Phonological Description of Sakachep

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Abstract: This paper is an extract from Dissertation work of Master of Arts in Department of Linguistics, North Eastern Hill University, Shillong. The aim of this paper is to investigate the basic phonology of the Sakachep language. Sakachep is a small ethnic group in North East India. Sakachep is also alternatively known as 'Khelma', 'Hadem', 'Halam' by other communities. This paper provides a description of major sound classes found in Sakachep. It includes the analysis of consonant and vowel sounds, tones, consonant cluster and syllable structure in Sakachep.

I.INTRODUCTION

Sakachep is one of the small tribes in the Kuki-Chin Community under Tibeto-Burman language family (Soppitt, 1893). Sakachep, which is also known as 'Khelma' is a small ethnic group inhabiting in North East India."Khelma" is a term given by the British during their encounter with them when they administered North Cachar Hills, Cachar and Karbi Anglong districts of Assam (Thang, 2019). Khamu and Langstieh (2009) asserted that the name Khelma is recognized only in the Dima Hasao district of Assam. In other districts of Assam and the neighbouring states of Manipur, Mizoram, Meghalaya, Nagaland, and Tripura, the community is known as the Sakachep community. The Sakachep were also named "Hadem" by the Pnar, a term translated as "backward people", but the term "Halam" (Ha-earth; lam-road) was referred to Sakachep to refer to a group of South Kukis in Tripura.

According to SIL ethnologue (2003) the total population of this community is 25,000 (approximately) in the entire region of North East India. They live in all parts of North East India, for examples: Assam (Dima Hasao, Karbi Anglong, Cachar districts), Meghalaya (Jaintia Hills district), Nagaland (Kohima district), Mizoram, Manipur and Tripura. Concerning occupation, most of the Sakachep are engaged in agriculture (Bhattacharya & Dutta, 2017). More than 60% of the Sakachep is presently involved in agriculture. Coming to the religion the Sakachep practised a fusion of naturalism and animism. The main traditional Gods and deities of Sakachep are Angera, Debi , Moka, Saichkri, Rajaram, Mokol raja, Enu Devi etc. With the advent of Christianity, majority of Sakachep became Christians. But still, some of the traditional practices are inter woven with Christian beliefs and practices. In the sphere of education, the effective literacy rate of Sakachep community in Dima Hasao district is 46.15% (Census 2011) in which male percent age is higher than its counterpart female.

1.1 ORIGIN AND HISTORY

There are two contrasting views pertaining to the origin of the word "Sakachep". One view states that Sakachep is derived from two words, namely "Saka" and "Chep". Saka means "Pig's legs" and Chep means "grill made of bamboo". It is believed that this term is derived from the elaborate nature of their marriage system. The other view states that Sakachep is derived from the two words, namely, Saka and Chep. Saka means "Upperside" and Chep means "using chopstick: i.e. people residing in Upper direction who use bamboo sticks to eat ".

As with the other tribal communities, oral tradition affirms back to the days of the construction of Great Wall of China. When the Great Wall of China was built up, the Sakachep came from China and settled in Chin State of Myanmar. Then some groups came out from that place and entered in North East India. At first, the Sakachep were believed to live in Vairengte (Mizoram). Then they later moved to Agartala (Tripura) around 300 years back. According to Sakachep folklore, there once lived a king (Vaireng) in Tripura who subdued the Sakachep into suzerainty. He subsequently ill-treated, punished and loathed them. This was to the extent that the Sakachep felt compelled to turn their backs on him and their native land and to search for greener pastures, which they found in Meghalaya.

Another narrative which accounts for their migration to Meghalaya points to the British colonisation of India. It is narrated that during those days the Sakachep fiercely defended their land but were extremely overpowered by British forces. They had, as this narrative goes, no option but to flee. They scattered in almost all the North Eastern States of India except Sikkim and Arunachal Pradesh.

1.2 GENETIC CLASSIFICATION

Sakachep belongs to the Tibeto-Burman language family. It is classified as a Kuki-Chin language by various scholars within the Tibeto-Burman family though the lower level sub-grouping varies. Kuki-Chin languages are mostly spoken in western Myanmar, Northeast India and Bangladesh. This study adopts the genealogical classification of Scot DeLancey (1987) showing Sakachep under Kuki-Chin subgrouping of the Tibeto-Burman language family.

Grierson (1904) classifies Kuki-Chin languages into two main groups: Meithei and Kuki-Chin languages proper. The Kuki-Chin proper is further divided into four groups –
(i) Northern group (Thado, Sokte, Siyin, Ralte, Paite)
(ii) Central group (Tashon, Lai, Lakher, Lushei, Banjogi, Pankhu)

(iii) Old Kuki (Rangkhol, Bete, Halam(Sakachep), Langrong, Aimol, Anal, Chiru, Kolren, Kom, Purum, Mhar, Cha)
(iv) Southern group (Chinme, Welaung, Chinbok, Yindu, Chinbon, Khyang or Sho, Khami).

Matisoff (1972, 2009) made four main divisions of the Kuki-Naga languages namely Central Kuki (incl. Lushei, Lai or Haka, Lakher), Northern Kuki (incl. Thado and Siyin), Old Kuki (which will include Sakachep as per the language classification) and Southern Kuki (incl. Sho, Yawdwin, Chinbok, Khami). In Matisoff's language grouping, *Sakachep* is not listed but in this study, the language is grouped under Old-Kuki looking into its typological characteristics and close linguistic affiliations with Biate, Rangkhol and other languages which also belong to Old-Kuki Chin subgrouping. The family tree is represented below in Figure 1:

Figure 1: Scott Delancey,1987
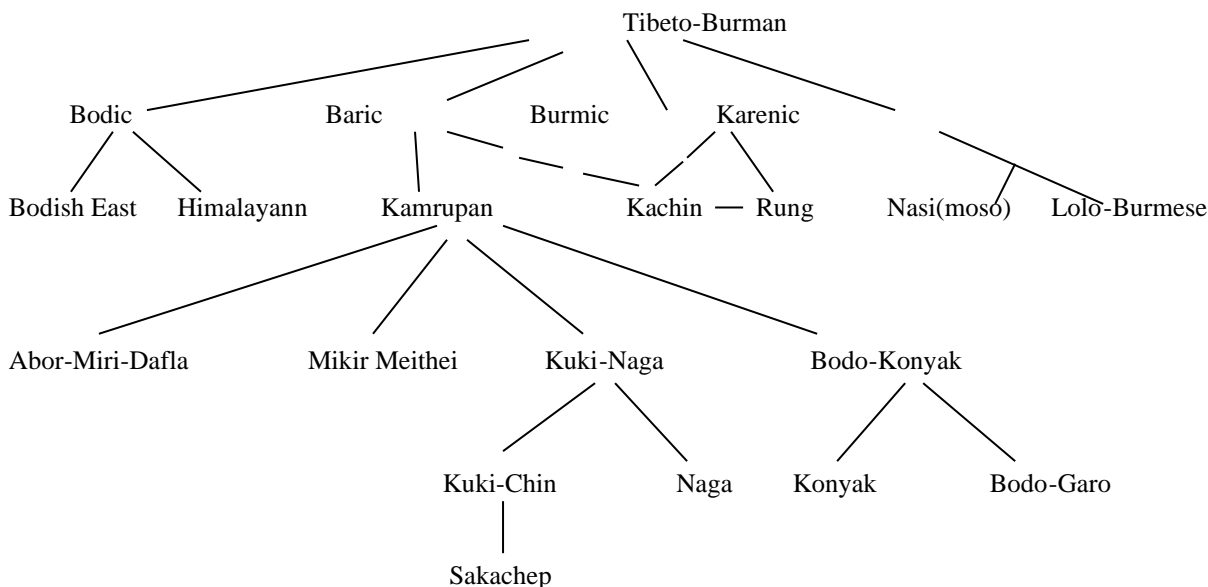
II.METHODOLOGY

The study was conducted in Dorbinsip village of Dima Hasao District of Assam, where a small community of Sakachep inhabits. There were around 40 Sakachep households inhibiting in the village. It was a study undertaken by 3rd semester students of Department of Linguistics, from North-Eastern Hill University, Shillong as a part of MA Dissertation. The study was conducted from 7th November 2019 to 9th November 2019 for three days. Also the informants were invited to the Department for in-depth discussions. The data has been collected and drawn out from the informants who have been regular guests and also from the field. In the Field the collection of data was done by face-to-face interaction and through the recording of data based on a wordlist prepared for the purposed work.

III.LITERATURE REVIEW ON PHONETICS AND PHONOLOGY

Language is a 'species specific' and 'species uniform' possession of man (Dr. Varnhney 2009:1). According to Henry Sweet (1921), language is defined as "the expression of thought by means of speech sounds." Linguistics is the science of Language, including the sounds, words, and grammar rules. It deals both with the study of particular languages and the search for general properties common to all languages or large groups of languages. Phonetics and Phonology are sub-branches of Linguistics which studies 'the production, acoustics and hearing of speech sounds' and 'the pattern of sounds in a particular language' respectively.

3.1 PHONETICS:

Crystal (2008: 363) defines phonetics as "human sound making especially those sounds used in speech and provides methods for their description, classification and transcriptions."

According to Riley (2000:6), "phonetics is concerned with properties of speech, studied by scientific method; it deals with objective physical or concrete reality."

Phonetics is one and the same for all the languages of the world. According to Lyons, "Phonetics differs from phonology... in that it considers speech sounds independently of their paradigmatic opposition and syntagmatic combinations in particular languages" (1972: 21).

3.2 BRANCHES OF PHONETICS:

Phonetics is generally divided into three branches:

(i)ARTICULATORY PHONETICS: It is a branch of phonetics which studies the way in which speech sounds are made by the vocal organs. In other words, this branch of phonetics deals with the production of sounds, how sounds are being produced by the different vocal organs; how the air is being modified in the vocal tract which results in the different production of sounds.

(ii)ACOUSTIC PHONETICS: It is a branch of phonetics which studies the physical properties of speech sound, as transmitted between mouth and ear. It is also known as experimental or instrumental phonetics. It is wholly dependent on the use of instrumental techniques of investigation, particularly electronics, and some grounding in physics and mathematics is a prerequisite for advanced study of this subject.

(iii)AUDITORY PHONETICS: It is a branch of phonetics which studies the perceptual response of the speech sounds, as mediated by ear, auditory nerves and brain. It is a less well-studied area of phonetics, mainly because of the difficulties encountered as soon as one attempts to identify and measure psychological and neurological responses to speech sounds.

3.3 CLASSIFICATION OF SOUNDS:
A 'sound' is a complex pattern of rapid variations in air pressure, traveling from a sound source and striking the ear, which causes a series of neural signals to be received in the brain: this is true of speech, music and random noises. The sounds can be classified as consonants and vowels in the way they are being produced.

3.3.1 CONSONANTS:
A Consonant is a sound which is produced when there is a complete closure or narrowing in the vocal tract such that the air can pass out suddenly or gradually which results in the audible friction. There is always an obstruction in the production of consonantal sounds.There are three parameters for the description of consonantal sounds. They are-

3.3.1.1 PLACE OF ARTICULATION:
lt is one of the main parameters used in the phonetic classification of speech sounds, referring to where the sound is produced. The following are the different places of articulation for different sounds.
(1)   Bi- Labial Sounds
When sounds are produced by the use of both the lips, it is called bilabial sounds. For example in English, [p] in pin, and [b] in bin.
(2)   Labio-Dental Sounds
The sounds which are produced when the lower lip touches the upper teeth are called labio -dental sounds. For example in English, [f] in face and [v] voice.
(3)   Dental Sounds
Dental sounds are those sounds which are produced when the tip of the tongue touches the upper teeth. For example in Spanish [t] in [toro] meaning "bull" and [d] in [donde] meaning "where". This sound is represented by diacritic below the segment like [t̪].
(4)   Inter- Dental Sounds
Inter-dental sounds are those sounds which are produced when the tip of the tongue comes in between the upper teeth and the lower teeth, For example, in English words like 'think', 'thing' the sound present is [θ] etc.
(5)   Alveolar Sounds
When the blade of the tongue touches the alveolar ridge, the sound produced in this manner is called alveolar sound. For example in Enslish [t]- 'took', [s] - 'sip' etc.
(6)   Palatal Sounds
Palatal sounds are those sounds which are produced when the front of the tongue touches the hard palate. For example in English [j] - 'yak', 'yes' etc.
(7)   Palato- Alveolar Sounds
The sounds which where there is constriction between the blade of the tongue and post alveolar region, which is the area between the alveolar ridge and the hard palate, is called palate alveolar or alveo - palatal sounds. For example in English [ʧ]- church, [ʤ]- judge,[ʃ]- shoe, shy, she, [ʒ]- leisure, measure, pleasure.
8)   Retroflex Sounds
When the undersurface or the sub laminal region of the tongue rolls towards the hard palate, sounds produced in such manner are called retroflex sounds. Most of the South -Indian languages have retroflex sound. For example, [ʈ]-Tamil.
(9)   Velar Sounds
The sounds produced when the back of the tongue touches the soft palate or the velum is called velar sounds. For example in English [k] in 'skit' and [g] in 'gross'.
(10)   Uvular Sounds
Sounds which are produced when the back of the tongue touches the uvula are called uvular sounds. For example, [R], [G] sounds present in Arabic and French Languages.
(11)   Pharyngeal Sounds
These kinds of sounds are produced when the root of the tongue touches the pharynx. For example, [ħ] - voiceless pharyngeal fricative.
(12)   Glottal Sounds
When the vocal cords are tightly closed and then the vocal cords are set apart, the air comes out suddenly. The sound produced in this manner is called glottal sound [ʔ]. This sound is common in Khasi as in words like [paʔ]'to make a noise' [baʔ] 'to carry'.

3.3.1.2 MANNER OF ARTICULATION:

According to the manner of articulation, which describe the type of obstruction caused by narrowing or closure of articulators, consonants can be divided as;

1)   Stops or plosives

In the production of stop the oral and nasal passages are closed simultaneously. The active and passive articulators come in contact with each other forming a stricture or complete closure and preventing air flow escaping through the mouth. The air behind the oral closure is compressed with the velic closure and when the active articulator is removed from contact with the passive one, the air escapes with explosions. Stops are also called as plosive or occlusives.

2)   Nasal

In nasal, the velum is lowered and the air passes through the nasal cavity where stricture formed by complete closure of cavity.

3)   Trill

In the production of trill, the active articulator, mostly tongue, taps several times against the passive articulator. The strictures involved are called (stricture of intermittent closure)trills.

4)   Fricatives

In the production of fricative consonants, the stricture is one of close approximation. The active articulators and the passives are so close to each other that passage between them is very narrow and the air passes through it with audible friction.

5)   Affricates

If the stop is not held for any appreciable time, and released slowly or by briefly stopping the airstream completely and thus releasing the articulators slightly so that friction noise is produced. That is why phonetician says that affricate is a sequence of stop followed by fricatives.

6)   Tap or flap

In the production of flap, the active articulator strikes the passive articulator once only.

7)   Lateral

Laterals are produced by a stricture of complete closure in the centre of the vocal tract, but the air passes out at the sides of the tongue.

8)   Frictionless continuant

In the production of a frictionless continuant the stricture is that of an open approximation.

3.3.1.3 VOICING:

The vocal folds may be held against each other at just the right tension so that the air flowing past them from the lungs will cause them to vibrate against each other. This process is called voicing. On the basis of voicing, sounds can be classified into voiced and voiceless. Sounds which are made with vocal fold vibration are said to be voiced. Sounds which are made without vocal fold vibration are said to be voiceless. For example-[b, d, g] are voiced whereas [p, t, k] are voiceless sounds. Consonants can also be further classified as-

1)   Liquids- they are sounds which behaves like consonants as well as vowels. They act like consonants as they come in contact with two articulators but there is free flow of air which makes them act as vowels. Example- [l] – lateral, [r]- trill.

2)   Approximants/Glides- The air is not passed freely, the articulators do not come in contact with each other. Though the air is not passed freely there is no audible friction. Example- [w].

3)   Obstruents- They are sounds that are produced when there is obstruction in the vocal tract. Example- stops [b , p], fricatives [f , v], affricates [tʃ , dʒ].

4)   Sonorants- they are those which are produced when there is a vocal tract configuration which allows spontaneous voicing. Example- [n, r, , l,].

3.3.2 VOWELS:

Phonetically vowel is a sound which is produced when there is no obstruction and the air can pass freely in the vocal tract. Phonologically a vowel is defined as a sound which occupies the nucleus position of the syllable structure. They are referred to as vocoids in phonetics. So, vocoids are normally classified according to three criteria: tongue advancement (front, central, back); tongue-height (high, mid, low, or close, half-open and open); and lip-rounding (rounded and unrounded).

3.3.2.1 THE BODY OF THE TONGUE:

(1)   Front of the tongue

The front part of the tongue falls opposite of the hard palate I these sounds are produced by the front of the tongue. So, they are called front vowels. For example, [i], [ɜ] etc.

(2)   Central Part of the tongue

The central part of the tongue falls opposite of the areas between the hard palate and soft palate. These sounds are produced by the central part of the tongue. So, they are called central vowel. For example, [ə], [ɜ] etc.

(3)   Back of the tongue

The back part of the tongue lies opposite the soft palate or velum. Back vowels are produced by the back part of the tongue. So, they are called back vowels. For example, [u],[o], [ɔ] etc.

3.3.2.2 HEIGHT OF THE TONGUE:

(1)   High or Close Vowel

These vowels are produced when the tongue is in its highest position. For example, [i], [u] etc.

(2)   Mid- High or Mid - Close Vowel
          These vowels are produced when the tongue is little lowered than high vowels. For example, [e], [o] etc.
(3)   Mid-Low or Mid- Open Vowel
          These vowels are produced when the tongue is slightly raised than the articulation of the low vowels. For   example, [ε],
[ɔ] etc.
(4)   Low or Open Vowel
          These vowels are produced when the tongue is in its lowest position. For example, [a], [ɑ]etc.

3.3.2.3 POSITION OF THE LIPS:
(1)   Rounded
          While producing these kinds of sounds the lips gets rounded. For example, [o], [u], [ɔ] etc.
(2)   Unrounded
          When the lips are spread while producing sounds, they are called unrounded. For example, [ɯ], [ɑ] etc.

TYPES OF VOWELS:
Vowels are divided into three types-
1)   Diphthongs
          It is a term used in the phonetic classification of vowel sounds on the basis of the manner of articulation. Some vowels are represented as sequences of vowel symbols because the tongue and or the lips move from one position to another. Such vowel sounds are called diphthongs. Though a diphthong has two vowels, it is considered as a single unit and is 'syllabic'.
 For example, in English
[ɔi] in transcription of boy-/bɔi/,
[əʊ] in transcription of home- /həʊm/ etc.
2)   Monophthongs
          It refers to a vowel (pure vowels) where there is no detectable change in quality during a syllables or which are produced based on the constant position of the tongue throughout the process of production. The qualities of the vowel remain virtually unchanged throughout their duration. For examples in English /bit/, /bʌd/, /sʌn/ etc.
3)   Tripthongs
          The use of more than two vowels in words is called tripthongs. Tripthong is type of vowels where there are two noticeable changes in quality during a syllable. Tripthongs are those sounds that consist of a movement or a glide from one vowel to second vowel and another third vowel. For examples, in English /fai:ə/,/taʊə/ etc.

3.2 PHONOLOGY:
          Katamba (1996:1) defines phonology as, "the branch of Linguistics which investigates the way in which sounds are used systematically in different languages to form words and utterances."
          Crystal (1997:289) defines phonology as "a branch of linguistics which studies the sound system."
          No language makes use of all the speech sounds that human beings can produce. Each language makes a selection of speech sounds. Different languages select different sounds out of the total inventory of sounds that can possibly be articulated and different languages organize the selected sounds in different ways. (Balasubramaniam 1981).
          In other words, Phonology is the subdiscipline within linguistics concerned with the selection and organization of sounds in a particular language.

3.3 SOME MAJOR CONCEPTS OF PHONOLOGY:
(1)PHONE:
          Any objective speech sounds, considered as a physical event and without regard as to how it fits into the structure of any given language is a phone. Thus, a phone in phonology is the smallest possible segment of sounds abstracted from the continuum of speech.

(2)PHONEMES:
          Crystal (1997: 287), defines phoneme as "the minimal unit in the sound system of a language."
          Phoneme is the smallest unit of a sound which cannot be further break into sound segments. It is defined as the smallest or minimal distinctive unit of the sound pattern of a language which cannot be further divided.
          Bloomfield (1933: 79), defines phoneme as "a minimum unit of distinctive sound feature".

(3)ALLOPHONES:
          Allophone is a speech sound which is one of a number of variants of a phoneme. Such variants can be either in complementary variations or in free variations. For instance [p] and [pʰ] are the allophones of the phoneme [p] in that, [p] is aspirated when occurring initially in a word and unaspirated elsewhere. In other words, [p] and [pʰ] are in complementary distribution and are allophones of the same phoneme [p].
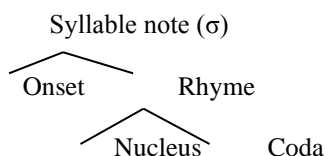
3.4 CONSONANT CLUSTER:
          It is a term used in the analysis of connected speech to refer to any sequence of adjacent consonants, especially those occurring initially or finally in a syllable, such as the initial [br-] of bread, or the final [-st] of best. Some linguists argue that the

term can be properly applied only to those consonant clusters that occur within one syllable. Others claim that the concept is more useful when it includes consonant sequences across syllable boundaries. According to the former definition, the longest consonant clusters in the word extra would be /ks/ and /tr/,whereas the latter allows /kstr/, which is phonetically [kʃt͡ʃɹ] in some accents.

3.5 SYLLABLES AND SYLLABLE STRUCTURE:

Syllable is a unit of pronunciation which is larger than a single segment but smaller than a word (Crystal, 2003). There is no definition of the syllable that phoneticians and phonologists agree upon yet the notion of a unit at a higher level than that of the phoneme has existed since ancient times. The syllable is a constant feature in every spoken language in the world and most people have an intuitive sense of what a syllable is. Each language has its own rules about what kinds of syllables are allowed, and what kinds aren't - but the general structure is the same everywhere. A syllable can have as many as three parts: onset, nucleus, and coda.

Syllable note (σ)

Onset   Rhyme

Nucleus   Coda

The onset and the coda are consonants, or consonant clusters, that appear at the beginning and the end of the syllable respectively. The nucleus forms the core of the syllable; it is most often a vowel, or a combination of vowels - but there are exceptions to that.

All languages have syllables of the form CV (vowel preceded by a consonant). In addition, languages have syllable types of CVC patterns and also patterns of greater complexity. The central position of the syllable, occupied by the 'V' element is normally referred to as the peak or the nucleus. The initial 'C' is called the *onset* and the final 'C' is called the *coda.*

A syllable does not necessarily have to have an onset or a coda - depending on the language - but a nucleus is always present. If a coda is present in a syllable, the nucleus and the coda form a single unit called a rhyme; otherwise the nucleus makes up the rhyme by itself.

3.6 TONE:

In a tone language, tone is a feature of the lexicon being described in terms of prescribed pitches for syllables or sequences of pitches for morphemes or words (Cruttenden, 1986). In such languages, sequences of adjacent tones may influence each other phonetically a word in isolation that has a low tone may be given a higher tone if a high tone word follows. Again, tone carried by a word may be an essential feature of its meaning. In Beijing Mandarin Chinese, the word 'ma' when pronounced in a level tone means 'mother'; in a falling tone the word means 'horse', if the tone is a rise-fall, then it means 'to scold' and if the tone is rising then it means 'hemp'. Tone languages differ in the number and the nature of pitch distinctions which they use to distinguish meanings. There are two basic types of tones-
1)   Register tone (single tone)

Register tones are measured by contrast in the absolute pitch of different syllables. Register tones can be of three types- High (´), mid/level (¯), low (`).
2)   Contour tones

Contour tones are fluctuating tones. They are tones involving a pitch shifting upward or downward in a single syllable.

3.7 PRINCIPLES OF PHONEMIS ANALYSIS:

Pike in 1947 mentions several principles for analysing sounds as phonemes. But the Structural Phonologists agreed on only six principles which are involved in establishing or inventing phonemes which then widely used for analysing sounds as phonemes.
The six procedures or principles are -
1. The Principle of contrastive distribution
2. The Principle of complementary distribution
3. The Principle of free variation
4. The Principle of phonetic similarity
5. The Principle of patterns of congruity
6. The Principle of economic criteria.

IV. PHONOLOGICAL DESCRIPTION OF SAKACHEP

4.1 CONSONANTS:

Sakachep has 20 consonantal sounds, which are presented below in a Table 1:

Table 1: Consonants in Sakachep

Manner of Articulation	Bilabial		Labiodental	Alveolar		Post-Alveolar	Palatal	Velar	Glottal
Plosive/Stop	p	b		t	d			k	ʔ
Aspirated plosive	pʰ			tʰ				kʰ	

Nasal	m		n			ŋ	
Flap			r				
Fricative			s z			ʝ	h
Affricate				ʧ			
Approximant		ʊ					
Lateral Approximant			l				

4.1.1 DESCRIPTION AND DISTRIBUTION OF CONSONANTS:

1. [p] – Voiceless Bilabial Plosive
      Initial   Medial   Final
      /pet/   'bite'   /ʋɔrpai/ 'throw'   /sip/   'full'
2. [pʰ] – Voiceless Aspirated Bilabial Stop
      Initial   Medial
      /pʰuksan/'Breath'   /kepʰa/ 'foot'
3. [b] – Voiced Bilabial Stop
      Initial   Medial
      /buɔŋ/   'fly'   /abit/ 'thick'
4. [t] – Voiceless Alveolar Stop
      Initial   Medial   Final
      /tel/   'count'   /mitin/ 'claw'   /kut/ 'hand'
5. [tʰ] – Voiceless Aspirated Alveolar Stop
      Initial   Medial
      /tʰuŋ/ 'tie'   /intʰum/ 'three'
6. [d] – Voiced Alveolar Stop
      Initial   Medial
      /dui/ 'wet'   /indai/ 'play'
7. [k] – Voiceless Velar Stop
      Initial   Medial   Final
      /kei/ 'I'   /riki/ 'horn'   /arik/ 'heavy'
8. [kʰ] – Voiceless Velar Stop
      Initial   Medial
      /kʰit/ 'tie'   /pilkʰu/ 'dust'
9. [ʔ] – Voiceless Glottal Stop
                                                  Final
                                                  /leʔ/ 'with'

10. [m] – Voiced Bilabial Nasal
      Initial   Medial   Final
      /mit/ 'eye'   /sumpʰai/'cloud'   /sam/ 'hair'
11. [n] – Voiced Alveolar Nasal
      Initial   Medial   Final
      /naipaŋ/ 'child'   /innim/ 'dirty'   /lian/ 'big'
12. [ŋ] – Voiced Velar Nasal
      Initial   Medial   Final
      /ŋa/ 'fish'   /raŋa/ 'five'   /haŋ/ 'black'
13. [r] – Voiced Alveolar Flap
      Initial   Medial   Final
      /rubut/ 'ashes'   /artui/ 'egg'   /par/ 'flower'
14. [s] – Voiceless Alveolar Fricative
      Initial   Medial
      /sip/ 'full'   /asei/ 'long'
15.[z] – Voiced Alveolar Fricative
      Initial   Medial
      /zaːn/ 'night'   /izil/ 'fog'
16. [ʝ] – Voiced Palatal Fricative
                             Medial
                             /kʰɔtiʝɔŋ/'where'
17. [h] – Voiced Glottal Fricative
      Initial   Medial
      /hai/ 'guts'   /mahin/ 'here'

18. [ʧ] – Voiceless Post- Alveolar Fricative
    Initial   Medial
    /ʧuŋa/ 'on'   /pilʧuŋ/ 'earth'
19. [ʋ] – Voiced Labiodental Approximant
    Initial   Medial   Final
    /ʋit/ 'stab'   /iʋur/ 'snow'   /pʰaiʋ/ 'wind'
20. [l] – Voiced Alveolar Labio-Dental
    Initial   Medial   Final
    /lu/ 'head'   /muluŋ/ 'heart'   /su:l/ 'grass'

4.1.2 CONTRASTIVE PAIRS OF CONSONANT:

Given below are the Contrastive pairs of Consonants in Sakachep. With the examples, illustrated below, we can determine the phonemic status of the consonants in Sakachep.

Voiceless Bilabial Plosive [p] and Voiced Bilabial Plosive [b]
    /pa:l/ 'group'   /ba:l/ 'mouth'

Voiceless Bilabial Plosive [p] and Voiceless Aspirated Bilabial Stop [pʰ]
    /pu:t/ 'try'   /pʰut/ 'begin'

Voiceless Alveolar Plosive [t] and Voiceless Aspirated Alveolar Plosive [tʰ]
    /mitin/ 'nail'   /mitʰin/ 'liver'

Voiced Alveolar Nasal [n]versus Voiced Velar Nasal [ŋ]
    /na/ 'leaf'   /ŋa/ 'fish'

Voiceless Alveolar Plosive [t] versus Voiced Alveolar Plosive [d]
    /tui`/ 'water'   /dui/ 'wet'

Voiceless Velar Stop [k] and Voiceless Aspirated Velar Stop [kʰ]
    /ka/ 'my'   /kʰa/ 'bitter'

Voiceless Alveolar Fricative [s] and Voiced Alveolar Fricative [z]
    /sa:/ 'animal'   /za:/ 'respect'

Voiceless Alveolar Fricative [s] versus Voiceless Glottal Fricative [h]
    /sa/ 'meat'   /ha/ 'tooth'

Voiced Alveolar Lateral [l] versus Voiced Alveolar Flap [r]
    /lu/ 'head'   /ru/ 'bone'
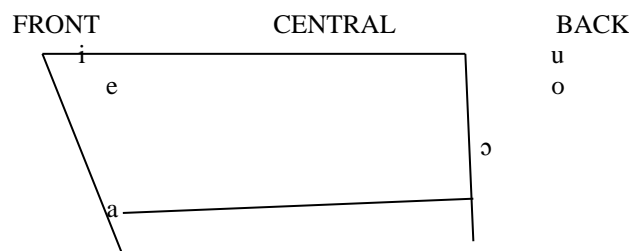
Voiced Bilabial Nasal [m] versus Voiced Alveolar Nasal [n]
    /mu/ 'see'   /nu/ 'mother'

Voiceless Alveolar Plosive [t] versus Voiced Alveolar Nasal [n]
    /ta:m/ 'many'   /na:m/ 'push'

4.2 VOWELS:

Sakachep has 9 vowel sounds, which are presented below in the Vowel chart:

4.2.1 DESCRIPTION AND DISTRIBUTION OF VOWELS:

1. [i] – High Front Unrounded
    Initial   Medial   Final
    /iʋur/ 'snow'   /minli/ 'four'   /misi/ 'salt'
2. [i:] – Long High Front Unrounded
                               Medial
                               /aitʰi:ŋ/ 'ginger'
3. [e] – Mid High Front Unrounded
                               Medial   Final
                               /sen/ 'red'   /male/ 'and'
4. [o] – Mid High Back Rounded
                               Medial   Final
                               /inmok/ 'bark'   /tumo/ 'who'
5. [ɔ] – Mid Low Back Rounded
                               Medial

/bɔŋ/ 'short'

6. [a] – Low Front Unrounded

Initial	Medial	Final
/asei/ 'long'	/mahin/ 'here'	/ŋa/ 'fish'

7. [a:] – Long Low Front Unrounded

Initial	Medial	Final
/a:lah/ 'far'	/za:n/ 'night'	/tʰa:/ 'moon'

8. [u] – High Back Rounded

Initial	Medial	Final
/ui/ 'dog'	/sun/ 'day'	/pilkʰu/ 'dust'

9. [u:] – Long High Back Rounded

Medial
/su:l/ 'grass'

4.2.2 VOWEL CONTRASTIVE PAIRS:

The vowel sounds which have Contrastive pairs are considered as Phonemic Vowels.

/o/	vs	/a/
/som/ 'ten'		/sam/ 'hair'
/u/	vs	/a:/
/lum/ 'warm'		/la:m/ 'dance'
/a/	vs	/e/
/kai/ 'pull'		/kei/ 'I'
/u:/	vs	/a/
/u:l/ 'rope'		/al/ 'far'
/i/	vs	/o/
/adik/ 'weak'		/adok/ 'correct'
/o/	vs	/u/
/asaloitʰopul/ 'offender		/asaloitʰupu/ 'evildoer'

4.3 DIPHTHONGS IN SAKACHEP:

Sakachep has 6 Diphthongs.

Diphthongs chart
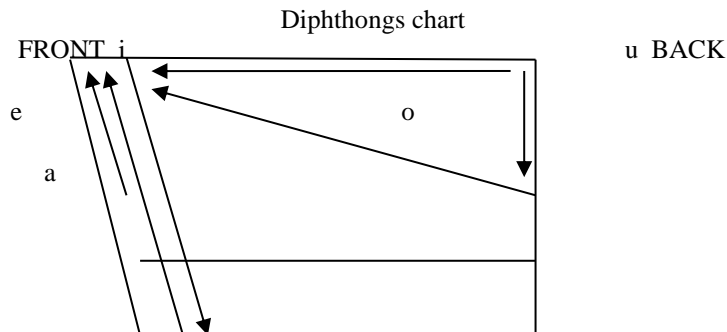
4.3.1 DISTRIBUTION OF DIPHTHONGS

1. [ei]

Initial	Medial	Final
[eini] 'we'	[meikʰu] 'smoke'	[asei] 'long'

2. [ai]

Medial	Final
[naipaŋ] 'child'	[dai/]'cold'

3. [ia]

Medial	Final
[riat] 'know'	[morsia] 'chilly'

4. [ui]

Initial	Medial	Final
[ui] 'dog'	[tuiduŋ] 'river'	[rui] 'rope'

5. [uo]

Medial	Final
[suok] 'servent'	[ruo] 'bamboo'

6. [oi]

Medial	Final
[ʋoitiaŋ] 'leftside'	[loi] 'jhum cultivation'

4.4 TONES IN SAKACHEP

Tones in Sakachep are phonemic, as different tones change the meaning of words. From the data collected three types of register tones are identified in Sakachep- high, mid and low. For my description of tone in Sakachep, I have used the diatric symbols.

1. High Tone
   tui´   'tasty'
   to´k   'knock knock'
   la:´m   'dance'
   ba´ŋ   'give up'
   tʰa´ŋ   'bad smell'
2. Mid Tone
   tūi   'egg'
   tʰāŋ   'dust'
3. Low Tone
   tui`   'water'
   to`k   'hit'
   la`m   'road'
   ba`ŋ   'wall'
   tʰa`ŋ   'famous'

The different Contrastive Tones found to be present in Sakachep are as follows,

1. High tone   vs   Mid tone   vs   Low tone
   tui´ 'tasty'   tūi 'egg'   tui` 'water'
   tʰa´ŋ'bad smell'   tʰāŋ'dust'   tʰa`ŋ'famous'
2. High tone   vs   Low tone
   to´k 'knock knock'   to`k   'hit'
   ba´ŋ 'give up'   ba`ŋ   'wall'

The data presented above shows that tone in Sakachep is phonemic. Thus, Sakachep can be classified as a tonal language.

4.5 SYLLABLE STRUCTURE:

A syllable is composed of an *onset* and a *rhyme*. A Rhyme is further divided into *nucleus* and *coda*.
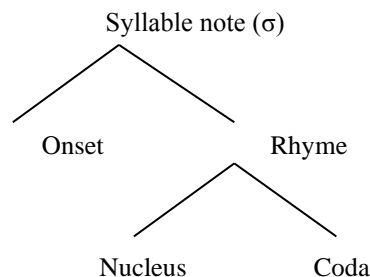

An Onset defined as a consonant or consonants preceding the Nucleus. The Nucleus is the structural place filled by consonants following the Nucleus. The Nucleus is called the peak of syllable. Rhyme is defined as the core of the syllable. It is divided into Nucleus and Coda. Onset can be optional. Coda is also optional. Rhyme is obligatory. For example in Sakachep, the syllable structure of the word /pet/ meanins 'bite', where [p] is the syllable onset, [e] is the nucleus and [t] is the coda.
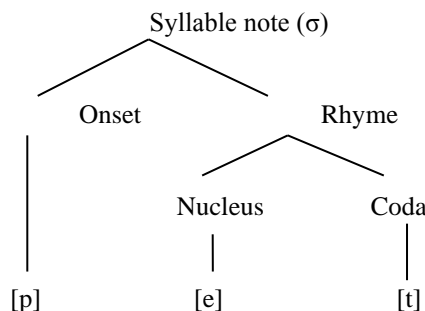

(1)OPEN SYLLABLE AND CLOSE SYLLABLE:

A coda-less syllable of the form V, CV, CCV etc. (V= vowel, C= consonant) is called an open syllable or free syllable. In other words open syllables are syllables which end in a vowel. For example in Sakachep, words like /ŋa/ meaning 'fish' is CV form where [ŋ] is the onset and [a] is the nucleus and the coda is null.

Syllable note (σ)

Onset   Rhyme

                 Nucleus

[ŋ]   [a]
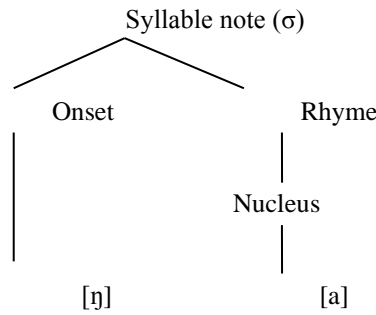
A syllable that has a coda (VC,CVC,CVCC,etc) is called a closed syllable or checked syllable or close syllables are syllables which end in a consonant. For example in Sakachep, /sun/ meaning 'day'is a close syllable of CVC form where [s] is the onset, [u] is the nucleus and [n] is the coda which is a consonant.

Syllable note

Onset   Rhyme

   Nucleus   Coda

[s]   [u]   [n]
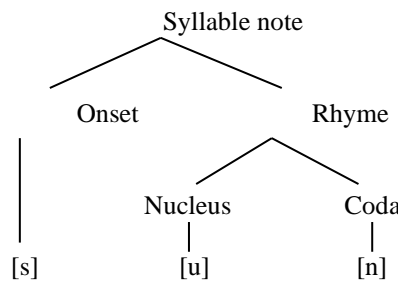
(2)LIGHT AND HEAVY SYLLABLE:

A light syllable is a syllable which consists of a short vowel or consonant, where the vowel is obligatory. A light syllable is also defined as a syllable which doesn"t have a branching rhyme. When the coda is null or empty the rhyme is considered to be non-branching. For example in Sakachep /ti/ meaning 'say' is a light syllable consisting of a consonant [t] and a vowel [i],

Syllable note (σ)

Onset   Rhyme

            Nucleus   Coda

[t]   [i]   ɸ
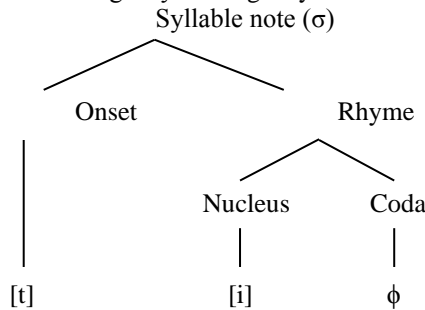
A heavy syllable is which consists of a short vowel and sequences of consonants, a long vowel and consonant, a long vowel and sequences of consonants, a diphthong and a consonant or consonants. For example in Sakachep /ui/ meaning 'dog' is a heavy syllable where the structure is,

Syllable note (σ)

Onset   Rhyme

        Nucleus   Coda

ɸ   [ui]   ɸ
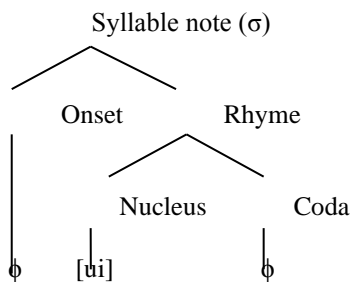
In Sakachep Monosyllablic, Disyllabic and Trisyllabic patterns ascertains that the basic order of syllable sequences is of VC, CV, CVC type.

4.5.1 TYPES OF SYLLABLE:

1.   Monosyllable
   Monosyllables can be of a CV,VC or a CVC sequence. In Sakachep CV, VC and CVC type is the most common.

/pet/	CVC	'bite'
/sun/	CVC	'day'
/zoi/	CV	'dig'
/kei/	CV	'I'
/ŋa/	CV	'fish'
/a:t/	VC	'cut'
/in/	VC	'sleep'

2. Disyllables

Disyllables are of CV-CV,CV-CVC,VC-CVC type in the language,

|		
/nene/	CV-CV	'breast
/pasal/	CV-CVC	'man'
/insuŋ/	VC-CVC	'in'
/rubut/	CV-CVC	'animal'
/lurik/	CV-CVC	'louse'
/naipaŋ/	CV-CVC	'child'

3. Trisyllables

In the case of Trisyllables, the first syllable can be of CV,VC or a CVC sequence followed by syllables of the same consonants and vowel order:

/rɔdɔkaŋ/	CV-CV-CVC	'ice'
/somleikʰat/	CVC-CV-CVC	'eleven'
/inʋanlai/	VC-CVC-CV	'sky'
/anziŋzet/	VC-CVC-CVC	'straight'

4.5.2 A SKETCH OF SAKACHEP SYLLABLE STRUCTURE:
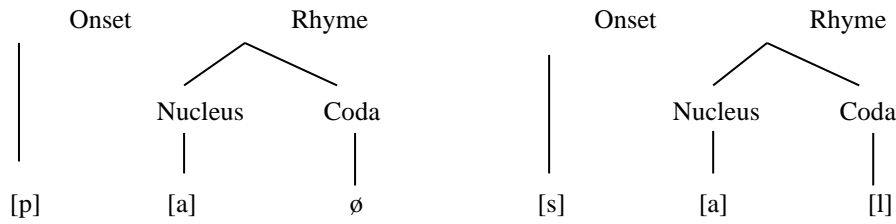
1. Monosyllabic

(i) /pa/ - CV – 'Father'

/in/ - VC - 'Sleep'
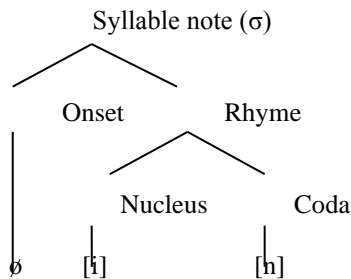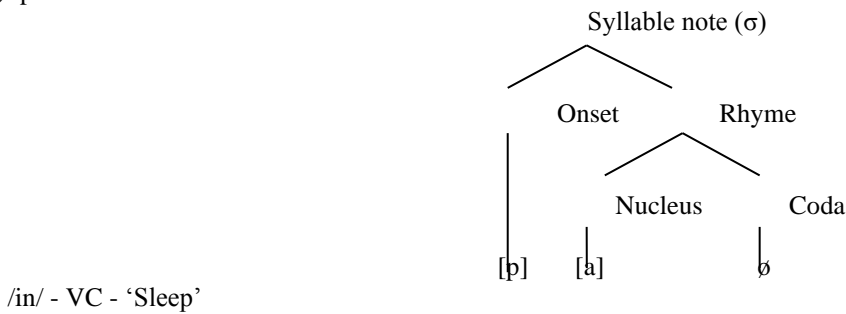
2. Disyllabic

(ii) /nene/ - CV-CV – 'Breast
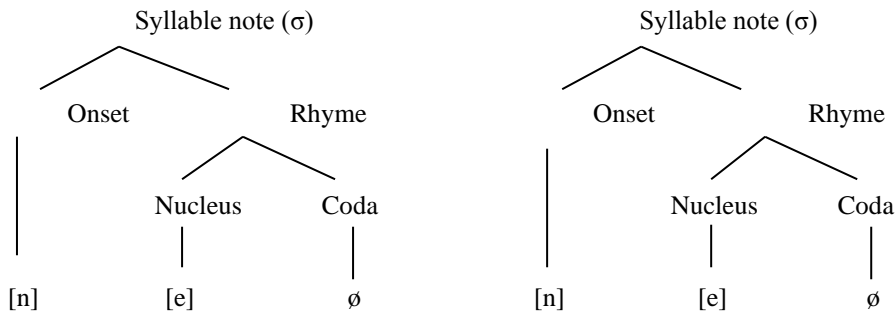
/pasal/ - CV-CVC – 'man'

```
        Onset          Rhyme                      Onset          Rhyme
          |             /    \                      |             /    \
          |        Nucleus   Coda                   |        Nucleus   Coda
          |           |        |                    |           |        |
         [p]         [a]       ø                   [s]         [a]       [l]
```

3. Trisyllabic

(iii) /rɔdɔkaŋ/ - CV-CV-CVC – 'ice'

```
   Syllabic note (σ)            Syllabic note (σ)            Syllabic note (σ)
     /        \                   /        \                   /        \
  Onset       Rhyme           Onset       Rhyme           Onset       Rhyme
    |         /    \            |         /    \            |         /    \
    |    Nucleus   Coda         |    Nucleus   Coda         |    Nucleus   Coda
    |       |        |          |       |        |          |       |        |
   [r]     [ɔ]       ø         [d]     [ɔ]       ø         [k]     [a]      [ŋ]
```

/somleikʰat/ - CVC- CV- CVC – 'eleven'

```
   Syllabic note (σ)            Syllabic note (σ)            Syllabic note (σ)
     /        \                   /        \                   /        \
  Onset       Rhyme           Onset       Rhyme           Onset       Rhyme
    |         /    \            |         /    \            |         /    \
    |    Nucleus   Coda         |    Nucleus   Coda         |    Nucleus   Coda
    |       |        |          |       |        |          |       |        |
   [s]     [o]      [m]        [l]     [ei]      ø         [kʰ]    [a]      [t]
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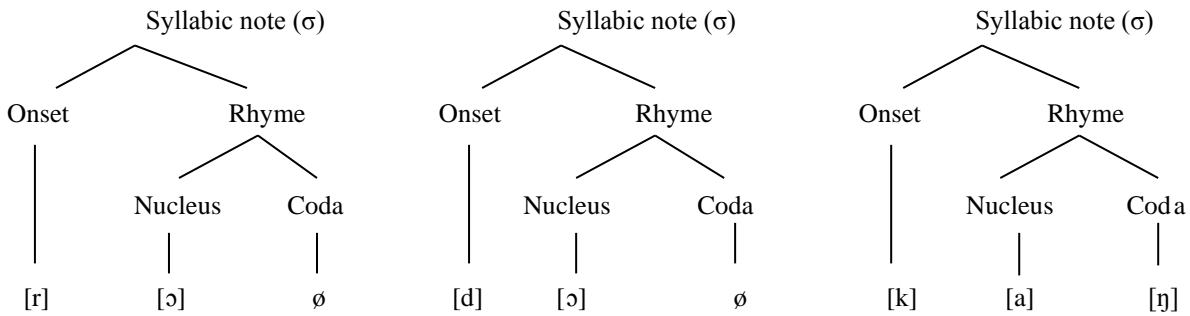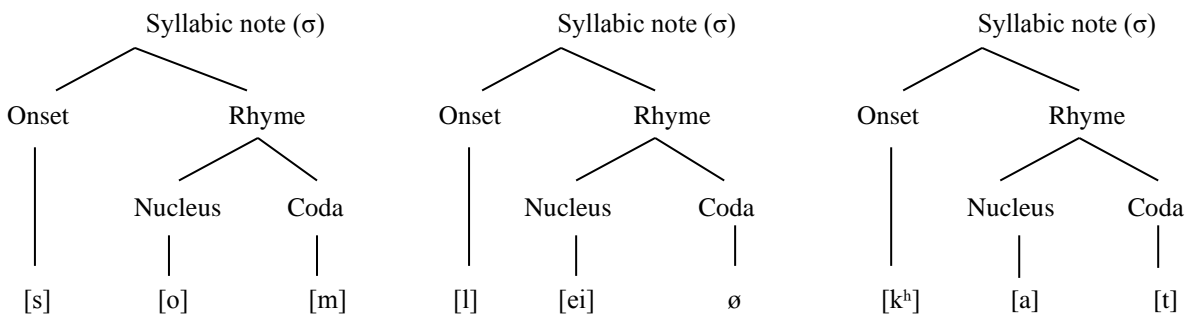
V.FINDINGS

This paper presents the overview of the Phonology of Sakachep, a language belonging to Kuki-Chin subgroup of Tibeto-Burman language family. Phonologically, Sakachep has 20 consonants : 9 stops /p, pʰ, b, t, tʰ, d, k, kʰ, ʔ/, 3 nasals [m,n,ŋ], 1 lateral [l], 1 affricate [ʧ], 4 fricative[s, z, j, h], 1 flap [r] and 1 approximant [ʋ]. Sakachep has 9 vowel sounds [i, i:, a, a:, u, u:, o,e,ɔ] and 6 diphthongs [ei, ai, ia, uo, oi, ui]. Sakachep has 6 contrastive pairs of consonant and 6 contrastive pairs of vowel. There is no voiced velar stop[g] in Sakachep language. From the data collected and analyzed, it is found that Sakachep is a tonal language and there are three types of register tones identified in the language. The tones occur in contrastive distribution. Different contrastive tones are found between high, mid and low tone and between high and low tone. In Sakachep the syllable structure ascertains that the basic order of syllable sequences is of VC, CV, CVC type. It has both light and heavy, and open and closed syllables. A word in Sakachep can be composed of monosyllabic, bisyllabic and trisyllabic structures.

VI. CONCLUSION

In this paper I have briefly surveyed the phonology of the Sakachep language. It is not to be considered as final and conclusive in any way. I believe there are much more phonological aspects that can be discovered in the language. I hope that this study would be of help to other students and research scholars interested in the phonology of the Sakachep language in particular and of Tibeto-Burman language in general.

VII. ACKNOWLEDGEMENT

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