PHONOTACTICS PHONEMES OF COASTAL SIBOLGA LANGUAGE

Gusniari Lubis
SMKN-1 (BM) Sibolga

Tengku Syarfina
Balai Bahasa Medan

Abstract
This study aims to examine the language of the Coastal Sibolga based on phonotactics point of view. This study aims to describe the structure phonotactics phonemes in the language syllable coastal Sibolga language. Method used in this research is descriptive qualitative. This research focuses on the structure phonotactics vowel phonemes and consonants series, phonotactics structure in the phonemes and phonotactics syllable structure patterns of phonemes in a word of coastal Sibolga language. Phonotactics phoneme structure in the vowel series of coastal Sibolga language is eleven vowel series, namely: /ai/, /aa/, /ae/, /ie/, /oa/, /iaw/, /ou/, /iaw/, /ou/, and /iu/. The vowel series are found in three positions, in the beginning, middle, and end of the word. Phonotactics consonant phonemes in BPS structure have eleven consonant series, namely: /h-h/, /h-k/, /l/, /g-/, /ccl/, /mmV/, /kk/, /mpl/, /mb/, /n-c/, and /nd/. Phonotactics phonemes structure in the syllable is divided into four sections, namely one syllable words, two syllables, three syllables, and four syllables phonotactics phonemes structure. Based on the results of research found a pattern of phoneme phonotactics in BPS. These patterns are as follows: Vokal, Vokal Konsonan, Konsonan Vokal, Konsonan Vokal Konsonan, Konsonan Konsonan Vokal, Konsonan Konsonan Vokal Konsonan, and Konsonan Konsonan Konsonan Vokal Konsonan.

Keywords: Phonotactic, Phoneme, Syllable, and Coastal Sibolga.

INTRODUCTION
Researcher observed that many phonotactic of local languages have been studied but not about phonotactic phoneme in Coastal Sibolga Language. This research considered the distinction between Coastal Sibolga language and bahasa Indonesia. It is necessary to be studied for some reasons. Look at the following examples:
Coastal Sibolga          Indonesian
‘makk’                  ‘makan’
‘kakki’                 ‘kaki’
‘dakki’                 ‘dekat’

It's clearly seen how the distinction between both phonemes construction in a word. There are consonant cluster [k] in the middle of the word of coastal Sibolga language, while in Indonesian language have only one [k] in the word [makan]. The example indicates that the language of the Coastal Sibolga is very unique and interesting to be studied. This research still needs to be studied more about how the phonemes in the BPS structure and phonotactics in this study will examine the combination of consonant and vowel phonemes in the first, second, third and fourth syllable in the Coastal Sibolga language root word as described above. Combinations of consonant phonemes such as /spl-, spr-, str-, dan /skl- can appear at the beginning of the Coastal Sibolga syllable language derived from English.

Problems of the study are: (1) How does the structure phonotactics vowel phonemes and consonants series in the language syllable of Coastal Sibolga language (2) How does the structure phonotactics phonemes syllable of Coastal Sibolga language, (3) How is phonotactics structural patterns of phonemes syllable in Coastal Sibolga language. The purpose of this study are: (1) to describe the structure phonotactics phonemes in consonant series coastal Sibolga language. (2) Describe the structure phonotactics phonemes in syllable of coastal Sibolga...
language. (3) Describe the structure phonotactics phoneme patterns in syllable of coastal Sibolga language.

LITERATURE REVIEW
Phonology is a sub-discipline which studied about sounds of language. Specifically, phonology basic study about function, behavior, and organization of sounds as part of linguistic elements (Lass, 1988:1). Phonemes are abstractions of language sounds. Similarly, Alwi describes that the phoneme is the smallest unit of language in the form of sounds which distinguishes the form and meaning of the word (Alwi et al, 2003: 53). Based on the presence or absence of obstacles to the flow of air in the sound of channel, it can be divided into two groups: vowels and consonants (Alwi et al, 2003:49).

Kridalaksana (1982:58) gives three definitions for the syllable phonotactics, namely:
1. Possible series of phonemes in a language
2. Description of the series
3. Stratification grammar of system settings in phonetics stratum

Tata Bahasa Baku Bahasa Indonesia (TBBI) states that phonotactics are rules that govern series of phonemes which contained or not contained in the language. This principle will shape phonemes that we can differ intuitively in the Indonesian which we've never seen before (Moeliono et al :1988:52 - 53).

In this study the effect on the pronunciation of some words in the language of coastal Sibolga language through Swadesh vocabulary and some others vocabulary were recorded at the time of data collection. Moreover, to see the series of phonemes that build syllables in the coastal Sibolga language. The theory used in this study is Pulgram theory (1970), for examples:

/-mb-/ in coastal Sibolga language as in words: [ signs ] 'Hair' syllable separation is [ ram - bu ]. Both of these sound are paired alveolar by alveolar (series) and the second pair is located on a different syllable so that the combined consonants such a series called consonants.

And the examples of consonants series in the middle word in the language of Coastal Sibolga Language can be seen as follows:

/-mb/- pada [rambu?] 'rambut'
/-nk/- pada [bajka?] 'jangan'
/-nt/- pada [hantam] 'angkat'
/-kk/- pada [dakke?] 'dekat'S

Consonant is a combination of two or three consonants that line in one syllable that is located in the beginning and end of syllables. Vowel series is a combination of two or more vowels series contained on different syllables and top sonorant in speech.

RESEARCH METHOD
The method used in this research is qualitative. It can provide clear information about phonotactics phonemes in coastal Sibolga language. This method will clearly describe the object of study naturally and explain the actual activity. The chosen location is the Aek Habil in Sibolga city. The study location was chosen due to two reason. First, it is densely inhabited by speakers of the Coastal Sibolga (BPS). Secondly, speaker of BPS is obedient in using their mother tongue. This study was conducted over two months, starting with the casual observation related to this thesis. The data which is used in this study derived from verbal spoken by native speakers who regard as informants of BPS. It was based on location, social status, age, and experience of speakers. The instrument used Swadesh vocabulary. The amount is expected to be adequate to achieve the objectives of this study. Beside, the researcher as a key informant made direct observation and recorded the data in the location of the research.

ANALYSIS AND FINDINGS
Based on findings at the coastal Sibolga language, it found phonotactics structure in vowel and consonant series. The following is a series of exposure vowel contained in the Coastal Sibolga
language which positioned at the beginning, middle and end of the word. The exposure described by the table below.

<table>
<thead>
<tr>
<th>Vowel Series</th>
<th>Position</th>
<th>Beginning</th>
<th>Middle</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ai/</td>
<td>[ai] artinya ‘air’</td>
<td>[jai?] artinya ‘jahit’</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[kalai?] artinya ‘ekor’</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[laim] artinya ‘lain’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/aa/</td>
<td></td>
<td>[baapo] artinya</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ie/</td>
<td></td>
<td>‘bagaimana’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ae/</td>
<td></td>
<td>[lie?] artinya ‘lihat’</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[gae?] artinya ‘tua’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/oa/</td>
<td></td>
<td>[matoari] artinya</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ia/</td>
<td></td>
<td>[siap] artinya ‘siang’</td>
<td>[kau] artinya ‘kamu’</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>[siapo] artinya ‘siapo’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ou/</td>
<td></td>
<td></td>
<td>[danou] artinya ‘danau’</td>
<td></td>
</tr>
<tr>
<td>/ua/</td>
<td></td>
<td></td>
<td></td>
<td>[sabua] artinya ‘satu’</td>
</tr>
<tr>
<td>/uo/</td>
<td></td>
<td></td>
<td></td>
<td>[baua] artinya ‘buah’</td>
</tr>
<tr>
<td>/iu/</td>
<td></td>
<td></td>
<td></td>
<td>[dau] artinya ‘dua’</td>
</tr>
</tbody>
</table>

Based on the above table is known that the series /ai/ are in two positions, beginning and middle position, while the vowel series /aa/, /ie/, /oa/, /ia/, /au/, /ou/, and /iu/ are found only in one position, which is at the center position. The seven series of vowels in the vowel series are said Coastal Sibolga language because not pronounced simultaneously but separately. In other words, the vowel series are found in different syllables. According to Alwi, et al. (1998:52) states vowels are same breath blowing vowel which both vowels are in different syllable.

Series vowel /ou/, /ua/, /uo/, and /au/ are at the end positions. The four series is said to be a vowel in the vowel series coastal Sibolga language because pronounced not simultaneously but separately. In other words, the four series of the vowels are on different syllables. From the data obtained, it was only one diphthong /ou/ found in coastal Sibolga language at the end of the word the word is [Danou]. Diphthong / ou / regard as diphthong in coastal Sibolga language, because it is pronounced simultaneously and located on the same syllable. Based on the data, bilabial sounds is found in words of coastal Sibolga language. The sounds are in the middle of the word. Three bilabial sounds of the data and the sound [iy] are three words, one word,[ow] and four words [uw]. Sound [ iy ] is found in the [liye ?], [Siyang], and [siyapo]. Actually, in the form of phonemes that appear are /i-e/, but in syllables of phonetic or pronunciation /y/ can also be referred to as sound bilabial, that belongs to the series of vowels / e/ which turn into [y]. Sound [ow] found in the [matowari] and phonemes that emerge is /oa/, but in syllables of phonetic or pronunciation is [w]. which called a glide sound that belongs to the vowel series /oa/ turn into [w]. Sound / uw / are on [sabuwa], [tuwo], [duwo], and [buwa]. Appears in the form of phonemes is /ua/, but in syllables of phonetic or pronunciation is [w]. which also called a glide sound including in vowel series /ua/ into [w].
Structure of phonotactics consonant phonemes series in BPS

From the results obtained is known that the whole consonants series of coastal Sibolga language only found in the middle position. The following words have a consonant series contained in the data.

**Tabel 2. Consonant series of coastal Sibolga language**

<table>
<thead>
<tr>
<th>No</th>
<th>Deret Konsonan</th>
<th>Arti</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>/-ñj-/ pada kata [aij-jiŋ]</td>
<td>Anjing</td>
</tr>
<tr>
<td>2.</td>
<td>/-ŋk-/ pada [baŋ-kaʔ]</td>
<td>Bengkak</td>
</tr>
<tr>
<td>3.</td>
<td>/-nt-/ pada [bin-tan]</td>
<td>Bintang</td>
</tr>
<tr>
<td>4.</td>
<td>/-ŋg-/ pada [unŋ-ge]</td>
<td>Burung</td>
</tr>
<tr>
<td>5.</td>
<td>/-cc-/ pada [cac-ciŋ]</td>
<td>Cacing</td>
</tr>
<tr>
<td>6.</td>
<td>/-mm-/ pada [um-maʔ]</td>
<td>Cium</td>
</tr>
<tr>
<td>7.</td>
<td>/-kk-/ pada [dak-keʔ]</td>
<td>dekat</td>
</tr>
<tr>
<td>8.</td>
<td>/-mp-/ pada [am-peʔ]</td>
<td>Empat</td>
</tr>
<tr>
<td>9.</td>
<td>/-mb-/ pada [rim-bo]</td>
<td>Hutan</td>
</tr>
<tr>
<td>10.</td>
<td>/-fic-/ pada [lii-ci]</td>
<td>Licin</td>
</tr>
<tr>
<td>11.</td>
<td>/-nd-/ pada [pendeʔ]</td>
<td>Pendek</td>
</tr>
</tbody>
</table>

From the table above, noted that all of the consonants that begin with /u/ in English Coastal Sibolga is /-ñj-/,-nt-, /-fic-, and /-nd-. Consonant series is only found in the middle position. The four series are said to be consonants series of coastal Sibolga language because it is not pronounced simultaneously but separately. In other words, there are six series of consonants on different syllables. In addition, the six series consonants of Coastal Sibolga above regarded as consonants because they were not found in the initial and final position of the basic word both in the pronunciation and orthography. Examples can be seen on the table below. /-ñj-/,-nt-, /-fic-, and /-nd-.

<table>
<thead>
<tr>
<th>Consonant series</th>
<th>Beginning</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>/-ñj-/</td>
<td>/aij-jiŋ/</td>
<td>artinya ‘anjing’</td>
</tr>
<tr>
<td>/-nt-/</td>
<td>/paŋ-kaʔ/</td>
<td>artinya ‘panjang’</td>
</tr>
<tr>
<td>/-fic-/</td>
<td>/lii-ci/</td>
<td>artinya ‘licin’</td>
</tr>
<tr>
<td>/-nd-/</td>
<td>/pendeʔ/</td>
<td>artinya ‘pendek’</td>
</tr>
</tbody>
</table>

Consonant series that begins with /m/ are found in the Coastal Sibolga language is like: /-mm-/,-mp-, and /-mb-. Consonant series is also presented in the middle position of the basic word. The three series are said to be consonant series in the language because it isn’t pronounced simultaneously but separately. In other words, the three series of consonants in coastal Sibolga language contained in the different syllables. Consonant series that begins with /ŋ/ are found in the Coastal Sibolga language is like: /-ŋk-/ and /-ŋg-/.

<table>
<thead>
<tr>
<th>Consonant series</th>
<th>Beginning</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>/-mm-/</td>
<td>/ummaʔ/</td>
<td>artinya ‘cium’</td>
</tr>
<tr>
<td>/-mp-/</td>
<td>/ampeʔ/</td>
<td>artinya ‘empat’</td>
</tr>
<tr>
<td></td>
<td>/rumpuʔ/</td>
<td>artinya</td>
</tr>
</tbody>
</table>
The consonant series is at the middle position. Both series are said to be consonant consonant series in Coastal Sibolga language because the pronunciation of the two series are not pronounced consonants simultaneously but separately. In other words, the two series of consonants in Coastal Sibolga language are found on different syllables. Another reason why the series are said to be consonant because both series were not found at the beginning and end of the words in the coastal Sibolga language even in pronunciation or ortography. Consonant series that begins with /k/ as /-kk/- found in the coastal Sibolga language. The consonant series is at the middle position. Consonant series is presented in words, as follows:

<table>
<thead>
<tr>
<th>Consonant series</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beginning</td>
</tr>
<tr>
<td>/-ŋk/-</td>
<td></td>
</tr>
<tr>
<td>/-ŋg/-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Series is said to be consonant because the pronunciation of the consonants are not pronounced simultaneously but separately. In other words, the consonant series are on different syllables. Another reason why the series are said to be consonant because both series were not found at the beginning and end of the words in the coastal Sibolga language even in pronunciation or ortography. Series that begins with a consonant /c/ as /-cc/- found in the coastal Sibolga language. The consonant series are located at the middle position. It is said to be consonant series in the language because it isn’t pronounced simultaneously but separately. In other words, the three series of consonants in coastal Sibolga language contained in the different syllables.

<table>
<thead>
<tr>
<th>Consonant series</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beginning</td>
</tr>
<tr>
<td>/-cc/-</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Looking at the above data is clear to us that the shape /-mt/-, /-md/-, /-np/-, /-nb/-, /-nc/-, /-nj/-, dan /-mk/- do not exist in the language of coastal Sibolga language (BPS). The reason the sound /d/ is a voiceless fricative forms and voiceless dental fricative /t/ must have a pair of dental nasal /n/, so that the sound /-mt/- and /-md/- does not exist in the BPS as well as the /-np-/ and /-nb-/.

The formula in the consonants series above are as follows:
1. Nasalized sound phoneme /n/ can be placed in front of the combination phoneme /c/, /j/, and loud phoneme /d/ and /t/. In coastal Sibolga language found phoneme / n/ which can be lined up directly with the phoneme / c / and / j / in the word /an-jin/ as in the data. Similarly, the phoneme /d/ and /t/. The loud phonemes can be lined up directly with the phoneme / n /, as in the word /lin-ci/ and /pen-de?/. If viewed from the articulatory that sound dental voiced [d] and the voiceless dental sounds [t] along with the sound of the dental nasal [n] are very common and can put syllable after [d] or [t] or otherwise, before the sound [d] or before the
sound [t]. Example: dan-tanj or [tan-da]. The position of [n] is before [t] and after [d], and the position of [n] is after [t] and before [d] so the syllable commonly applied from its articulatory, that [t] and [d] is the sound of a fricative dental and [n] is a nasal sound voiced fricative dental. Sound [c] as a palatal sound, noiseless afrikative and sound [j] as a palatal sound, afrikative sound is logical and based on the same of its articulatory source, but in syllables of how articulatory nasal sound then palatal nasal sound [ni] not [n] arises. Data found in the sound [nj] and [nc] in the vowel series of coastal Sibolga language is on the [ai-] and [ii-ci]. In syllables of phonemes correctly seen /n/ but phonetically sound to be heard was the sound of a nasal palatal [n] and this study discuss about phonotactics phonemes, so logically, it just happened that way because of the form is used in coastal Sibolga language.

2. Nasalized /n/ phoneme can be placed in front of the burst sound phoneme /k, g/. Series are found in the word /ban-kaʔ/ and /un-ge/. These consonant series are found in the coastal Sibolga language. If viewed from the articulatory of sounds then africative velar sounds [k] and [g] along with the velar nasal sound [ŋ] are commonly used and the syllable can be put after [k] or [g] or otherwise, before the sound [k] or before the sound [g]. The position of [ŋ] is before [k] and [g], so that it applies prevalent syllable from its articulatory. Data found in the sound [nk] dan [ng] in the vowel series of coastal Sibolga language. This study discussed about phonotactics phonemes, so logically, it happened because the form is used in coastal Sibolga language.

3. Nasalized sound phoneme /m/ can be placed in front of burst sound phoneme /b/, /p/ and nasalized sound phoneme /m/. The word that has series of consonants that combine the phonemes /m/ with the phoneme /b/, /m/ and /p/ are in the word /ram-buʔl/, /Am - peʔ/ /, /am-peʔ/ /, dan /um-maʔ/. If viewed from the articulatory source of sounds then bilabial plosive sounds [b] and [p] along with bilabial nasal [m] are commonly used and the syllable can be put after [b] or [p] or otherwise, before the sound [b] or [p]. The position of [m] is before [b] and [p], so that it is applied in prevalent syllable from its articulatory Data found in the sound [mp], [mb], and [mm] in the vowel series of coastal Sibolga language.

4. Burst sound phoneme /k/ can be placed in front of burst sound phoneme /k/. which found in the word /dak-keʔ/ /, The /k/ phoneme can be lined up straight with the same /k/ phoneme. If viewed from the articulatory source of sounds then velar africative articulatory sounds [k] can be along with africative velar sounds so that it is applied in prevalent syllable from its articulatory. Data found in the sound [kk] in the vowel series coastal Sibolga language 5. Combining phonemes /c/ can be placed in front of the combining phoneme /c/. The same thing also happened on the phoneme /c/, which can also be lined up in front of the phoneme /c/. So this phoneme structure can also be found in the BPS words which used by coastal Sibolga communities.

From discussion above, it can be seen that the combination shows pattern of consonant series which tends to use a nasal consonant – homorganic nonnasal . Phonemes in front tends nasal phonemes, and voiceless. Phonemes located on the back consists of alveolar phoneme and nasal phoneme. Phoneme structure in word formation can be found on the BPS as the patterns above. nasalized sound phonemes series such as /n/, /m/, and /n/ phoneme can be combined with the burst alveolar phonemes /bl, /dl, /gl, /pl, /kl/ with /c/ and /j/ phoneme. Such phoneme combinations appear in the BPS. Discussing about the series will also discussed on consonant clusters. Consonant cluster is two or three consonants that are along with a single syllable, in this research, many clusters are found in the Coastal Sibolga language located in the start and end position while in the middle was not found. Consonant clusters contained in preposition: /pr-/, /kr-/ /sp-/, /tr-/, /br-/ dan /str-. Consonant clusters in the middle position: / - tr - /. Consonant clusters may be regarded as consonant clusters in coastal Sibolga language because both the preposition and the middle position pronounced simultaneously. In other words, the six clusters are found in the same syllable, as follows:
Phonotactics phoneme structure in Syllabary Coastal Sibolga (BPS)
As described in the previous discussion, this analysis will be performed on phonotactics phoneme of Coastal Sibolga language at the level of syllables. Keep in mind that every syllable in Coastal Sibolga language marked with a vowel is a sonorant syllable. Tons can be preceded and followed by a consonant. Process of syllable in this study should be found, in order to know the principle of syllable in the BPS. Based on the observation, each vowel and consonant combination can not escape from syllable principles used in formulating the problem in completion of this research. Number of syllables found in Coastal Sibolga language, ie monosyllabic words, disyllabic words , three syllabic words , and four syllabic words. Based on the data that has been discovered, there are number of syllables that have one syllable as much as two words. The word has two syllables as much as 176 words of the total. The word has three syllables as much as 20 words and four syllables found in only two words. Below will be explained the structure of the syllable phonotactics of monosyllabic, disyllabic, three syllabics, and four syllabic word.

Phonotactics in the rate structure monosyllabic word
Each syllable in Coastal Sibolga language characterized by a vowel preceded and followed by a consonant. Based on the data obtained, one syllable are only two words: /di/ dan /an/. Syllable principals are made based on observations of consonants patched to vowels in the word based on the principle of syllable without ignoring language used in reality. In this case, a consonant patched to a vowel to form a word that once formed a syllable, an opened syllable because the vowel located after a consonant. This is in accordance with the principle that require the first open syllable and put the syllable at the beginning. Objectives of the second principals of syllable require open first syllable fulfilled and put a single consonant syllable at the beginning. The principals can be seen through the following words:

<table>
<thead>
<tr>
<th>Consonant series</th>
<th>Beginning</th>
<th>Middle</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>/pr- /</td>
<td>[preman]</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>[premature]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[proses]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/kr- /</td>
<td>[kreatif]</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>[kronologi]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/sp- /</td>
<td>[spiral]</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>/tr- /</td>
<td>[tradisi]</td>
<td>[kontrak]</td>
<td></td>
</tr>
<tr>
<td>/br- /</td>
<td>[broker]</td>
<td>[bobrok]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[brosur]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Phoneme structure is built by vowels and consonants, it appears at the end of the syllable which sounds voiceless nasal velar /ŋ/. In this section there are no consonant clusters. Based on the above findings, it can be concluded that the syllable with one syllable in coastal Sibolga language accepted and this pattern is commonly used by people of coastal Sibolga.
Phonotactics structure in disyllable syllable

In desyllabelling the syllable in words, researcher do observation of the data and divide words into syllable by using an intuitive language, then adjust with the principal used in syllable. The following example will show syllable is formed, as follows:

- baru? (a) /ba-ru/ (b) */bar-u/
- gole? /go-le/? */gol-e?/
- butul /bu-tul/ */but-ul/
- bibit /bi-bit/ */bib-it/
- bare? /ba-re?/

From the above data consists of two phonemes, there are consonant and vowel. With the presence of consonant at the beginning of the first syllable cause the syllable become open syllable, and it is caused the use of language includes a consonant in the first syllable. Phonemes structure formed the syllable is consonant and vowel, that consonant precede vowel to form an open syllable. This shows that the purpose of the principals to form syllable be an open syllable can be fulfilled. Second syllable consists of three phonemes: consonant, vowels, and consonants to form a closed syllable. The syllable form in (b) is unacceptable syllable principals because there is no consonant in the first syllable. A consonant can basically put on the second syllable, such as those in (a).

From the example above shows that the first syllable is open cause consonant put along before vowels, whereas the second syllable causes the first syllable closed, as the impact of there is a consonant at the end of syllable, so the distribution of consonants not found in syllable as consonant clusters both in the first and the second syllable. Phonotactically, it is accepted in syllable principals in the use of costal Sibolga language. The word structure can be found in BPS, namely: /gadan/, /kolo?/, /bulan/, /busu?/, /daging/, /danjan/, /dinjin/, /taga?/, /tula?/, /dudu?/, /kure?/, /garam/, /gawi?/, /gapi?/, /gigi?/, /gosi?/, /gununj/, /hapus/, /kabe?/, /jalan/, /kolo?/, /muna?/, /kanan/, /kete?/, /karin/, /kotor/, /kuli?/, /kunin/, /lanj?/, /lawi?/, /liye?/, /nurus/, /lutu?/, /malan/, /minum/, /hanqo?/, /hanqe?/, /kasi?/, /para?/, /batan?, /kudun?, /pusc?, /kapa?/, /siyan?, /tajam?, /tarqan?, /hela?, /taban?, /gala?/, /meme?/, /tipis?, /tulan/.

Phonemes contained in the above structure is as follows:
1. Burst phonemes /b, d, t, k, p, g/, fricative /h, s/,/l/, nasalized sound /m/, and alveolar /l/ combined with vowels that form syllable into words.
2. Vowel /a, i, u, e, o/ form word syllable that is syllable as open syllable. Because consonant preceded the vowel.
3. Burst phonemes /b, d, t, p, g/, fricative /s/,/l/, nasalized sound /m, n, η, l/, alveolar /l/ bilabial /w, y/ and alveolar /r/ appears at the beginning of the formation of ethnic the word.
4. Vowel phonemes /a, i, u, e, o/ are in the middle of two consonants.
5. Burst voiceless phoneme /t, η, / fricative /s/, nasalized sound /m, n, η, l/, and alveolar /r/ found at the end of syllable and form a closed syllable.

In addition to the data above, the following data is also contained in coastal Sibolga language, ie: [abu], [aya], [baru], [basa], [bala], [buño], [soñe], [basu], [bahe], dan [ati]. Those words also have two syllables, it's just a different pattern of syllable principals. Analyzing in syllables formed above, that consonant can desyllableine a syllable in the word, as well as a vowel do. In consonant phonemes of a syllable, consonant becomes the end syllable of first syllable or first syllable of second syllable. It indicates that the presence of a consonant in the first syllable and the second syllable causes them an open syllables. Syllable in (b) is unacceptable because there is no such used in BPS. basically a consonant can be put on the second syllable, such as those in (a). Syllable principals require first syllable opened and principle of locating in the beginning of syllable in coastal Sibolga language.
From the data also showed that not all first syllable attached by a consonant but only of a single vowel. As in the words below:

<table>
<thead>
<tr>
<th>Word</th>
<th>Syllable 1</th>
<th>Syllable 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ijo</td>
<td>/i-jo/</td>
<td>*/ij-o/</td>
</tr>
<tr>
<td>ati</td>
<td>/a-tn/</td>
<td>*/at-i/</td>
</tr>
<tr>
<td>abu</td>
<td>/a-bu/</td>
<td>*/ap-u/</td>
</tr>
</tbody>
</table>

Consonants that can be regarded as the first or end syllable was not all can preceded or followed each vowel in coastal Sibolga language. Basically every vowel can be preceded or followed at the beginning or at the end of a particular syllable. In coastal Sibolga language also found syllable without beginning and end syllable. The syllable called one syllable phoneme because it consists of a vowel phonemes only. As in the words above explains that the vowel phonemes can be located at the beginning of the word. Based on the data obtained that all vowel phonemes in coastal Sibolga language can be one phoneme syllable. This is acceptable in the language and the principal of coastal Sibolga accepted because the two syllables the form open syllables. In addition , from the data found in the form of word clusters because there are two to three consonants between the syllables as contained in the following words :

<table>
<thead>
<tr>
<th>Word</th>
<th>Syllable 1</th>
<th>Syllable 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>preman</td>
<td>/pre-man/</td>
<td>*/prem-an/</td>
</tr>
<tr>
<td>proses</td>
<td>/pro-ses/</td>
<td>*/pros-es/</td>
</tr>
<tr>
<td>spiral</td>
<td>/spi-ral/</td>
<td>*/spir-al/</td>
</tr>
<tr>
<td>broker</td>
<td>/bro-kor/</td>
<td>*/brok-e/</td>
</tr>
<tr>
<td>struktur</td>
<td>/stru-kur/</td>
<td>*/stru-ktur/</td>
</tr>
<tr>
<td>kontrak</td>
<td>/kon-trak/</td>
<td></td>
</tr>
</tbody>
</table>

From the above data indicate that some consonants are along with a first syllable form a closed syllable because the syllable located at the end. The inclusion of two or more consonants can generate a number of possible patterns of the phonemes in the language phonotactics coastal Sibolga language. An open syllable indicated is not fulfilled because an attempt to acquire open syllable have an impact on the appearance of consonant clusters that can not be accepted at the beginning of second syllables.

Based on the data that has been found to be known to the syllable structure as below :

1. [ai] (air) /a-i/  
2. [apo] (apa) /a- po/  
3. [inun] (itu) /i- nun/  
4. [ikko] (ini) /ik-ko/  
5. [ampe?] (empat) /am-pe/?  
6. [kau] (kau) /ka-u/  
7. [gae?] (tua) /ga-e/?  
8. [sone] (buruk) /so- ne/  
9. [bare?] (berat) /ba-re/?  
10. [rimbo] (hutan) /rim-bo/  
11. [rambu?] (rambut) /ram-bu/?

There are several formulas relating to the series of phonemes that form two syllables, as follows:

1. Phonemes /a, i, u, e/, example: /ti-tu/
2. Vowel /a, i, e, o/ in the /am-bo/, /un-ge/, /in-da/?. /am-bo consist of two syllables, ie /am/ as the first syllable and /bo/ as the second syllable, o that form the word /am-bo/.
3. The third example above is the first syllable consisting of vowel /a, u, i, e, o/, as in the example of the word ta-un/, [bu-wa], /ki-da/, /ke-te?/, /go-so/.
4. Vowel /a, i, u, e, o/ are in the word /da-ra/, /bi-ni/, /ba-tu/, /ba-he/, /li-mo/. For example, the word /da-ra/ consists of two syllables. The first syllable is /da/ sound consisting of a
voiceless dental followed by the vowels /a/. The second syllable is /ra/ consisting of consonant sounds voiced trill /r/ and the vowels /a/.

5. The first syllable consists of /a, i, u, e/ i.e inle in word /kak-ki/, /rim-bol/, /kukku/, /pen-de?i/.

For example, in the word /kak-ki/ has two syllables, /kak/ as the first syllable, consisting of burst phoneme /k/ in initial rate, vowel /a/, and the phoneme /k/ at the end of syllable, this is often found in the structure of BPS. /ki/, in the second syllable consists of phonemes /k/ and phoneme vowel /a/.


8. Consonant on the first syllable and closed consists of phonemes nasalized sound /m, n/, example in word am-pc?i/, /um-ma?i/.

9. Consonant on syllable principal in the first syllable consists of all bursts phonemes /b, d, g, k, p, t/, which consists of fricative phoneme /h, s/, alloym phoneme /j/, nasalized sound phoneme /m/, and alveolar phoneme /l/ as in example /ba-ru/, /ha-ru/, dan /ja-tu/.

10. Consonants on the second syllable consists of burst sound phoneme /b, d, g, t/, phonemes fricative /s, h/, alveolar phoneme /t/, phonemes alveolar /l/, the phoneme bilabial /w/, phonemes nasalized sound /m, n, y/, and alloy phonemes /j/, as in example /ma-ti/, /sa-mo/, dan /pa-ra/.

11. The first syllable consist of bursts phonemes / b, d, k, t, p/, fricative phoneme /h/, alveolar phoneme /t/, alveolar phoneme /l/, nasalized sound phoneme / m, n, y/, and alloy phonemes /c, y/, as in example /iin-ci/, /ham-bus/, dan /ku-duŋ/.

12. The second syllable consist of burst sound phoneme /kl/, fricative phoneme /s/, and nasalized sound phoneme /m, y/, for example /pan-jaŋ/, /ham-bus/, /sam-pi?l/.

13. The first syllable consist of bursts phoneme /d, k, t/, nasal phoneme / m, n, y/, and fricative phoneme /s/ found in the word /ham-bus/, dan /ku-duŋ/.

14. The second syllable consist of burst sound phoneme /?l/, fricative phoneme /s/, and the nasal phoneme /m, y/, found in the word /pan-jaŋ/, /ham-bus/, /sam-pi?l/. From these examples can be seen that the nasal phoneme /n/ and /m/ along with alveolar phoneme /b/ dan /p/. In addition the nasal phoneme is along with alloy phonemes such as /j/. This means that the phonemes structure in word of language Coastal Sibolga language are found prevalently.

Every syllable in the word which has two syllables marked with a vowel syllables. It is the top of sound level which preceded and followed by a consonant.

Structure phonotactics in syllable which has Three syllabic word

The researcher observed that the distribution of consonants and vowels in the word formed both open and closed syllables at the beginning and at the end of the syllables. The syllable principal used in forming a syllable. The syllable in (b) is unacceptable because the fact in the use of language, a consonant not included in the first syllable. Basically, a consonant can be put on the second syllable, such as in (a) The following example will show that the syllable is formed, as follows:

[bæapø] (a) / ba-a-po / (b) * / ba-ap-o /  
[sadebo] / sa-de-bo / * / sad-e-bo /  
[padusi] / pa-du-si / * / pad-u-si /  
[sadopø] / sa-do-po / * / sad-o-po /  
[talino] / ta-li-go/  

From the above data shows that the first, second, and third syllable consists of two phonemes, consonant and vowel. Consonants in the beginning in every syllable cause the syllables to be open syllables, it is caused due to the presence of the fact that language includes a consonant on each syllable. Coastal Sibolga language accept such phonemes in a phonotactics. The consonants and vowels form structures of syllable, where consonants precede vowel to form an open syllable. This shows the purpose of syllable principal as a based to form the first open
The second syllable consists of two phonemes, consonants and vowels which form open syllables.

From the example above shows that the first syllable is open because only one consonant along before the vowel, the second syllable also become an open syllables because there are vowels along after a consonant. The principal of syllable accept the syllable as in the second part of principal require limits of syllable along after the vowel Not all consonants as in the beginning or end of the syllable can precede or follow each vowel in coastal Sibolga language. Basically at the beginning or at the end of a particular syllable preceded or follow every vowel. In this research found syllable in Coastal Sibolga language without beginning and end syllable. The syllable called as a syllable because it consists of vocal. As in the /ba-a-po/ indicates that the vowel phonemes can be a syllable located in the middle of a word. This is exactly what happened in the second syllable of Coastal Sibolga language and linguistics, it is acceptable, as well as the use of the word by the Coastal Sibolga. Coastal Sibolga language in phonotactics can receive syllable that form the structure of the word after applying the principal of syllable in Coastal Sibolga language, while the third syllable form a closed syllable because the position of the consonant at the end of the syllable. Syllable in (b) is unacceptable because the fact that language is not included a consonant in the first syllable. The researcher found that basically consonant can be located on the second syllable, such as those in (a), so the distribution of consonants not found in syllable form of consonant clusters even in the first, second, and third.

The principal of syllable agree with fonotatic syllable process and in the use of costal sibolga language. Based on the data found, there are three syllable words that have such structure, as follows:

1. /ba-a-po/
2. /sa-de-bo/
3. /sa-ke-te?/
4. /ba-cak-ka?/
5. /di-sik-ko/

There are several formulations on the order of phonemes that apply the three syllables, there are:

1. Vowels are located on the first syllable which consist of vowel /a, i, u, o/.
2. Vowels are located on the second syllable consists of vowels /a, i, e, u, o/.
3. Vowels are located on the third syllable consists of vowels /a, i/.
4. Consonants on the first syllable consists of burst sound phoneme /b, g, t/, fricative phoneme /s, l, alveolar phoneme /t, alveolar phoneme /l/, and nasalized sound phoneme /n, p, n/ as in example /sa-de-bo/, /ta-li-no/, dan /sa-bu-a/.
5. Consonants which are on the second syllable consists of burst sound phoneme /b, d, p/, alveolar phoneme /t, l, m, n, ng/ example /sa-de-bo/, /ta-li-no/, dan /sa-bu-a/.
6. Syllabic consonants on the third syllable consist of burst sound phoneme /b, d, k, p, t/, and fricative phoneme /s, l/.

In the beginning of a word, the researcher also found some words in the first syllable which consist of consonant that form consonant cluster. The words are as follows:

[a] /pre-ma-tur/  (b) */pre-ma-tur/
[pramuka] /pra-mu-ka/  */pra-mu-ka/
[kreatif] /kre-a-tif/  */krea-tif/
[tradisi] /tra-di-si/

The data above states that some consonants in certain syllable which have first syllable form an open syllable because vowel attached at the end. In the process of attaching two or more consonant can make some possibilities in the pattern of phonotactic phoneme in costal Sibolga language. Open syllable can be an open syllable if the principal fulfilled because every way to make an open syllable can arise the consonant cluster which not acceptable in its second
syllable. In the process of forming the first open syllable can cause consonant between the first and the second syllable attached after consonant so separating line between the first and the second syllable have a phoneme.

**Structure phonotactics in syllable which have four syllabic word**

Structure syllable phonotactics in four syllabic also does syllable principal. When all these principals are applied by dividing words according to the phonemes which formed them. These principals located after the vowel and open syllable is formed.

Cluster of consonants and vowels in open syllables and words lead to closed syllables even in the beginning or in the end of syllables. These principals are used in forming a syllable. The following example will show how syllable is formed, as follows:

- [mataro̞i] (a) /ma-to-a-ri /
- [batanai] /ba-tan-a-i /

The above data shows that the first syllable consists of two phonemes, consonant and vowel. With the presence of consonants before the vowel at the beginning of the first syllable caused the syllables to be open syllables. So also with the inclusion of a second syllable followed by a consonant and vowel forming an open syllable. The principals syllable in (b) is unacceptable because the the fact that language not included a consonant in the first syllable. A consonant can basically put on the second syllable, such as those in (a). Not all consonants that located in the beginning or end of the syllable can precede or follow each vowel phonemes in Coastal Sibolga language. The researcher found that every vowel can be preceded or followed in the beginning or end of certain syllable and also found a syllable without a beginning or end of syllable. This kind of syllable called one syllable phoneme which consist of one vowel. As in the word /ma-to-a-ri/ shown that vowel phonemes can be a syllable located in the middle of a word. This was also found in the third syllable Coastal Sibolga language. In a fourth syllable, consonants located in the beginning of syllable cause to be an open syllables. it is acceptable in linguistic of coastal Sibolga language.

In the use of syllable principal which need an open syllable can be described in the word [batanaï]. It is caused by a consonant which precede a vowel and become a limit of syllable. The second syllable become a closed syllable because its located at the end of syllable, while the fourth and fifth syllable are one syllable phoneme because only consist of one vowel phoneme that cause the syllable opened. This is commonly and acceptable in phonotactic and linguistic used in coastal Sibolga language that in the word [batanaï] can be syllabled as /ba-taŋ-a-i /. The researcher found cluster consonant are not used in consonant syllable of coastal Sibolga language. The researcher found consonant only in the beginning a syllable and a consonant without a syllable in coastal Sibolga language which called one syllable phoneme. Based on the data obtained Coastal Sibolga word that has four syllables. The four syllabic words consist of 3 (three) syllable structure, as in:

1. /ma-to-a-ri/
2. /ba-taŋ-a-i/
3. /lak-ki-lak-ki

**Phoneme patterns in phonotactics structure of Coastal Sibolga language.**

Based on the results of research on phonemes of phonotactics in Coastal Sibolga language (BPS), researcher found a pattern of phonotactics phoneme in BPS. The phonotactics structure which appears in the formation of words in the BPS are as follows:

1. V
2. VK
3. KV
4. KVK
5. KK
6. KKVK
7. KKKVK
The following table shows the patterns that can form a word in coastal Sibolga language and their position in the word. The above table describes that pattern V and VK appears on the first and second syllable. KV patterns exist in almost all positions. It shows that this pattern is the most widely used in syllables of Coastal Sibolga language. In other words KV pattern is contained in a dominant pattern of syllables. KV pattern emerged from monosyllables to four syllables, so is pattern’s KVK. This pattern appears in almost every syllable and found in almost every position. Construction dominant pattern consists of a pattern ends with KV and KV patterns or KVK. There is a pattern of VV in disyllabic words as in /ai/. This only occurs in words that have two syllables.

The patterns above are general patterns in forming words coastal Sibolga language. These patterns are the words that have one syllable, two syllables, three syllables, and four syllables, such as following:

a. Structural patterns of phonemes in words that have one syllable
   KV example di (di) /di/
   VK example an (kamu) /an/

b. Structural patterns of phonemes in words that have two syllables
   V example ai (air) /a-i/
   V KV example apo (apa) /a-po/
   V KVK example inun (itu) /i-nun/
   VK KV example ikko (ini) /ik-ko/
   VK KVK example ampe? (empat) /am-pe?/
   KV V example kau (kau) /ka-u/
   KV VK example gae? (tua) /ga-e?/
   KV KV example sonoe (buruk) /so-ne/
   KV KVK example bare? (berat) /ba-re?/
   KVK KV example rimbo (hutan) /rim-bo/
   KVK KVK example rambu? (rambut) /ram-bu?/
   KVK KVK example kontra? (kontrak) /kon-tra?
   KVK KVK example preman (preman) /pre-man/
   KKKVK KVK example.. structure (structure) /structure - tour

c. Structural patterns of phonemes in words that have three syllables
   KV-V-KV example /ba-a-po/
   KV-KV-KV example /sa-de-bo/
   KV-KV-KVK example /sa-ke-te?/
   KV- KVK-KVK example ba-cak-ka?/
   KV-KV-KV example /di-sik-ko/

   d. Structural patterns of phonemes in the word has four syllables
      KV-KV-V-KV example /ma-to-a-ri/
      KV-KV-KV-V example ba-ta-qa-i/
      KV-KV-KVK-KV example /lak-lak-ki-ki/

From the patterns above, it can be seen that the KV is often appeared in Coastal Sibolga. The pattern found in almost all positions within the syllable, in other words KV pattern is contained in a dominant pattern of syllables. KV pattern emerged from monosyllables to four syllables. Then KVK also appears frequently in syllable. This pattern appears in almost every syllable and position. Mostly structure of the pattern consists of KV and ended by KVK.

CONCLUSION
This study is about phonotactics phonemes in coastal Sibolga language (BPS). The focus of the study is about phonotactics phonemes structure in vowel and consonant series, structure phonotactics phonemes within syllables and phonemes phonotactics structural patterns in syllable of coastal Sibolga language. There are 11 (eleven) structure of phonotactic phoneme in vowel series of coastal Sibolga language: /ai/, /aa/, /ae/, /ie/, /oa/, /ia/, /au/, /ou/, /ua/, /uo/.
and /iu/. Researcher found the eleven vowel series in three position, in the beginning, middle and end of a word. The vowel series are not only in one position but also in two position, as in /ai/ vowel series. These vowel series have two position, at the beginning and end position, while consonant series are found in eleven position in phonotactic phoneme structure of coastal Sibolga language. They are: /ni-j/, /ny-k/, /n-u/, /ny-g/, /c-Cl/, /m-mI/, /k-kl/, /m-pl/, /m-b/, /ni-cl/ and /n-d/ which located in the middle of a word.

A syllable divides into four parts in phonotactic phoneme structure, the parts are monosyllabic words, disyllabic words, three syllabic word, and four syllabic word. These findings are indicated by a consonant which are located in before and after a syllable based on the principal of phonotactic syllable in coastal Sibolga language. In fact, researcher had an analysis and findings that not all syllable principal stated by Pulgram can be implemented in the principal of syllable in coastal sibolga language. Researcher found consonant cluster and consonant in a word of coastal Sibolga language after the principal of syllable applied. The consonant is simple and used in linguistic (pronunciation) based on the syllable principal and pronunciation not always the same. This is due to the process of syllable principal based on different principles, while syllable principal process based on phonemic focus on aspects of the system, ie stacking phonemic relation parts produced in accordance with the valid system of phonemes, whereas penyukuan on the basis of pronunciation, based on how the word is pronounced, that is used as a guide in the process of syllable principal in determining limit of syllable. Based on the results of research on phonemes in a phonotactics syllable of language coastal Sibolga (BPS) found a pattern of phoneme phonotactics in BPS. These patterns are as follows: V, VK, KV, KKV, KKVK, KKKV. These patterns combine with each other in every word of coastal Sibolga language that form a pattern in each syllable. The patterns also form phonemes phonotactics syllable principlas in coastal Sibolga language, and patterns are included in the word that has one syllable, two syllables, three syllables, and four syllables.

REFERENCES