d] which has distinctive features [-son, -strid, + voiced]. The writer sees this change only if the sound [t] lies in the last syllable and begins with vowel or nasal sound. Then the phonological rules can be described as follows:

\[
\begin{align*}
\text{[-son]} & \rightarrow \text{[+nas]} \\
\text{[-cor]} & \rightarrow \text{ + cor} \\
\text{[-voiced]} & \rightarrow \text{[+voiced]} \\
\end{align*}
\]
The rule states that the sound of plosive voiceless consonant will turn into plosive voiced consonant if the sound is in the last syllable after vocal sound or nasal sound.

**Velar Voiceless Consonant Change into Velar Voiced Consonant**

In the following data, the writer found a change in the sound [k] with distinctive features [-son, -cor, -ant, -voiced] into sound [g] with distinctive features [-son, -cor, -ant, + voiced] if the sound is located after the long vowel sound or after the nasal sound. Look at the data below:

\[
\begin{align*}
 &a) /ulo:kʌ/ \rightarrow Logam \\
 &b) /vila:ŋkə/ \rightarrow Belenggu \\
 &c) /maŋka:j/ \rightarrow Mangga \\
 &d) /maːli:kʌ/ \rightarrow Maligai \\
 &e) /ra:kʌm/ \rightarrow Ragam
\end{align*}
\]

Based on the data above, to describe the phonological changes of the data; the writer concludes phonological rule as follows:

\[
\begin{align*}
 &\begin{align*}
 &\text{-son} \\
 &\text{-cor} \\
 &\text{-ant} \\
 &\text{-voiced}
\end{align*} \\
 &\text{a.} \quad (V)\# \\
 &\text{b.} \quad +\text{voiced}
\end{align*}
\]

Based on the rule above it states that the velar voiceless consonant sound will be the velar voiced consonant sound if and only if it lies in the last syllable after long vocals or nasal sounds.

**Fricative Voiced Consonant Change into Plosive Voiced Consonant**

In the process of Tamil language absorption into the Indonesian language there is a change in the sound of fricative voiced consonants into sounds of plosive voiced consonants. This is because in Indonesian the sound of [v] itself is rarely used or even almost never appeared at the beginning of the word so that in the following data sound [v] here changes to sound [b].

\[
\begin{align*}
 &a) /vaː tʌi/ \rightarrow badai
\end{align*}
\]
From the above data the writers found fricative voiced consonant sound [v] with the characteristics [-cor, + ant, + cont, + voiced] into plosive voiced consonant [b] with [-cor, + ant, -cont, + voiced] when it is at the beginning of a word and followed by vocal sound [a] with the characteristic [+ long] or a vocal sound [ʌ] with [-long] characteristic. From the explanation, the writer formulates phonological rules as follows:

a. #[a]______
   [+long]

b. #[ʌ]______
   [-long]

Fricative Voiced Consonant [v] change into Semivowel [w] in Beginning of Syllable and Last Syllable

In the following data, there is a change in the sound fricative voiced consonant [v] with distinctive feature [+ high, -cor, + ant, + voiced] into semi-vocal sound [w] with distinctive features [+ high, -cor, -ant + voiced]. This change occurs because in phonological Indonesian sound [v] is very rarely used so that [v] in the following data is pronounced into [w].

a) /ka:vAl/ kawal
b) /ve:1A/ wéda

Looking at the word structure in the data, the writer can formulate the following phonological rules:

a. (V)#
   [+long]

b. #(V)____
   [+long]

The explanation of the rule is the voiced fricative sound [v] which has distinctive features [+cons, -cor, + ant, + voiced] will turn into semi vocal sounds [w] with distinctive features [-cons, -cor, + ant, + voiced] if located after the long vowel sound in the last syllable or
followed by long vocal sound if it lies in the first syllable.

**Assimilation of Nasal Sound**

**Nasal Velar Consonant Change into Nasal Alveolar Consonant**

In the process of Tamil absorption into Indonesian, the writer found some changes to the nasal sound, one of which is the change of nasal sound [ŋ] with distinctive features [+nas, -cor, -ant] into nasal sound [n] with distinctive features [+nas, +cast, +ant]. The process of change is proved by the following data:

\[
\begin{align*}
\text{a) } & /kuŋʈu/ \rightarrow gundu \\
\text{b) } & /tuŋai/ \rightarrow tunai
\end{align*}
\]

In the data there is a change in nasal sounds which is located in the middle of the word structure. The writer found a change of nasal sound [ŋ] into [n] influenced by the previous vocal sound [u] which has distinctive features [+syl, +back, +round]. So the writer formulates the phonological rules as follows:

\[
\begin{align*}
\begin{bmatrix} +\text{nas} \\
-\text{cor} \\
-\text{ant} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{nas} \\
+\text{cor} \\
+\text{ant} \end{bmatrix} / \begin{bmatrix} +\text{syl} \\
+\text{back} \\
+\text{round} \end{bmatrix} # ___
\end{align*}
\]

The rule explains that nasal velar consonant [ŋ] with distinctive features [+nas, -cor, -ant] will turn into nasal alveolar consonant [n] that have distinctive features [+nas, +cor, +ant] if they are in the middle of the word structure after the vocal sound [u] which has distinctive features [+syl, +back, +round].

**Nasal Palatal Consonant change into Nasal Alveolar Consonant**

In the following data the writer found the last phonological changes that occur in nasal palatal sound [ɲ] that have distinctive features [+nas, +cast, -ant]. The writer found this nasal sound change because it is influenced by the vocal sound [ʌ] with distinctive features [+syl, +back, +low, -tense] located before the nasal sound [ɲ].

\[
\begin{align*}
/kʌɲʧi/ \rightarrow \text{kanji}
\end{align*}
\]
By looking the sound change of nasal palatal consonant [ɲ] into nasal alveolar consonant sound [n] that has distinctive features [+ nas, + cor, + ant] in the data, the writer formulates the phonological rule as follows:

\[
\begin{align*}
(+nas) & \quad (+nas) & \quad (+syl) \\
(+cor) & \quad (+cor) & \quad (+back) \\
(-ant) & \quad (+ant) & \quad (+low) \\
& & \quad (-tense)
\end{align*}
\]

The rule explains that nasal consonant sound [ɲ] has distinctive features [+ nas, + cast, - ant] into nasal consonant sound [n] that has distinctive features [+ nas, + cast, + ant] if they are located after the vowel sound [ʌ] on the first syllable.

**Consonant Deletion**

**Consonant Deletion of Plosive Alveolar Voiceless in last syllable**

In the following data the writer discovers the consonant sound absorption occurring in the alveolar voiceless plosive [t] on the last syllable or end of the word. Deletion process occurs because it is influenced by the sound of vocals.

\[
a) \quad /ku:lit/ \rightarrow kuli \\
b) \quad /ku:ttu/ \rightarrow kutu
\]

By looking at the data, the sound that gets the deletion process is the sound [t] which has the distinctive feature [- son, + cast, + ant], in the data (a) the [t] sound is deleted at the end of the word, whereas in the data (b) sound [t] is deleted at the end of syllable. From the explanation, the writer formulates the phonological rules as follows:

\[
\begin{align*}
(-son) & \quad (+cor) & \quad (+ant) \\
& & \quad /a. \quad (V)\#
\end{align*}
\]

\[
\begin{align*}
& & \quad /b. \quad #\quad (V)
\end{align*}
\]
In that rule we can conclude that the sound [t] is get deletion process when it is at the end position of the word because there is a s vocal sound before the sound [t]. It is because the vocal sound is a voice that has more contribution than a voiceless sound. In addition the rule also states that the sound [t] is deleted if it lies in the last syllable followed by the vowel sound.

**Consonant Deletion of Fricative Voiced Consonant in the Middle of Vocal Sound.**

In this following data, the writer found consonant deletion process of fricative voiced consonant. In Tamil language absorption, the writer only gets one process of deletion of fricative sound into vocal sound, as follows:

\[ /ko:vil/ \rightarrow kuil \]

The data above shows there is deletion process of consonant sound [v] which has distinctive feature [+cons, -cor, + ant, + voiced] when it occurs in the middle of rounded vocal sound. So that the writer creates phonological rules as follows:

\[
\begin{align*}
+\text{cons} && -\text{cor} \\
+\text{ant} && +\text{voiced} \\
\end{align*}
\]

The rule above describes that fricative voiced consonant [v] will run into deletion process if the sound placed in the middle of vocal sound which has distinctive features [+syl, + round]. But this rule cannot be applied to all data. This rule is made only to describe the phonological changes in the data above.

**Conclusion**

Based on the results of research, the writer found many differences between Tamil language and Indonesia Language. There are some phonological changes in the absorption of Tamil language into Indonesian. The phonological changes are differentiated into two categories, they are vowel sounds changes and consonant sound
changes. On the change of vowel sound, the writer found three major change categories. First, the assimilation of vowel sound into another vowel sound where in change there are three kinds of sound change. The second is deletion of vowel sound. The last one is the coalescence of the vowels where the diphthong sounds changes into a monophthong sound. While in the consonant sound changes, the writer found three kinds of major consonant sound change categories. First, the writer found consonant sound changes into another consonant. Second, the writer found deletion of consonants sound. The third, the writer found assimilation of nasal consonant sound. Based on the results and discussion of the research, the sounds changes are influenced by different phonological systems of the two languages. Based on the result of the study, a loanword in Tamil language can have more than one of sound changes when it is absorbed into Indonesia.

References