



## Manner and place of articulations of consonant in Bodo language: A study through speech organs

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### Abstract

The manner of articulation of consonant is a configuration and interaction of the articulators through speech organs. It studies how closely the speech organs approach one another and which mainly used for analysis of the movement of the articulators. The place of articulation of a consonant is the point of contact where an obstruction occurs in the vocal tract along with the manner of articulation and the phonation which gives the consonant its distinctive sound. The Bodo language is a developing language among the different languages of India. Bodo language belongs to Tibeto-Burman languages of Sino-Tibetan language family. This paper is an attempt to study on the Manner and Place of Articulation of Consonant in Bodo Language.

**Keywords:** manner, place, articulation, consonant, bodo language and speech organs

### 1. Introduction

The Bodo is one of the major ethnic and linguistics aboriginal community belonging to the Indo-Mongoloid family of Tibeto-Burman stock of the Assam-Burmese group of the Brahmaputra valley in the northeast part of India. Linguistically, they are language belongs to the great Sino-Tibetan language family. Bodo is a developing language among different languages of the North East India. According to the population census report of Assam 2011, out of total population 14, 54, 547 are the Bodo language speaker. They have their own language, literature and culture which are unique identity of them. Specially, the Bodo word is also known as ‘Boro’ which represent the community. In 1846, B. H. Hodgson used Bodo word for the first time for denoting language as well as ethnic identity. The Bodo language is a one of the major state language of Assam. Generally, the Bodo language is spoken in the different districts of Assam, i.e. Kokrajhar, Chirang, Baksa, Udalguri, Goalpara, Nalbari, Barpeta, Dhuburi, Kamrup, Darrang, Sonitpur, Lakhimpur, Dhemaji, Nagaon, Marigaon, North Cachar and Karbi Anglong as well as in some parts of West Bengal and Nepal. In 2004, Bodo language is included 8<sup>th</sup> schedule of the Indian constitution. Formerly, the Bodo language was written using Roman and Assamese script. But, the language has been written using the Devanagari script since 1963. The Bodo language is a tonal language. The present research paper is based on the

manner and place of articulation of the consonant phonemes of Bodo language.

### 2. Objectives

1. To study about manner of articulation of the consonant of Bodo language.
2. To analyses about the place of articulation of the consonant of Bodo language through the speech organs.

### 3. Methodology

The analysis method is employed for this research paper. The primary and secondary is main sources for collected data. Generally, the primary data have been collected from information sources from different people Bodo language speaker. Besides, the secondary data have been collected from text books, journals, and articles. Some of the important data are collected from web browser.

### 4. Discussion and Analysis

There are sixteen consonant phonemes in Bodo language including two semi-vowels. The sixteen consonant phonemes are - /p<sup>h</sup>, b, t<sup>h</sup>, d, k<sup>h</sup>, g, m, n, ŋ, s, z, h, r, l, w, y/. We have found five ways as per manner of consonants of Bodo language, i.e. - Stop, Nasal, Fricatives, Lateral, Trill and Semi-Vowel. On the other hand, consonant can be categorized into five terms for place of articulation, i.e.- Bilabial, Alveolar, Palatal, Velar and Glottal.

**Table 1:** Consonant chart of Bodo language

Manner of Articulation		Place of articulation										
		Bilabial		Alveolar		Palatal		Velar		Glottal		
		vl	vd	vl	vd	vl	vd	vl	vd	vl	vd	
Stop	Un-aspirated		b		d					g		
	Aspirated	p <sup>h</sup>		t <sup>h</sup>				k <sup>h</sup>				
	Nasal		m		n				ŋ			
	Fricative					s	z					h
	Rolled/Trill				r							
	Lateral				l							
	Semi-vowel		w				y					

**4.1 Speech Organs**

The speech organs are most important part of human body which produces the sounds of language. The lips, teeth, alveolar ridge, hard palate, soft palate (Velum), uvula, glottis and the tongue are main speech organs. The speech organs can be divided into two types - passive articulators and active articulators. As per articulation, the teeth, alveolar ridge, hard palate, soft palate, uvula, and pharynx are passive articulators. The tongue, the vocal tract and the lips are plays most important place as active articulator.

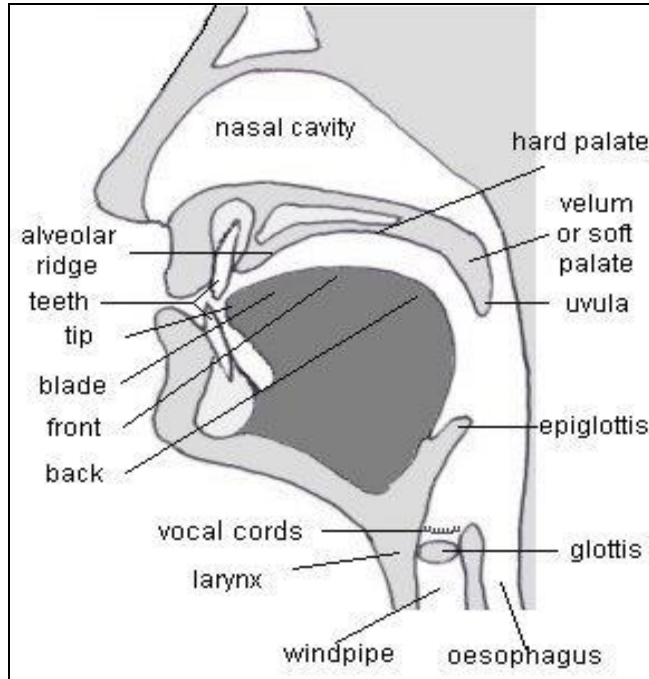


Fig 2: Sources: www.myefe.com

The sixteen consonant phonemes can be described according to the manner and place of articulation and the position of the vocal cords through speech organs as follows –

**/b/:**

It is an un-aspirated stop manner and bilabial voiced consonant of Bodo language. During the articulation of /b/ the lips take close round position and air make stop in oral cavity followed by sudden release. The vocal cord is vibrates when it is articulated. In Bodo language, /b/ consonant phoneme can occur in all three positions in words.

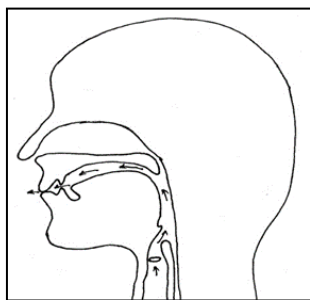


Fig 4.1.1

**/d/:**

It is a voiced un-aspirated alveolar stop consonant of Bodo language. When it is articulated the tip of tongue is raised

and touched the alveolar ridge to block the air passage then air is compressed followed by a sudden release. The vocal cord is vibrates when it is articulated. The /d/ consonant phoneme can occur in all three positions in words.

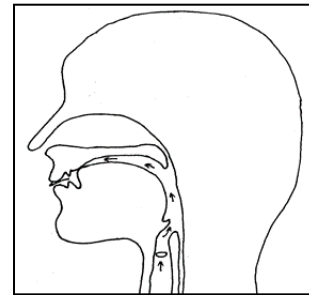


Fig 4.1.2

**/g/:**

It is a voiced un-aspirated velar stop consonant of Bodo language. During the articulation of this consonant the sound is produced by raising the back part of the tongue to the soft palate and compresses the air before sudden release. The vocal cord is vibrates when it is articulated. The /g/ consonant phoneme can occur in all three positions in words.

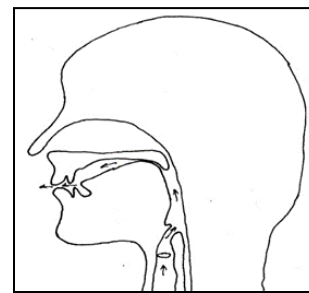


Fig 4.1.3

**/p<sup>h</sup>/:**

It is an aspirated stop manner and bilabial voiceless consonant of Bodo language. This bilabial sound is produced with both lips. When it is articulated the air passage is shut off by the raising of the soft palate. When the lips are opened, the air escapes with an explosive sound. The /p<sup>h</sup>/ consonant phoneme occur only initial and medial positions in words. There is no place for final position.

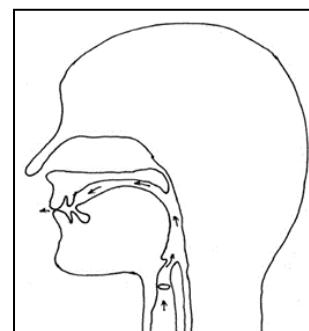


Fig 4.1.4

**/t<sup>h</sup>/:**

It is a voiceless aspirated stops alveolar sound of Bodo language. When it is articulated the tip of the tongue touched upper teeth alveolar ridge. And both lips make open

round position. The /t<sup>h</sup>/ consonant phoneme occur only initial and medial positions in words. There is no place for final position.

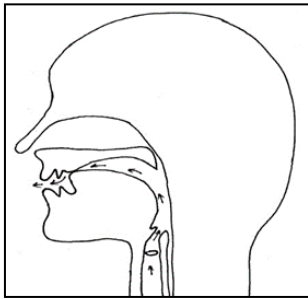


Fig 4.1.5

**/k<sup>h</sup>/:**

It is a voiceless aspirated stops velar sound of Bodo language. When it is articulated the centre of the tongue touched soft palate. And both lips make open round position. The air from the lungs complete blockage and followed by sudden release. The /k<sup>h</sup>/ consonant phoneme occur only initial and medial positions in words. There is no place for final position.

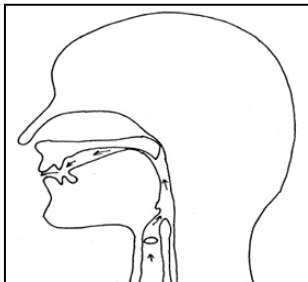


Fig 4.1.6

**/m/:**

It is a bilabial voiced nasal consonant phoneme of Bodo language. When it is articulated the back of tongue is touched on the soft palate and the air is passes through the nose. The lower lip take as an active articulator and upper is as passive articulator. The vocal cord is vibrates when it is articulated. The /m/ consonant phoneme can occur in all three positions in words.

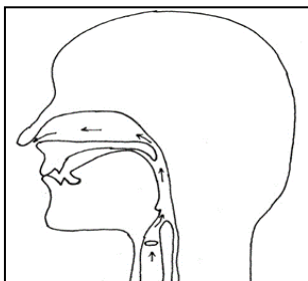


Fig 4.1.7

**/n/:**

It is an alveolar voiced nasal consonant phoneme of Bodo language. When it is articulated the tip of tongue touched the alveolar ridge and block the air, and the air is passes through nasal cavity. The both lips take open rounded position. The vocal cord is vibrates when it is articulated. The /n/ consonant phoneme can occur in all three positions in words.

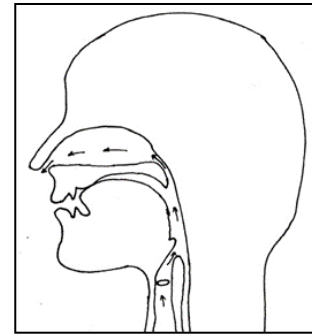


Fig 4.1.8

**/ŋ/:**

It is a velar voiced nasal consonant phoneme of Bodo language. During the articulated this sound the back of tongue is touched the soft palate and air from the lungs is passes through the nasal cavity. The both lips take close rounded position. The vocal cord is vibrates when it is articulated. The /ŋ/ consonant phoneme occur only medial and final positions in words. There is no place for initial position.

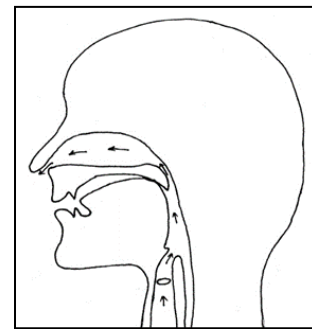


Fig 4.1.9

**/s/:**

It is a voiceless fricative palatal consonant sound of Bodo language. When it is articulated the tip of the tongue is raised to the hard palate but the tip tongue is lowered so that air escapes over it. The lips take position is open rounded position. The /s/ consonant phoneme cannot occur in final position in words. It is occur in initial and medial position in words.

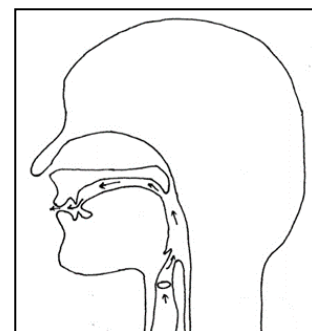


Fig 4.1.10

**/z/:**

It is a voiced fricative palatal consonant sound. When it is articulated the tip of the tongue is raised to the hard palate. The both lips take close rounded position. The tip of the tongue is raised towards the alveolar ridge and the air from the lungs to pass with an audible friction through a narrow

passage. The /z/ consonant phoneme cannot occur in final position in words. It is occur in initial and medial position in words.

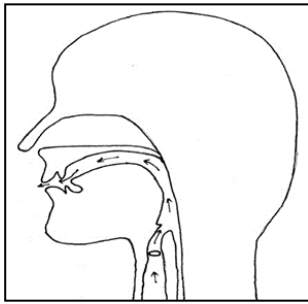


Fig 4.1.11

**/h/:**  
It is a voiced fricative glottal consonant sound of Bodo language. During the articulation of /h/ consonant the soft palate is raised to close the nasal passage. The air from the lungs passed through the narrow passage of the glottis. The /h/ consonant phoneme cannot occur in final position in words. It is occur in initial and medial position in words.

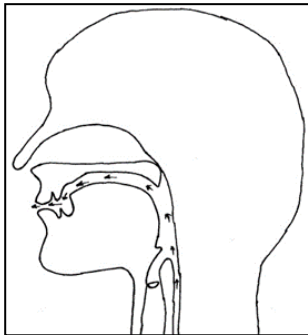


Fig 4.1.12

**/r/:**  
It is a voiced rolled or trill alveolar consonant sound. During the articulation of /r/ the tip of the tongue is raised towards the alveolar ridge and touched the soft palate more than one times. The lips are plays open round position. The /r/ consonant phoneme can occur in all three positions in words.

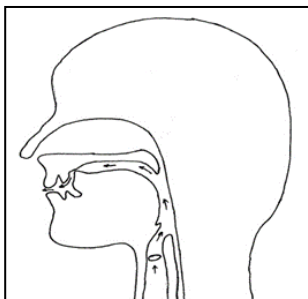


Fig 4.1.13

**/l/:**  
It is a voiced lateral alveolar consonant sound of Bodo language. During the articulation of /l/ consonant the tip of the tongue closely contacted with the alveolar ridge and the soft palate is raised to block the nasal passage. But the tongue is lowered to allow the air without any friction. The lips are plays open round position. The /l/ consonant

phoneme can occur in all three positions in words.

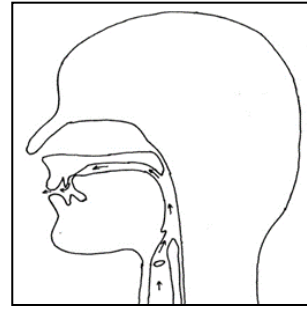


Fig 4.1.14

**/w/:**  
It is a voiced bilabial semi-vowel consonant sound of Bodo language. During the articulation of this sound, the soft palate is raised to shut the nasal passage. The back of the tongue take the position of half close to close vowel. The lips are plays open round close position. The /w/ semi-vowel consonant phoneme can occur in medial and final position in words but it cannot occur in initial position.

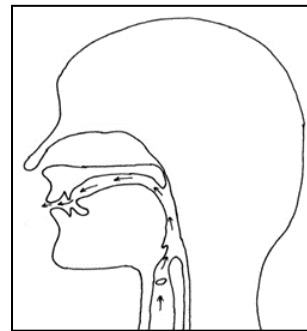


Fig 4.1.15

**/y/:**  
It is a voiced palatal semi-vowel consonant sound of Bodo language. When it is articulated the soft palate is raised to shut the nasal passage. The tip of tongue raised and touched the hard palate. The position of tip of tongue is front half-close to close vowel, then quickly moves away towards the position of central vowel in between half-close and half-open. The /y/ semi-vowel consonant phoneme can occur in medial and final position in words but it cannot occur in initial position.

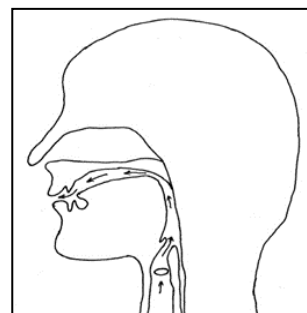


Fig 4.1.16

**4.2 Occurrences of consonant**

In Bodo language, most of the consonants can appear in all positions in words, at the initial, in the middle, or at the final. However, few consonants cannot occur in all positions

in words. It is found that all the voiceless consonant phoneme of Bodo language cannot occur at the final position of words.

**Table 2:** Occurrences of Consonant in Bodo language

Consonant	Initially	Medial	Final
/b/	/bima/ 'mother'	/abad/ 'agriculture'	/gab/ 'colour'
/d/	/dan/ 'cut'	/ada/ 'elder brother'	/zirad/ 'thing'
/g/	/gami/ 'village'	/agan/ 'footstep'	/p <sup>h</sup> arag/ 'difference'
/p <sup>h</sup> /	/p <sup>h</sup> rai/ 'to read'	/gup <sup>h</sup> ur/ 'white'	-----
/t <sup>h</sup> /	/t <sup>h</sup> alir/ 'banana'	/hat <sup>h</sup> ai/ 'teeth'	-----
/k <sup>h</sup> /	/k <sup>h</sup> anthal/ 'jackfruit'	/ak <sup>h</sup> ai/ 'hand'	-----
/m/	/mai/ 'rice crop'	/amai/ 'uncle'	/gwjam/ 'old'
/n/	/na/ 'fish'	/zunar/ 'animal'	/gabwn/ 'tomorrow'
/ŋ/	-----	/wŋk <sup>h</sup> rwi/ 'curry'	/mun/ 'name'
/s/	/sinai/ 'identify'	/gisib/ 'bamboo made fan'	-----
/z/	/zirai/ 'to seat'	/bizab/ 'book'	-----
/h/	/how/ 'hill'	/gaham/ 'good'	-----
/r/	/rao/ 'language'	/gwrān/ 'dry'	/bigur/ 'skin'
/l/	/lanzai/ 'tail'	/bilai/ 'leaf'	/nangwl/ 'plough'
/w/	-----	/gwlaol/ 'long'	/baw/ 'forget'
/y/	-----	/mwija/ 'yesterday'	/nay/ 'look'

**5. Findings**

1. We have found in the Bodo origin words the consonant phonemes / p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>/ do not occur in word final position but in loan words can occur replacing by /p, t, k/. So, we can consider the phonemes /p, t, k/ are the allophones of aspirated / p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>/ in Bodo language. Hence, they pronounce them as aspirated plosives both in stressed and unstressed positions.
2. In Bodo native dialect, there are 22 consonantal phonemes but in scientific linguistic standard Bodo language has only 16 consonantal phonemes. The consonantal phonemes which are absents in the standard language i.e. /p/, /t/, /k/, /g<sup>h</sup>/, /b<sup>h</sup>/, /d<sup>h</sup>/. We have found 12 consonant phonemes are voiced including two semi-vowels i.e. /b, d, g, m, n, ŋ, z, h, r, l, w, y/ and 4 consonant phonemes are voiceless i.e. / p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>, s/.
3. As per manner and place of articulation there are six consonant phonemes are un-aspirated, aspirated, stop and bilabial, alveolar, and velar sound, i.e. /b, d, g, p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup>/, three consonant phonemes are nasal, bilabial, alveolar and velar sound, i.e. /m, n, ŋ/, three consonant phonemes are fricative, palatal and glottal sound, i.e. /s, z, h/, two consonant phonemes are rolled or trill, lateral and alveolar sound, i.e. /r, l/, and two are semi-vowel consonantal sound, i.e. /w, y/ .
4. All the consonant phonemes are occurs in the medial position of Bodo words.

**6. Conclusion**

From the above discussion, we have found that the Bodo language has sixteen consonant phonemes. The phonological system of this language is based on the speech organs for articulations. According to the speech organs, the tongue, the vocal tract and the lips are plays active articulators, besides the nasal cavity and oral cavity plays passive articulators. In case of consonant phonemes voicing is the main characteristics of the Bodo languages. There is a scope for further research about the phonological structure of Bodo language through scientific manner especially among the native speaker of rural area.

**References**

1. Balasubramanian T. A Textbook of English Phonetics for Indian Students, Chennai, Macmilan Print, 2008.
2. Baro MR. Structure of Boro Language. Guwahati NL. Publication, 1990.
3. Basumatary P. An Introduction to the Boro Language. New Delhi Mittal Publications, 2005.
4. Bhattacharya PC. A Descriptive Analysis of the Boro Language, Guwahati, Gauhati University (Reprinted, 2007.
5. Chainary SP. Tibeto-Barman Languages of North East India. Mittal Publication, New Delhi, 2014.
6. Hocket CE. A System of Descriptive Phonology. Linguistic Society of America, 1942.
7. [https://en.wikipedia.org/wiki/Bodo\\_language](https://en.wikipedia.org/wiki/Bodo_language)<http://www.iitg.ac.in/rcilts/pdf/bodo.pdf>