

Phonological study of the Sonaha language¹

Anil Dutt Chaudhary

Abstract

The Sonaha is a language which is spoken in Bardiya, Kailali and Kanchanpur districts in Nepal. Sonaha language, henceforth Sonaha, was not identified by the government before the Census 2011. In spite of having its own linguistic features and originality, Sonaha is badly affected by the influence of other neighbouring languages. Keeping this in mind, this study mainly aims to explore and present the inventory of the phoneme, syllable structures and vowel sequence or, in short, to highlight the phonological system of Sonaha language. Sonaha 3404 native words were collected from fifty native speakers of Rajapur Municipality and Geruwa Rural Municipality of Bardiya district, Ghodaghodi Municipality of Kailali and Bhimdutt Municipality of Kanchanpur district. The data were presented and analyzed based on minimal pairs to verify phonemes. This study explored six vowels, twenty nine consonants, six types of syllable structures and seven vowel sequences in Sonaha.

Key words: Consonant cluster; Minimal pairs; Phoneme; Sonaha; Syllable structure

Introduction

The census of Nepal 2001 enumerated 92 living languages (spoken and signed) in use among the 103 caste and ethnic groups of the nation, whereas the census 2011 listed 123 languages in Nepal (spoken and sign). Many languages of Nepal are spoken by ethnic groups of people. Sonaha language is one of them which is spoken by Sonaha indigenous people. This is an endangered language according to the list of Language Commission Nepal. The name of the language is derived from the name of the community's tribe. The alternative name of this language is *Sonha, Sonaha, Sonahaa,*

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Sunah, Sunha (Epple, Lewis, Regmi & Yadav eds., 2012). However, the elder Sonaha people claim it as '*Sunaha*' (Sonaha, 2018). According to Ethnologue Language of the World, the ISO code of this language is 639-3 (soi). The Expanded Graded International Disruption Scale (EGIDS) status of this language is defined under 7 Level, i.e. shifting level. The EGIDS is a multi-dimensional scale which focuses on different aspects of vitality at different levels of the scale. The EGIDS level of this language is meant the people bearing generation of this ethnic group know the language well enough to use it among themselves but it is not being transmitted to their children (Epple, Lewis, Regmi & Yadav eds., 2012).

This language is mainly spoken in Daulatpur, Murgahawa, Himalipur, Chanaura, Manparipur, Sarkhol, Rajipur, Sankatti and Prasehani (Saijanatol) in Bardiya district; Bhajani, Munuwa, Gorange in Kailali district and Adali, Airi, Pipariya and Bhujela in Kanchanpur district. The population of Sonaha people has not been identified by the Census 2011. The Sonaha leaders claim that they were merged in Tharu population. The total number of Sonaha is 1172 (Sonaha, 2018). The average household (HH) sizes for Bardiya, Kailali and Kanchanpur are 5.13, 5.44 and 5.59 as per the National Population and Housing Census 2011 respectively. Thing (2014) calculated 238 Sonaha's houses in those districts. As per the average household sizes in those districts, he calculated 1249.09 as the total number of Sonaha's population. The Census 2011 only shows the total number of Sonaha mother tongue speakers, i.e. 579. However, the 60% male and 33% female of Sonaha can read and write their mother tongue (Thakur & Thakur, 2014).

There are few numbers of written documents about Sonaha regarding its genetic relationship. It has been categorized under the Indo-European family of Indo-Iranian, Indo-Aryan, Central zone (Epple, Lewis, Regmi & Yadav eds., 2012). But Eberhard, Gary & Charles (2019) have kept it under Western zone, unclassified. However, the influences of the other neighbouring languages such as Dagaura Tharu with 80% intelligibility, lexical similarity: 69% with Rana Tharu, 73% with Kathariya Tharu, 72% with Dangaura Tharu (Epple, Lewis, Regmi & Yadav eds., 2012) also proves that this language belongs to the same family of the above language. The dialect of this language is not confirmed (Epple, Lewis, Regmi & Yadav eds., 2012). Based on the survey conducted by Chaudhary, Chaudhary and Khanal (2018b) confirmed 'Bhauraihya' and 'Kanchanpurihya' as dialects of Sonaha.

Review of literature

Phonology studies the sound systems of languages (Crystal, 2008), and it is concerned with speech sounds forming patterns in a particular language (Gut, 2009). However, Carr (2013) explains it as the study of certain sorts of mental organization, not the study of human speech sounds per se. The main aim of phonology is to demonstrate the pattern of distinctive sound found in a specific language, to make as general statement as possible about the nature of the sound system of the world (Crystal, 2008), and to establish phonemes (Roach, 2013). Phoneme is a part of phonology, and viewed as the smallest unit of sound system. Roach (2013) simplified it as a number of regularly used sounds.

There have been numerous studies to investigate about the phoneme of different languages. Lohar (2008) in his study of sound system of Bhojpuri language has illustrated and analyzed consonant and vowel sounds through different perspectives. He claims that Bhojpuri language being written in Devanagari script has the alphabets almost correspond to the phonemes of Devanagari script. However, he indicated that it is difficult to separate the diphthong vowel of that language. Likewise, Chaudhary (2013) has explained 28 consonants and six vowel sounds in Saptariya Tharu language. Similarly, the joint study done on Mid-Eastern Tharu language by SIL International and Matribhasha Sewa Kendra in 12 districts in eastern parts of Nepal has proposed 30 consonants and eight vowel sounds (as cited in, Chaudhary, 2020). Both the studies have included dental consonants /t, t̪, d, d̪/ which are also found in Sonaha language. However, Boehm (2003) found that there is the absence of dental plosive series in Dangaura Tharu. He looked at the phonemic inventory, the distribution of phonemes, syllable types, stress and phonological process in this Tharu variety and concluded that there are 31 consonants, eight vowels including two diphthongs. He also found six types of syllable patterns, however, concluded that there are minimal consonant clusters in the onset, and no consonant clusters permitted in coda. Since Sonaha language is very much close to Dangaura Tharu phonologically, lexically or semantically, it seems different from Dangaurain dental phonemes. The study on “Dangaura Tharu Bhashako Varna Nirdharn” done by National Foundation for Development of Indigenous Nationalities (2020) in Dang district has proposed 30 consonants and 16 vowels in Dangaura Tharu. The proposed Dangaura Tharu aspirated breathy nasal sounds such /m̥, n̥, ñ̥/, aspirated lateral /l̥/ and aspirated trill /r̥/ are also found in Sonaha except /r̥/. Dhakal (2013) has

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determined 33 consonants such as /k, k̄, g, ḡ, ts, ts̄, dz, dz̄, t, t̄, d, d̄, n, n̄, p, p̄, b, b̄, m, m̄, j, r, r̄, l, l̄, w, s and h/ and six vowels such as /, i, u, e, o/ in Rana Tharu language. These are the exact consonants and vowels which are also found in Sonaha language, however, the aspirated breathy sounds /m̄, n̄, r̄ and l̄/ still need to be confirmed. My study is very much similar to these studies in regarding methodology because almost all the studies have employed the use of minimal pair to determine the phonemes.

Webster (1993) claimed that Sunha (SkP) and Kathoriya (KkP) do not fit easily in any of the other subgroups of Tharu languages. Sunha shares 70 percent or greater lexical similarity with the Rana group and 72 percent or greater with the Dangora group. Both Sunha and Kathoriya seem to form bridges between the Rana and Dangaura. Similarly, Epple, Lewis, Regmi & Yadav eds. (2012) has explained that Sonaha language has 80% intelligibility with Dangaura Tharu (thl) and Awadhi (awa). It has 69% lexical similarity with Rana Tharu (thr), 73% with Kathoriya (tkt) and 72% with Dangaura Tharu.

Apart from language, the previous researches showed that there is no unanimous view regarding the origin of Sonaha. Sonaha (2000) justified how Sonaha became Sonaha from *Jalthakuri*, but the study conducted by Budha (2006) proved the confusion of their origin. Similarly Chaudhary, Chaudhary and Khanal (2019) found that Sonaha are still unknown about their generic origin, and from where and when they came to the lower Karnali river delta is a subject of study.

Likewise, seminal contributions have been made by Adhikari (2009), G.C. (2012), Thing (2014), Chaudhary (2015) and Sonaha (2018), Chaudhary, Chaudhary and Khanal (2019) to study about Sonaha's socio-cultural, educational, health and economic conditions. They have commonly concluded for preserving them as their suggestions.

Goshain (2013) compared Sonaha verbs related to harvesting and wedding ceremony with Nepali and English verb. He limited study to the comparison of morpho-syntax only. He found that the English language has less number of pre-harvesting and harvesting, pre-wedding and wedding verbs in comparison to Nepali and Sonaha, and Nepali has the largest in comparison to Sonaha and English. Thakur and Thakur (2014) surveyed the linguistic and sociolinguistic background information about the Sonaha and Khuna language. They found that all the members of Sonaha and Khuna communities are very much fluent in speaking their mother

tongues, whereas only a few literate Sonaha and Khuna speakers are good in reading and writing their languages. Sonaha language spoken in Bardiya district is very much similar to Sonaha spoken in Kanchanpur district, i.e. 76% similarity is seen between the two varieties of Sonaha lexical items. Chaudhary, Chaudhary and Khanal (2018b) collected Sonaha word preparing the ontology of different domains of language. They conducted a survey, and collected altogether 3304 words from different domains of language.

These works so far reviewed have assisted the understanding of the existing Sonaha socio-culture, origin and their features of language. However, very few works have been done regarding Sonaha and its linguistic features. Some works, though with limited data, are of descriptive types. However, no attempt has yet been made to study the phonological analysis of Sonaha from the Sonaha's area. Thus, for a detailed description in Sonaha, each domains of the language has to be further explored with more discourse data.

Methodology

This study was based on the mixed method design with cross sectional survey. Fifty Sonaha native speakers from Bardiya, Kailali and Kanchanpur districts were purposively selected. The lists of ontology from different domains of Sonaha language was prepared, and asked to the informants to collect the words as per the ontologies at the time of field observation. Some lexical items were also obtained directly from the formal and informal interviews. A list of Tharu and Nepali words was prepared and asked the Sonaha native speakers to translate those words in their language too. Some translated written texts in Sonaha language were also used to gather the words. The collected data were presented in the table and analyzed using minimal pair both phonologically and morphologically. The phonemes were verified individually and in groups.

Results and discussion

This paper mainly focuses on phonology of Sonaha. To determine its phonemes in clear concise way, morphological aspect was considered to be the base. The findings of the study are presented as follows.

Vowel phonemes

Sonaha language has six vowel phonemes. In terms of height of the tongue, there are two high vowels /i/ and /u/, two mid vowels /e/ and /o/, and two low vowels /ə/ and

/a/. Likewise, on the basis of the part of the tongue there are three front vowels /i/, /e/ and /a/, a single central vowel /ʌ/, and two back vowels /u/ and /o/. In the same way, in terms of position of the lips, there are rounded /u/ and /o/ and four unrounded vowels /i/, /e/, /ʌ/ and /a/. The high and mid vowels differ in terms of back part of the tongue: high front vowel /i/ and high back vowel /u/ and mid front vowel /e/ and mid back vowels /o/ while the low vowels /ʌ/ and front low vowel /a/ are both roughly central. The nasalization is contrastive in some places but the distribution is not even. The length feature in vowels seems to occur phonetically but not identified well. These vowels are shown in Figure 1 according to the cardinal vowel system.

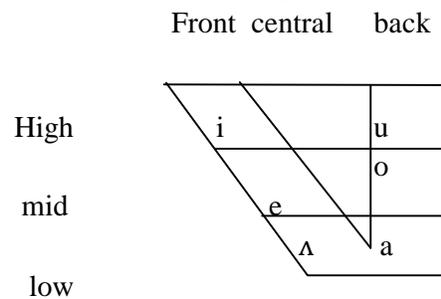


Figure 1. Sonaha cardinal vowels

Minimal pairs to determine vowel phonemes

Minimal pairs are the pairs of words, may be written and spoken, that are different in only one phonological element such as phoneme. Generally, minimal pairs of words are used to recognize the phoneme of a particular language. Some minimal pairs of Sonaha words are presented below to determine vowel.

Rounded vs rounded.

/u/ vs /o/	us-kʌina	‘to uplift clothes’
	os-kʌina	‘to turn over straw while threshing’

Rounded vs unrounded.

/u/ vs /ʌ/	ui-yã	‘a kind of grass’
	ʌi-ya	‘eep! A word used by the Sonaha women while feeling pain or surprise’
/u/ vs /i/	u-par	‘across the river’

	i-par	'in your own side of the river'
/o/ vs /e/	dz ^h o-kna	'to spread salt on curry'
	dz ^h e-lna	'to bear the problem'
/u/ vs /a/	ute	'there, that side'
	ate	'to be'
Unrounded vs unrounded.		
/a/ vs /i/	urΔi-na	'to fly'
	urΔi-ni	'the main pole of the thatched house'
/Δ/ vs /i/	Δ -gur	'grapes'
	i -guri	'fingers'
/a/ vs /e/	uhi-ma	'in that same thing'
	uhi-se	'better than him/her/that'
/e/ vs /i/	a-ge	'the east'
	a-g	'the fire'
/a/ vs /Δ/	a-dza	'grandfather, grandfather's father'
	a-dz	'today'
/e/ vs /Δ/	a-te	'to be'
	a-m	'mango'
High vs high.		
/u/ vs /i/	u-par	'across the river'
	i-par	'in your own side of the river'
Mid vs mid.		
o/ vs /e/	dz ^h o-kna	'to spread salt on curry'
	dz ^h e-lna	'to bear the problem'
Low vs low.		
/a/ vs /Δ/	a-dza	'grandfather, grandfather's father'
	a-dz	'today'
High vs mid.		
/e/ vs /i/	a-ge	'the east'
	a-gi	'the fire'
/u/ vs /o/	us-kλina	'to uplift clothes'
	os-kλina	'to turn over straw while threshing'
High vs low.		
/Δ/ vs /i/	Δ -gur	'grapes'

	i -guri	'fingers'
/a/ vs /i/	urɔi-na	'to fly'
	urɔi-ni	'the main pole of the thatched house'
/u/ vs /ʌ/	ui-yã	'a kind of grass'
	ɔi-ya	'eep! A word used by the Sonahawomenwhile feeling pain or surprise'
/u/ vs /a/	u-te	'there'
	a-te	'to be'
Mid vs low.		
/e/ vs /ʌ/	a-te	'to be'
	a-m	'mango'
/a/ vs /e/	uhi-ma	'in that same thing'
	uhi-se	'better than him/her/that'
/o/ vs /a/	kõ-ts	'love birds'
	kã-s	'a very smooth grass used to make a basket which is used for carrying things in it'

Consonant phonemes

Sonaha language has 29 consonants. They are bilabial, dental, alveolar and velar stops /p, p^h, b, b^h, t, t^h, d, d^h, t̪, t̪^h, d̪, d̪^h, k, k^h, g, g^h/; alveolar and glottal fricatives /s, h/; alveolar affricates /c, c^h, dz, dz^h/; bilabial, alveolar and velar nasals /m, n, ŋ/; alveolar lateral /l/; alveolar trill /r/ and bilabial and palatal glides /w, y/. Aspiration is contrastive in stops and affricates. Unaspirated voiceless stops and affricates have their voiced counterparts whereas aspirated voiceless stops and affricates lack their voiced counterparts. Both the alveolar fricative /s/ and glottal fricative /h/ are voiceless. And nasals, lateral, trill and glides are voiced. Some voiced aspirated consonants such as / m^h, n^h, l^h and r^h / seem to occur, but not confirmed. They are not so productive but found in a few native words such as 'guim^ha' (a kind of creeper having yellow fruit) 'pɔɔɔɔɔ^ha' (to read), 'kor^hi' (lazy) and 'p^hill^ha' (thigh). All the consonants except / m^h, n^h, l^h and r^h / are found in written system. They seem to be the allophones of /m, n, r and l/ respectively. All the consonant phonemes are presented below.

Table 1: Sonaha consonants

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Place of articulation →	Bilabial		Dental		Alveolar	Palatal	Velar	Glottal
↓ Manner of articulation	p	b	t	d	t̪ d̪		k	g
Stops	p ^h	b ^h	t ^h	d ^h	t̪ ^h d̪ ^h		k ^h	g ^h
Fricatives					s			h
Affricates					c dz			
					c ^h dz ^h			
Nasals	m				n			
	(m ^h)				(n ^h)			
Lateral					l			
					(l ^h)			
Trill					r			
					(r ^h)			
Glides (approximant)		w					y	

Minimal pair to determine consonants

Some minimal pairs of Sonaha words are presented below to confirm consonants.

Bilabial stops.

/p/ vs /p ^h /	pɹk-na	‘to be cooked’
	p ^h ɹk-na	‘to throw’
/b/ vs /b ^h /	ba-te	‘folk tales’
	b ^h at	‘rice’

Dental stops.

/t/ vs /d/ tal	dal	‘pond’
		‘cooked lentil’
/t/ vs /t ^h / tɹp-na	t ^h ɹp-na/	‘to make body warm, to bask’
		‘to extend one’s hand to receive something’
/d/ vs /d ^h /	dɹ-na	‘to give fodder to the cattle, to set’
	d ^h ɹ-na	‘to keep’

Alveolar stops

/t̪/ vs /d̪/ t̪ɹs-na	d̪es-na	‘to stick, to patch’
		‘a kind of thin blanket’
/t̪/ vs /t̪ ^h / t̪ok-ni	t̪ ^h ɹk-ni	‘a small open plain or colourful basket made of special grasses’
		‘a kind of broom made of bamboo used for combing hair’
/d̪/ vs /d̪ ^h /	d̪es-na	‘a kind of thin blanket’
	d̪ ^h es-na	‘to push’

Velar stops.

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/k/ vs /k ^h /	ki-ra k ^h i-ra	'an insect' 'a cucumber'
/k/ vs /g/kΔl-la	gul-la	'tip of the new plant'
/g/ vs /g ^h /	gΔn-na g ^h Δn-na	'testes' 'sugarcane' 'to wear'
Alveolar fricative vs glottal fricative.		
/s/ vs /h/ sΔrna	hΔr-na	'to transfer' 'to lose bet'
Alveolar affricatives		
/c/ vs /c ^h /	cu-riya c ^h u-riya	'bangles' 'a knife'
/dz/ vs /dz ^h /	dzΔr dz ^h Δr	'fever' 'placenta'
Nasals		
/m/ vs /n/	ma-na na-na	'an equal measurement of a plate' 'mother's father'
/n/ vs / /swan	swa	'gold' 'to mimic or to joke'
Alveolar trill vs lateral		
/r/ vs /l/ swar	swal	'voice' 'to glide'
Bilabial vs palatal approximants		
/w/ vs /y/	lΔt[u-wa lɔtj-ya	'dumb' 'a steel jug'

There are some sounds such as bilabial, alveolar voiced aspirated nasal /m^h, n^h/, alveolar voiced aspirated lateral /l^h/ and alveolar voiced aspirated trill /r^h/ are the residual sounds in Sonaha language. These sounds are found mostly in Tharu words but also in a few Sonaha words as well. Therefore, these sounds are either the innovations due to the influence of other languages or the residual sounds due to the process of sound change.

These sounds are illustrated below in these examples:

/n ^h /	pΔrn ^h a c ^h Δmn ^h a	'to read' 'to touch'
/r ^h /	kumr ^h a pΔr ^h Δl	'pumpkin' 'educated'
/l ^h /	p ^h ill ^h a	'thigh'

cul^{hi} ‘a small oven’
 / m^h/ guim^{ha} ‘a kind of creeper having yellow fruit’

Syllable structure

There are mainly three basic theories of syllable structure: the theory of the flat syllable, the onset-rime theory and the theory of body-coda organization. Of all these theories, the onset-rime is perhaps the most widely accepted one (Kessler & Treiman, 1997).

According to the onset-rime theory, the vowel groups with the coda to form a constituent called the rime. The rime includes an obligatory part called nucleus and an optional part known as coda. The nucleus is always occupied by the vowel or vowel sequence whereas onset and coda positions are occupied by the consonants.

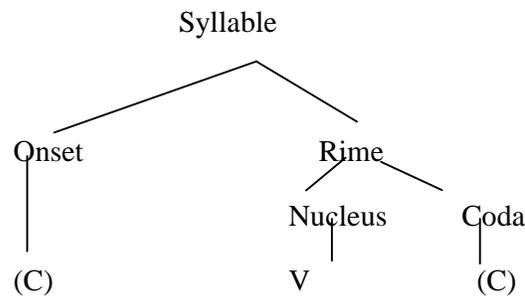


Figure 2. Onset-rime theories of syllable structure

The study revealed six types of syllable structures in Sonaha. They are V, CV, VC, CVC, CCV, and CCVC. The syllable structure and examples are illustrated in the following.

Table 2: Syllable structures

S.N	Syllables Type	Examples	
1	V	u	‘he’
2	CV	wa	‘ouch’
3	VC	ak	‘one’
4	CVC	kās	‘a kind of smooth grass used for making basket’
5	CCV	kya	‘what’
6	CCVC	k ^h wa	‘a kind of hand made bamboo instrument used for trapping fish’

Vowel sequence

When two or more different vowels appear in a row, and pronounced each one separately with a smooth glide between them is called vowel sequence. A vowel sequence may occur as monophthong and monophthong or monophthong and diphthong together in the same syllable or separating it as two syllables. They look like diphthong in nature. Vowel sequences distributed in Sonaha language are in three positions: word initial, word medial and word final. Word initial vowel sequences are Δi , Δu , ui , oi , and ai . Word medial vowel sequences are Δi , Δu , ui , oi , ai , eu , and ao . And word final vowel sequences are Δi , Δu , ui , oi , ai and eu . The example is given in the following table:

Table 3: Vowel sequences

Initial	Medial	Final
Δina 'to come'	$k^h \Delta ina$ 'to eat'	$\Delta hi \Delta i$ 'to become'
aur 'more'	$n \Delta uc^h ar$ 'the back nail of the cock which is above the finger'	$\Delta k^h i b^h \Delta u$ 'eye brow'
$uiya$ 'a kind of grass'	$fuina$ 'to be'	$tisui$ 'white and green scorpion'
$oisane$ 'therefore'	$coila$ 'bark of tree'	$foi foi$ 'ok'
$aira$ 'an ornament worn in ear'	$gaike$ 'by singing'	$osai$ 'to separate dirt from grain'
	$deuta$ 'god'	$dz^h e dz^h e$ 'an act of scolding'
	$\Delta nt^h aon$ 'fifty eight'	bau 'father'

Consonat clusters

Two or more than two consonants occurring together is known as consonant cluster. There are two types of consonant clusters in Sonaha. Only initial and medial consonant cluster are found in Sonaha. Final consonant cluster is not found in this language. The initial cluster is mainly formed by the sound /y/ and /w/ preceded by the half-conjoined consonant (*halanta*) such as k/ k^h / g/ s/ l+w/y. The medial cluster is formed by mostly doubling the same consonant sound.

Table 4: Consonant clusters

Initial consonant cluster	Medial consonant cluster
$kwan$ 'corner'	$\Delta kkais$ 'twenty one'
$kyara$ 'banana'	$\Delta ganne$ 'the day before yesterday'
$k^h wade$ 'to dig'	$i guri$ 'fingers'
$k^h yat$ 'farm'	$iskul$ 'school'
$gwar$ 'leg'	$ubdzna$ 'to germinate'
$swan$ 'gold'	$killa$ 'nail'
$syar$ 'a measurement of one kilogram'	$hagbe$ 'to stool'

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lyar 'stool of goat and sheep'

udzdzar 'white'

lwaha 'iron'

uppar 'up'

Distributions of the phonemes

If two sounds of a language replace one with other in the same phonological environment with the change in meaning, those sounds are said to be the phoneme of that language. Following the process of contrastive distribution, Sonaha phonemes have been analyzed using minimal pair in initial, medial and final positions of the words.

Distribution of vowels

The distributions of the vowels are found in initial, medial and final position. The examples are illustrated in the following table:

Table 5: Distribution of vowels

S. N	Vowe	Initial	Medial	Final
1	ʌ	aganne 'the day before yesterday'	kadzara 'eye liner'	gadz 'thunder'
2	a	ate 'to be'	gafana 'yam'	nana 'mother's father'
3	i	Imnik 'they'	kuila 'left part of burnt fire'	dai 'mother'
4	u	usisa 'pillow'	gaul 'a bird which likes to kill fish'	Knau 'main pole of the house'
5	e	eri 'heel'	paseri '2.5 kilogram'	mokane 'to me'
6	o	osne 'in this way'	gārgob^{hi} 'kohlrabi (German turnip)'	

Distribution of consonants

To confirm the consonant of Sonaha, the sounds are distributed in all the positions as mentioned below:

Table 6: Distribution of consonants

S.	Co	Initial	Medial	Final
N	nso nan t			
1	k	k Λnau ‘main pole of house’	nik Λrna ‘to take out’	ak ‘one’
2	k ^h	k^h ΛbΛfΛ ‘a type of watermelon like vegetable’	b Λkk ^h ari ‘breadbasket used for keeping grain’	q Λrk ^h a ‘arum’
3	g	g ΛlΛra ‘a kind of fish having big mouth and head’	q igΛr ‘narrow road’	q uggi ‘cutting board for meat’
4	g ^h	g^h Λnna ‘to wear’	b Λg ^h uwa ‘a tiger’	dz^h āg ^h ‘thigh’
5			b^h Λ b ^h Λusa ‘slow minded’	swa ‘to joke’
6	c	c Λkiya ‘grinder’	k^h Λrcaha ‘extravagant’	ky āc ‘the dead outer part of the snake that is changed regularly’
7	c ^h	ch^h awΛs ‘son’	p Λc ^h ela ‘a thick silver ring worn on the wrist or worn behind the main bangle’	p Λc ^h e ‘the west’
8	dz	dz Λm ‘birth’	m Λdzuri ‘work of labour’	g adz ‘thunder’
9	dz ^h	dz^h Λra ‘a basket’	m Λndz ^h Λla ‘the second brother’	g odz ^h i ‘pocket’
10	t	t Λriyā ‘a kind of thick and hollow silver ring worn round the arm’	p eτar ‘an object made by grass to keep new clothes on it’	py at ‘stomach’
11	t ^h	t^h at ^h ‘outer shell of	p Λt ^h iya ‘baby she goat’	sa t ^h ‘sixty’

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		tortoise or snail'		
12	ɖ	ɖabi 'wooden log'	sandɖaha 'bad-tempered'	landɖa 'penis'
13	ɖ ^h	ɖ^hya 'tall'	kamɖ^hanya 'slave girl'	bud^hɖ^ha 'an old man'
14	t	tadza 'fresh'	k^hatɖa 'a left part of cooked raw materials of alcohol'	bate 'folk tale'
15	t ^h	t^hariya 'plate'	pat^hara 'stone'	sokt^ha 'dried'
16	d	dariya 'small pieces of grain'	gadura 'fox'	gyadã 'a ball'
17	d ^h	d^himari 'a bamboo object used for catching fish'	band^huwa 'a dam'	sud^h 'very simple'
18	n	nah 'finger nail'	p^hanas 'the cutting part of maize plant'	Byana 'hand fan'
	n ^h			Sen^ha 'scales of fish'
19	p	patuihya 'daughter in law'	Ipar 'your own side of river'	kwãp 'a kind of measurement with palm, a folding of a hand palm'
20	p ^h	p^hatik 'clear water'	p^hup^hak 'father's sister's husband'	dzapp^he 'whenever'
21	b	ɖarau 'a part of stone and sand separated for processing gold'	gabda 'leaf of arum'	dzalebi 'redcoloured rounded juicy sweet'
22	b ^h	b^hataras 'husband'	k^hob^hri 'a small box of clay attached on the wall that is used to store grain'	pamb^hi 'transparent'
23	m	mas 'mosquito'	dzamãwa 'curd'	d^him 'slow, dim light'
	m ^h			guima 'a kind of creeper having yellow fruits'

24	y	y ri ‘a small boat’	myar ‘a small dam around the farm’	mitanya ‘girlfriend or close friend’
25	r	ridzui ‘stomach worm’	sarin ‘odor of decayed thing’	Lyār ‘stool of goat’
	r ^h		Ar^hari ‘a kind of pulse like pegeon pea’	kum^ha ‘pumpkin’
26	l	lhuri ‘smallest finger of the palm’	dzalam ‘birth’	tatal ‘hot’
	l ^h			p^hill^ha ‘thigh’
27	w	wakar ‘his’	tuwar ‘orphan’	danuwa ‘monster, gaint’
28	s	sagai ‘engagement, ceremony’	ring masugar ‘muscles part’	masaus ‘damp’
29	fi	fiay ‘yes it is’	sahad ‘honey’	Sonaha ‘Sonaha people’

The main objective of the study was to determine the phoneme of Sonaha. After analyzing the collected data, the study confirmed six vowels: / ʌ, a, i, e, u, o/, twenty nine consonants: /k, k^h, g, g^h, , c, c^h, dz, dz^h, t, t^h, d, d^h, n, p, p^h, b, b^h, m, y, r, l, w, s, fi/; four residual voiced aspirated consonants: / m^h, n^h, l^h and r^h/; six types of syllable structure: V, CV, VC, CVC, CCV, CCVC, and seven types of vowel sequences: /ai, au, ui, oi, ai,eu, ao /in Sonaha. The distribution of the consonants is also even like that of the vowels. All the consonants excluding residual and / / sounds are found in the word initial, word medial and word final position, but the medial position of the distribution is not even. The consonant cluster within the syllable occurs only in the onset of the syllable. Basic syllable structure in Sonaha language is (C) (C) V (C), i.e. (C²VC). The vowel sequence is found in all the position of the word.

Conclusion and implications

Basing the data analysis on minimal pairs of vowels, consonants, their distributions and the syllable structure, the study determined six vowels and 29 consonants, six

types of syllable structures, and seven types of vowel sequences. The findings drawn from fifty native speakers data are valid since the population of target native speakers is less, i.e. 1172. The use of interviews, field observations, questionnaires and FGD for collecting data drew the actual informations. The study was not based on any hypothesis, however, the findings of phonemes are correspondent to its neighbouring language such as Rana and Dangaura Tharu. The study was limited only in three districts and only fifty native speakers were sampled as population. It has focused only phonological aspects of this language.

Many studies have been done regarding Sonaha socio-culture, economic condition, health, education and language. Since no any studies about Sonaha phoneme and phonology have been done, this study will be the foundation for the Sonaha language researchers or text book writers. The findings are applicable as per the policy of government regarding mother tongue multilingual education, this study will play a vital role in designing the local language curriculum, and writing text books in Sonaha language. However, the findings of my study has limits. The depth study about some other linguistic aspects of this language is still required.

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