## A STUDY OF PHONOLOGICAL SYSTEM OF MENTOK

DIALECT OF BANGKA LANGUAGE IN PUSUK DISTRICT
OF KELAPA WEST BANGKA REGION

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#### Abstract

The phonological system is a language system used by a society to distinguish itself from other societies. Bangka language is part of Malay cluster. This paper was written to describe Bangka language phonological system in Mentok dialect used in Pusuk based on (1) vowels, (2) consonant system, (3) diphthong, (4) distributions of vowels, consonants, and diphthongs, and (5) phonemic principle. The method used in this research was qualitative method. The data in this study was 248 basic vocabularies of Swadesh-based UnCen-SIL Wordlist. The data was collected with basic technique "conversation technique", followed by "noting and recording technique". The finding of Bangka language phonological system in Mentok dialect used in Pusuk was 9 vowels, 19 consonants, and 4 diphthongs. The distributions of vowel and consonant were incomplete. There was an allophone found in the study.


Keywords: Phonology, Phonemes, Vowels, Consonants, Diphthongs.
Abstrak : Sistem fonologi adalah sistem bahasa yang digunakan oleh suatu masyarakat untuk membedakan dirinya dari masyarakat lain. Bahasa Bangka adalah bagian dari gugus Melayu. Penelitian ini ditulis untuk menggambarkan sistem fonologis bahasa Bangka dalam dialek Mentok yang digunakan di Pusuk berdasarkan pada (1) vokal, (2) sistem konsonan, (3) diftong, (4) distribusi vokal, konsonan, dan diftong, dan (5) prinsip fonemik. Metode yang digunakan dalam penelitian ini adalah metode kualitatif. Data dalam penelitian ini adalah 248 kosakata dasar dari UnCen-SIL Wordlist yang berbasis di Swadesh. Data dikumpulkan dengan teknik dasar "teknik percakapan", diikuti oleh "teknik mencatat dan merekam". Temuan sistem fonologis bahasa Bangka dalam dialek Mentok yang digunakan di Pusuk adalah 9 vokal, 19 konsonan, dan 4 diftong. Distribusi vocal dan konsonan tidak lengkap. Ada alofon yang ditemukan dalam penelitian.

Kata kunci: Fonologi, Fonem, Vokal, Konsonan, Diftong

## 1. INTRODUCTION

Language is a system of conventional spoken, manual, or written symbols by means of which human beings, as members of a social group and participants in its culture express themselves. Language is used every day in our communication. Language is the most important means of communication of
human beings. People use language as the medium of expressing ideas, feeling, and thoughts. Every language has restrictions on how words must be arranged to construct a sentence or how words should be spoken properly. Phonology is one of the core fields that compose the discipline of linguistics, which is defined as study of the patterns of sounds in a language and across languages. To put more formally,
phonology is the study of the categorical organization of speech sounds in languages; how speech sounds are organized in the mind and used to convey meaning. In respect of much ethnic diversity, Indonesia has many local languages. In Indonesia, there are approximately 400 local languages.

In general, Indonesian is bilingual whose societies at least know two languages which are mother tongue and Bahasa Indonesia as national language. Local language is a language that is used in area of a country and used in daily conversation by local people. One of the local languages used to communicate is Bangka language. Bangka language is a local language that tends to be used by people of Bangka Island due to its convenience and clarity. Bangka language is part of the Malay language cluster in general, but it changes the pronunciation of letter ' $e$ ' to ' $E$ '. Bangka language is also similar to Indonesian, with a few minor differences. There are also some minor differences between the dialects of Bangka, but they are mutually intelligible For instance between Pangkalpinang and Sungailiat areas have a little difference in terms of language and dialect, as well as Belinyu and Toboali, but each region has its own characteristics. Dialect is accent of a language. Dialect is a variety of a language that signals where a person comes from. The notion is usually interpreted geographically (regional dialect), but it also has some application in
relation to a person's social background (class dialect) or occupation (occupational dialect).

The role of local language is very important in enriching culture and national identity. Generally, local languages have common functions such as information functions, individual /community expression functions, adaptation and integration functions and social control functions. Here are several functions of local language:
a. As a pride of a region.
b. As the identity of a region.
c. As the interface among the people in local level.

The research of local languages is very important because it can maintain and develop the local language itself and the result of it is one of significant contributions in developing Bahasa Indonesia. Local language should always be used especially by local people. Local language is an asset of Indonesian language and the source of Indonesian culture. The research will help to decrease the possibility of local language from extinction. In this study, the writer will focus on one of local languages in Bangka that is Bangka language of Pusuk. Pusuk is a small village located in West Bangka. In this research, the writer will analyze the composition of consonant and vowel through phonemes, the words will be written in phonetic transcription. According to Muslich (2008, p. 77), phoneme is the smallest unity of a
language that serves to distinguish meaning. Maksan (1994, p. 45), states that in a language, the phoneme has a certain distribution, which is unlike any other language. A phoneme can occupy the beginning, middle, and end position of a word. However, it can also happen that certain phonemes can only occupy certain positions, for example it cannot occupy the final position, or only possible in the middle position, and so forth. Chaer (2009, p. 89) says that the distribution of phonemes is the ability for the phoneme to be in a certain position in a basic word. The phoneme in the language will form the speech. The combination of some phonemes will form syllables and syllables will form words, as well as words will form sentences and speech. The phoneme arranged in the word will have a certain position in the word.

As primary form of a language, phonology is the most important language element (Samsuri, 1987). That is why the disclosure of phonology system in Bangka language is very important in conceiving it. One of the ways to do it is by analyzing one of language aspects that is phonology. According to Chaer (2009, p. 5), phonology is the sounds of language as a complex unit of speech with "composite" between sounds that form syllables or syllables. Maksan (1994, p. 34), put forward several theories with respect to phonology. Marjusman's constraint on phonology is the field of science that is used specifically by significant language
sounds, all static sounds of language. Thus, in contrast to phonetics which aims at all common languages, phonology only aims particular language. The scope of the phonological study is not only to examine the sounds of the language and its phonemes, but it is broader than that which includes examining the role of the phoneme in forming syllabic structures and combining morphemes with other morphemes in that language. Thus the scope of phonological studies begins with the discovery of sounds of language, which investigates the meaning of speech that produces it and its formation so that the sounds of the language will be discovered. This research will also conduct phonemic principle of Bangka language, for instance; allophones, minimal pairs and so forth.

The sounds of language are the sounds produced by the human speechforming speech. Sound as an element of language is the sounds that make up the word. The sounds of the language consist of vocals, consonants and diphthongs. The phonemes in the language also have the ability to be in a certain position called the phoneme distribution. A vowel is a sound produced with a comparatively open configuration of the vocal tract. In everyday language, a vowel is a letter (sound) of the English alphabet that is not a consonant. More specifically, a vowel is a sound that when paired with a consonant makes a syllable. Maksan (1994, p. 39) says that the vowel is the sound produced
by the utterance device without any obstruction / disruption to the air that flows out of the lungs. Meanwhile consonant is a letter of sound in alphabet that is not a vowel. More specifically, a consonant is a sound that when paired with a vowel makes a syllable. Consonants are produced when the airflow that coming out of the lungs are detained. In phonetics, a diphthong is a vowel in which there is a noticeable sound change within the same syllable. Brinton points out that "a diphthong is not necessarily longer (does not take more time to articulate) than a monophthong, though diphthongs are frequently, and erroneously, called 'long vowels' in school" (The Structure of Modern English, 2000). So, based on vowel and consonant system that linguists have laid out, we can find a system to examine and analyze a language. This means, if we analyze a regional language or a national language, we will certainly find a number of different vowels, consonants, and dipthongs. This is because every language has different language sounds with other languages. The most interesting fact is that vowel and consonant phonemes can also prove their role as a differentiation of meaning.

In this research, the researchers focused on identifying the vowel and consonants systems, phonemes, diphthongs, the phonemic principles, and their distributions in Bangka language. This research was based on the five dialects of Bangka language in a book
entitled "Latar Belakang Social Budaya Melayu Bangka". The dialects are Mentok, Belinyu, Toboali, Central Bangka, and Pangkalpinang. The researcher focused on the phonological system in Mentok dialect in subdistrict of Kelapa.

The various geographical dialects found in the Malay language of Bangka which are considered the main dialects can be seen in the table below.

| No | Dialects | Area of using |
| :--- | :---: | :---: |
| 1. | Sungai Liat | in the central <br> part of Bangka <br> Regency |
| 2. | Mentok | in the west part <br> of Bangka <br> Regency |
| 3. | Belinyu | in the north part <br> of Bangka <br> Regency |
| 4. | Toboali | in the south part <br> of Bangka <br> Regency |
| 5. | Pangkalpinang | in the central <br> part of Bangka <br> Regency |

## 2. METHODOLOGY

According to Odden (2005), Phonology is one of the core fields that compose the discipline of linguistics, which is defined as the scientific study of language structure. Phonemes connect meaning to the sounds and phonology is the study of phonemes. Phonology looks at the sound patterns within words.

Different languages have different sound patterns within words. Some of these sound patterns are shared between different languages, and some are entirely different than any other language sound.

Phonology studies two points of view, phonetics and phonemics. According to Clark and Yallop (as cited in Muslich, 2009, p. 8), phonetics is a field that is closely related to the study of how humans speak and hear and process speech received, whereas according to Chaer (2007, p. 102), phonetics is a branch of phonological studies that study sound language regardless of whether the sounds have $a$ function as a distinguishing meaning or not. In general, phonetics can be divided into articulatory phonetics, acoustic phonetics, and auditoric phonetics.

According to Yusuf (1998, p. 7), phonology aims to express the principles of the universe of languages in the following way:
a. Comparing the sound system of languages in the world
b. Segmenting the sounds of the language
c. Grouping sounds of human language
d. Analyzing its phonological processes
e. Explaining the variations of languages in the world based on variations of spoken sounds
f. Describing occurrence of sound changes in human language

Whereas according to Chaer (2007, p.102), phonetics is a branch of phonology studies that study the sound of
language regardless of whether the sounds have a function as a differentiator meaning or not. In general, phonetics can be divided into articulatory phonetics, acoustic phonetics, and auditoric phonetics. Chaer (2007, p. 113) classifies the sound of language divided into vowels, diphthong sounds, and consonant sounds.

### 2.1. Consonant

The word 'consonant' has been derived from the Greek word 'consonautem', which means the sound produced with the help of some other sound (vowel). Consonant is sound of a language in which its formation the airflow that flows from lungs inhibited. A consonant is usually described, taking into account whether it is voiceless or voiced its place of articulation and its manner of articulation. Voiced consonant will create vocal cord vibration meanwhile voiceless consonant will not create any vocal cord vibration.

The manner of articulation is the configuration and interaction of the articulators (speech organs such as the tongue, lips, and palate) when making a speech sound. Manner of articulation is specified according to degree of stricture that is how closely the speech organs approach one another. There are three principal degrees of stricture are as follows:

1. Complete closure, it happens when the articulators seal off the flow of air completely; these sounds are called stops or plosives.
2. Close approximation, it happens when the articulators come very close to one another without actually sealing off the escape of air; these sounds are called fricatives.
3. Open approximation, it happens when the articulators are not sufficiently close, to induce turbulence and audible friction, such sounds are called approximants.

The place of articulation of a consonant is the point of contact where an obstruction occurs in the vocal treat between articulatory gestures. Place of articulation distinctions are as follows. Where the sounds produced by using both lips together (the lower lip articulates against the upper lip), the sound is bilabial. Where the sounds are articulated by using the lower lip and the upper front teeth, the sound is labiodental. Where the sounds occur when you block/constrict airflow by placing your slimy tongue against your upper teeth, the sound is dental. Where the sounds are made by raising the tip tongue towards the ridge that is right behind the upper front teeth, it is called alveolar. Where the sounds are made by raising the blade of the tongue towards the part of the palate just behind the alveolar ridge, it is palato-alveolar sound. Where the sound is articulated high up in the oral cavity, with the front of the tongue against the hard palate, the sound is palatal. Where the sounds are made by raising the back of the tongue towards the soft palate, it is velar sound. Where the
back of the tongue and the uvula are the articulatros, the sound is uvular.

### 2.2. Vowel

All vowels are articulated with a stricture of open approximation. Vowels are made by pushing air up from the lungs and allowing it to pass through the vocal tract without obstruction. Although usually produced with vibrating vocal cords, vowels may be pronounced without such vibration, resulting in a voiceless, or whispered, sound. From the viewpoint of articulatory phonetics, vowels are classified according to the position of the tongue and lips and, sometimes, according to whether or not the air is released through the nose.

The vowel sound can be determined based on the shape of the tongue and the position of the mouth. The shape of the tongue can be both vertical and horizontal .Two extreme-vowel heights may be distinguished: close (or high), where the tongue body is as near the hard or soft palate as it can be without causing auidble friction, and open (low) where the jaw is lowered and the tongue body is as far as possible from the roof of the mouth. There are three kinds of vowel based on the area of tongue, the front, the central and the back vowels. The front vowels are [i], [e] and $[\varepsilon]$. The central vowel is [a]. The back vowels are [u] and [o].

### 2.3. Diphthongs

A diphthong is a sound made up two separate vowel sounds within the same syllable. The word is derived from Greek
for "having two sounds". It's the influence of the glides (movement of the tongue, lips and jaw) from one pure vowel sound to another. In phonetics, a diphthong is a vowel in which there is a noticeable sound change within the same syllable. However the tongue position when pronounce the sound is up and down. Though they are single speech sounds, diphthongs are usually represented, in a phonetic transcription of speech, by means of a pair of characters indicating the initial and final configurations of the vocal tract. Many of the vowel sounds in most dialects of English are diphthongs: e.g., the vowels of "out" and "ice," represented as [au] and [ai], respectively. There are two types of diphthong, those are closing and opening diphthong. In closing diphthongs, the second element is closer than the first e.g. [ai]; in opening diphthongs, the second element is more open e.g. [ia]. Closing diphthongs tend to be falling [ai], and opening diphthongs are generally rising [ia].

### 2.4. Allophones

Allophones are a kind of phoneme that changes its sound based on how a word is spelled. Think of the letter "T" and what kind of sound it makes in the word "tar" compared with "stuff." It's pronounced with a more forceful, clipped sound in the first example than it is in the second. Linguists use special punctuation to designate phonemes. The sound of an "L", for instance, is written as "/l/." Substituting one allophone for
another allophone of the same phoneme doesn't lead to a different word, just a different pronunciation of the same word. For this reason, allophones are said to be non-contrastive. For example, consider the tomato. Some people pronounce this word "toe-MAY-toe," while others pronounce it "toe-MAH-toe." The definition of "tomato" doesn't change, regardless of whether it's pronounced with a hard A or a softer tone.

### 2.5. Minimal Pairs

A minimal pair is a pair of words that differ in a single phoneme. Minimal pairs are often used to show that two sounds contrast in a language. For example, we can demonstrate that $[\mathrm{s}]$ and [z] contrast in English by adducing minimal pairs such as sip and zip, or bus and buzz. Since the only difference in these words is the [s] vs. [z], we conclude that they belong to distinct phonemes. However, a similar test would show that [a:j] and [Aj] are distinct phonemes in English, since writer and rider appear to be minimal pairs distinguished in their second elements, not their fourth (Alasdair, 2005). This can best be shown with examples.

| N <br> o | Spell <br> ing | Group <br> ing | Pronunci <br> ation | Explana <br> tion |
| :---: | :---: | :---: | :---: | :---: |
| 1. |  |  | only k <br> and - <br> bat | minim <br> al pair |
|  | Kæt - <br> bæt <br> are <br> differen <br> t |  |  |  |
| 2. | ride | minim | rard - | only aI |


|  | road | al pair | raud | and $\partial \circlearrowright$ are differen t , these are two differen t diphtho ngs. They are single phonem es, althoug h they are written in two symbol |
| :---: | :---: | :---: | :---: | :---: |
| 3 | maid - <br> made | not a minim <br> al pair | meid meid | the two words are the |


|  |  |  |  | same <br> exactly |
| :--- | :---: | :---: | :---: | :---: |
| 4 |  |  |  | there |
|  | wais | not a <br> minim <br> -rice | waiz - <br> al pair | differen <br> ces in |
|  |  |  | these |  |
|  |  |  | words |  |

## 3. RESULT

In this study, the researchers describe the vowel, consonant, diphthong and phonemic principle of Mentok dialect. Based on the data obtained, the sounds of the Lamalera language can be seen in Table 2.

| No | Vowel sounds | Consonant sounds | Diphthong sounds |
| :---: | :---: | :---: | :---: |
| 1 | [i] | [b] | [eu] |
| 2 | [I] | [t5] | [er] |
| 3 | [e] | [d] | [э] |
| 4 | [ə] | [d3] | [әu] |
| 5 | [a] | [g] |  |
| 6 | [ 0 ] | [h] |  |
| 7 | [u] | [1] |  |
| 8 | [0] | [k] |  |
| 9 | [ 0 | [m] |  |
| 10 |  | [n] |  |
| 11 |  | [ท] |  |
| 12 |  | [n] |  |
| 13 |  | [p] |  |
| 14 |  | [r] |  |
| 15 |  | [s] |  |
| 16 |  | [t] |  |
| 17 |  | [?] |  |
| 18 |  | [w] |  |
| 19 |  | [j] |  |
|  |  |  |  |

From the tabel above, Bangka language especially Mentok dialect has 9 vowel sounds, those are [i], [r], [e], [ə], [a], [u], [ J$],[\mathrm{o}]$ and [ o$]$ and 19 consonant sounds such as [b], [c], [d], [d3], [g], [h], [j], [k], [l], [m], [n], [ $]$ ], [n], [p], [r], [s], [t], [?], [w].

There are 4 diphtongs found in Mentok dialect of Bangka language, those are [eu], [er], [әu] and [әг]
A. Vowel Description

| I III |  | Front | Center | Back |
| :--- | :--- | :--- | :--- | :--- |
| High | Nr | $\mathrm{i}, \mathrm{I}$ |  |  |
|  | R |  |  | $\mathrm{u}, \mathrm{v}$ |
| Middle | Nr | e | 2 |  |
|  | R |  |  | $\mathrm{o}, 0$ |
| Low | Nr |  | a |  |
|  | R |  |  |  |

Explanation: I: high and low position of tongue

II: shape of lips
III: part of tongue
Nr: not round
R : round

Here is the description of Vowel sounds found in Mentok Dialect:
a. [i] sound is high and not rounded vowel. This vowel is formed when two lips are opened to the right and left side of the face. For instance:

- /liat/ - lihat (see)
- /tikəm/ - tikam (stab)
- /bərip/ - beri (give)
b. [u] sound is high and back rounded vowel. This vowel is formed by raising the tongue and both lips are moved forward and a little bit rounded. For instance:
- /bulen/ - bulan (moon)
- /tumpol/ - tumpul (dull)
- /sepuloh/ - sepuluh (ten)
c. [r] sound is near-close near-front unrounded vowel. In this case your tongue is close to the top and the front of your mouth. Unrounded refers to your lips because they are stretched out as if you are smiling and not rounded. It is similar to the /i:/ sound, but it is shorter. For instance:
- /t f arı $\mathrm{P} /$ - cari (seek/look for)
- /bedrri/ - berdiri (stand up)
- /dradəp/ - didepan (in front)
d. [e] sound is Close-Mid Front Unrounded Vowel. In this case your tongue is high, but not at the top of your mouth, and at the front. Unrounded refers to your lips because they are stretched out as if you are smiling and not rounded. For instance:
- /bae?/ - baik (good)
- /liher/ - leher (neck)
- /puteh/ - putih (white)
e. [ə] sound is Mid-Central Vowel. It is often called the schwa sound but that refers to the symbol that is used it is nothing to do with the phonetics of the sound. In this case your tongue is in the middle and the center of your mouth. All vowels are made through the mouth and are voiced so you vibrate your vocal chords to make the sound. To produce the a sound put your tongue in the middle and in the center of your mouth and make a short voiced sound.
- /garəm/ - garam (salt)
- /bəriz/ - beri (give)
- /dəkət/ - dekat (near)
f. [a] sound is open central unrounded vowel. This vowel sound is formed when the middle of tongue spread evenly and the mouth is widely opened. For instance:
- /tayən/ - tangan (hand)
- /kap/ - saya (I)
- /bənar/ - benar (true)
g. [u] sound is Near-close Near-Back Vowel. In this case your tongue is close to the top and near the back of your mouth. For instance:
- /luka/ - luka (wound)
- /vjen/ - hujan (rain)
- /garo/ - garuk (scratch)
h. [o] sound is Close-Mid Back Rounded Vowel. This vowel is formed when both lips are moved forward and a little bit rounded and the back of tongue is raised. For instance:
- /bator/ - batuk (cough)
- /gusor/ - gosok (rub)
- /idoy/ - hidung (nose)
i. [0] sound is Open-Mid Back Rounded Vowel. In this case your tongue is low and at the back of your mouth. Rounded refers to your lips because they are pushed together like you are going to kiss someone. For instance:
- /puyэn/ - punggung (shoulder)
- /pəntəy/ - pukul (hit)
- /yomon/ - bicara (talk)


### 3.1. Consonant Description



Explanation: V: Voiced sound
Uv: Unvoiced sound (voiceless)

### 3.2. Diphtongs Description

| Diphthong | Closing | Opening |
| :---: | :---: | :---: |
| [eu] | malu - <br> shy <br> /maleu/ | - |
| [er] | to bite /nigert/ | - |
| [əu] | $\begin{aligned} & \hline \text { batu - } \\ & \text { stone } \\ & \text { /batəu/ } \end{aligned}$ | - |
| [ $\quad$ ] |  | - |

Diphthongs occur because of tongue position in the inital and end position are not the same. This inequality is about high or low tongue, part of the tongue that move, as
well as its stricture. However diphthongs produced only one sound because that sound is in one syllable, even when it sounds like two sounds at the same time.

### 3.3. Allophones

It is any variation spoken sounds or signs used to pronounce a single phoneme in particular language. The writer found one allophone in Mentok dialect of Bangka language.

The phoneme $/ \mathrm{k} /$
/bato $\boldsymbol{2} /$ - batuk (cough)
/lakəı/ - laki (man)
[?] and [k] are allophones for the phoneme /t/

### 3.4. Minimal Pair

In this study, the writer does not find any minimal pairs in all 248 words.

## 4. CONCLUSION

As the result of Mentok dialect of Bangka language research with total 248 vocabularies obtained from the native speaker, the writer can conclude several things:

1. Bangka language especially Mentok dialect which is spoken in Pusuk, the District of Kelapa and the Region of Bangka Barat has 9 vowel sounds, those are [i], [r], [e], [ə], [a], [u], [u], [o] and [ 0 ].
2. Bangka language especially Mentok dialect which is spoken in Pusuk, the District of Kelapa and the Region of Bangka Barat has 19 consonant sounds such as [b], [c], [d], [f], [g], [h], [j], [k],
[1], [m], [n], [n], [n], [p], [r], [s], [t], [?], [w].
3. Bangka language especially Mentok dialect which is spoken in Pusuk, the District of Kelapa and the Region of Bangka Barat has 4 diphthongs, those are [eu], [er], [әu] and [әг]
4. The distribution of Bangka language vowel especially Mentok dialect which is spoken in Pusuk, the District of Kelapa and the Region of Bangka Barat is not complete. The complete distribution is only [a], [e], [ $u$ ], [ $u$ ] and [i]. The other vowels like [ $\mathrm{\rho}$ ] and [ r ] only occur in the middle of the words.
5. The distribution of Bangka language consonant especially Mentok dialect which is spoken in Pusuk, the District of Kelapa and the Region of Bangka Barat is not complete. The complete distribution is $[\mathrm{b}],[\mathrm{t}],[\mathrm{m}],[\mathrm{n}],[\mathrm{n}],[\mathrm{s}],[\mathrm{r}],[1]$ and the others, [d], [d3], [tf], [g], [h], [j], [n], and [?] are not complete.
6. Vowels, consonants and diphthongs found in Mentok dialect of Bangka language is similar with vowels, consonants and diphthongs found in Malay.

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