

Making Phonemic Inventories of Nepali Mother Tongues and its Implications to English Language Teaching: A Case of Dungmali

Nirajan Rai

Abstract

This article presents the idea why phonemic systems of students' mother tongues should be studied while teaching English? As Nepal is a rich country in terms of linguistic diversity, students having different linguistic backgrounds attend the English language classrooms every day. However, their perception of learning English language is different to each. They think English is very hard, talent one only masters it. Teachers also are not aware on vast distinctions of sound systems of students' mother tongues with English that affects language learning hugely. This gap is one of the major issues of English language teaching in Nepal. This paper attempts to analyze this issue by making phonemic inventory of one of the Nepali mother tongues of Nepal; Dungmali. It emphasizes the importance of phonemic inventories with reasons in reference to English Language Teaching.

Keywords: ELT, language learning, phonemic inventory, mother tongues, vowels and consonants.

Background

Phonemic inventory is the set of phonemes of a language. Languages among the single family also have different number of phonemes. This variation shows the unique phonological system of all languages. That is to say, students having different linguistic backgrounds have different perception on English sounds in the classroom. The teacher should be acquainted with the knowledge of varies of phonemic systems of Nepali mother tongues. Moreover, Phonemic inventory of a student's mother tongue must be a prerequisite to carry out mother tongue-based education, to teach second language or English language teaching (ELT). Through this, a teacher discovers the areas of problem and cause of errors a student makes in reading and writing. The formula of phonemic inventory first, helps to diagnose and overcome problems of learning in student's perception on learning sounds of another language. This article has put an effort to present stepwise procedures to build phonemic inventory of a language with the reference of Dungmali; an endangered Kirati language spoken in Dungma Bhojpur, eastern Nepal. Then, it relates the outcome to ELT in Nepalese context.

Language is a purely human (Sapir, 1921) property that distinguishes man from the animal. It has been a powerful tool from which humans have achieved this era through imagination, interaction and collaboration. Language is a vehicle to transfer knowledge, cultures, facts, ideas and beliefs between people across the world. The power of language has been felt high till the date. Being a global language, English is learned and taught every corner of the world today. Though, learning different languages enhance students' horizon of sight, it is always influenced by one's mother tongue. If the phonological systems between one's mother tongue and target language are more similar, learning will be easy and if the systems are less similar learning might be difficult. The one hard method to find out similarities and differences between phonological systems among languages is to make phonemic inventories through scientific reasons. This article aims to present the procedures of making phonemic inventories, methods of comparison and applications of results in ELT.

Objectives

The objectives of this article are as follows:

- to state the procedures of making phonemic inventory of a language.
- to compare the phonemic inventories of English and a one's mother tongue.
- to state the application of phonemic analysis of a mother tongue and the target language.

Research Questions

This article has following research questions:

- How to make phonemic inventory of a language?
- How to compare phonemic inventories of English and one's mother tongue?
- What are the applications of phonemic inventory of a mother tongue in ELT?

Methodology

This study is largely based on the database the researcher had built while working in the Dictionary of Dungmali language. Researcher had visited Dungma; original homeland of Dungmali people for three times, conducted a workshop to determine phonemes, compiled a dictionary, wrote a research report and published a Grammar of Dungmali. Structured and unstructured interviews, words collections and survey sheets were used in data collection. The researcher has used three references; Rai (2011), Rai (2015) and Rai (2015) for Dungmali language. The minimal pairs of the Dungmali language presented here are solely based on Dungmali Byakaran (grammar) by the researcher, Rai (2015). For English, the writer used a reference; Giegerich (1992). The writer has adopted a model for comparison for two phonemic inventories from Rai (2016).

Fundamentals of Phonemic Inventories

This section comprises three subsections, in which fundamentals of phonemic inventories are discussed. These fundamentals are phonemes, minimal pair, allophonic variation and phonetic and phonemic transcription. They provide the clear concept to build phonemic inventory of one's mother tongue.

Phoneme and Allophone

Phoneme is a smallest and meaningful sound in the speech. It cannot be further divided, and it must have an identity of unique and distinct sound unit. Predictable variants of certain segments are grouped together into a contrastive phonological unit is called a phoneme (Dobrovolsky, 1997, p.68). Allophone is varieties of realization of a single phoneme. Different allophones of a phoneme occur in different and predictable phonetic environments (Rowe and Levine, 2006, p.17). Each language has varied of phonemes; English has 20 vowels and 24 consonants, Nepali language has 11 vowels and 33 consonants, Bantawa has 6 vowels and 30 consonants (Rai & Rai 2009 p. 1-2), Lapcha language has 14 vowels and 30 consonants (Rai & Kissan 2016, p.19) etc. Languages of same family may have similar kind of phonemes, but each language has different number and varieties of phonemes; which is called phonemic system of the language. The sound /p/ and /p^h/, /k/ and /k^h/ are phonemes in Nepali but the /p^h/ and /k^h/ are the allophonic variation of /p/ and /k/ in English. We determine phonemes by employing minimal pairs for clear-cut contrast. The scientifically classified list of phonemes is called phonemic inventory or *varnamala*.

Minimal Pair

Minimal pair is the pairing of two words having similar sounds except one. In other words, we choose two words of a language, where two nearby sounds occur in identical environment. When we change or replace that different sound from another different sound of next word, the meaning is replaced. When two words such as *pat* and *bat* are identical in form except for a contrast in one phoneme, occurring in the same position, the two words are described as minimal pair (Yule, 2003, p.17). Examples of minimal pairs are as follows:

/kam/	'work'	(Nepali)
/k ^h am/	'envelope'	(Nepali)
/panma/	'to make cry'	(Bantawa)
/p ^h anma/	'to exchange'	(Bantawa)

These pairing have similar sounds except /k/ and /k^h/ in first pair and /p/ and /p^h/ in second pair. If we replace these different sounds in their pairings, the meanings they carry are diversified

or exchanged. It means these unique sounds have their own distinct phonemic value in the language. Unlikely, English has no distinct value between [k] and [k^h] as in [kæt] and [k^hæt] 'cat', [pin] and [p^hin] 'pin'. It shows /k/, /k^h/, /p/, /p^h/ in Nepali language are phonemes but allophones in English.

Phonetic and Phonemic Transcription

Phonetic transcription is the orthographic representation of a speech sound. In a language, varieties of new sounds may exist which might never be encountered earlier. A scholar should be aware to find out those sounds. These sounds are transcribed in a proper way, so they can be analyzed and manipulated manually and in a software. For this, International Phonetic Alphabet (IPA) is used. IPA is the alphabets developed by linguists in the end of the 19th century to document the human speech sounds. Firstly, all the speech sounds found in the language are transcribed. This is known as phonetic transcription and after determining the phonemes of the language, we have specific writing system based on the phonemic inventory. This is called phonemic transcription. Phonetic transcription is made with square brackets [] and phonemic transcription is done with slashes //.

Determination of phonemes

In this section, projection of sounds, identification of sounds for minimal pairs, minimal pairs for clear-cut contrast are discussed. This is the second step of making phonemic inventory after gaining the knowledge for fundamentals. In this procedure, we find the varieties of sounds and identify their pairing to make their distinct identity to set in the inventories.

Projection of Vowels

Projection is general survey of sounds in a language. Here, Dungmali sounds are surveyed on the basis of structured word collections.

Table1: Projection of vowels

<i>Vowels</i>	<i>Word</i>	<i>Meaning</i>
[i]	[d ^h igo]	Big
	[mi]	Fire
	[mirip]	Tail
	[sitɲpu]	Tree
	[imma]	to sleep
	[enma]	to hear
	[setma]	to kill

[e]	[lem]	tongue
	[saŋe]	Star
	[keŋgo]	Cold
[u]	[puk]	Belly
	[tuŋma]	to drink
	[k ^h uk{aŋ}]	Horn
	[sump ^h ak]	Leaf
	[luŋma]	Liver
[o]	[kot ^o o]	Dog
	[t ^h ikko]	Black
	[igo]	This
	[mo]	That
	[omgo]	White
[a]	[lap]	feather
	[{ama]	to come
	[nabuk]	Nose
	[lam]	Road
	[sago]	Who
[ʌ]	[hʌna]	You
	[ʌnkan]	We
	[bʌd{b ^h e]	Many
	[mʌk]	Eye
	[hʌkma]	Warm
[i]	[k ^h ikma]	to bite
	[niŋ]	Name
	[jiŋma]	to say

	[b ^h ir]	mountain
	[kiŋ]	Tooth
[i:]	[hi:k]	Two
[i]	[bi~sɔuwa]	cushion support for vessel
[u~]	[t ^{sh} ou~]	Bird
	[gu~]	hill covered by forest
	[sui~ja]	Bee
	[pʌgru~uiwa]	earth hornet
[o~]	[go~ga]	Dumb
	[t ^o gla]	group of seven stars
[e~]	[t ^{sh} e~i]	brothers
[ʌ~]	[tʌ~i]	Brain

Through this observation, there are thirteen different vowel sounds are found in Dungmali. Now, these vowels are checked out in minimal pairs in minimal pair section (3.4), whether they have the meaningful distinct value or not.

Projection of Consonants

Consonant sounds are surveyed on the basis of structured wordlists, linguistic database and corpus made for Dungmali grammar and dictionary.

Table 2: Projection of consonants

Consonant	Word	Meaning
[k]	[kʌkʌrʌkma]	Latch
	[karʌk]	Paddy
	[kinma]	to frighten
	[kokpasi]	Soybean
	[ken]	Drum
	[k ^h ʌm]	Address

[k ^h]	[k ^h anokma]	to snore
	[k ^h iwama]	Hornbill
	[k ^h uŋ[an]	Horn
[g]	[gΛuruŋ]	Guard
	[gad ^z i]	Marriage
	[gipsi]	Soybean
	[gobΛ]	Sweat
	[gurukbi]	Cucumber
[g ^h]	[g ^h ΛrΛme]	Horse
	[g ^h awa]	Crow
	[g ^h empa]	earthen vessel
	[g ^h oksu]	Caterpillar
	[g ^h oŋma]	Sow
[ŋ]	[ŋΛŋma]	to sake
	[ŋa]	Fish
	[ŋikba]	Clever
	[ŋoma]	to fry
	[ŋetment ^s e]	Short
[t ^s]	[t ^s Λu]	Water
	[t ^s ama]	to eat
	[t ^s ik ^h im]	main house
	[t ^s ukma]	to store
	[t ^s omba]	Slowly
[t ^{sh}]	[t ^{sh} Λkma]	to pinch
	[t ^{sh} akma]	to scrape
	[t ^{sh} i]	Necklace

	[t ^{sh} um]	Mortar
	[t ^{sh} enma]	to choose
[d ^z]	[d ^z ʌŋga]	sponge gourd
	[d ^z ʌluka]	taro arum
	[d ^z ʌj ^h ane]	Testicle
	[d ^z ʌrik ^h oŋloŋ]	Couple
	[d ^z ʌlʌuti]	net to trap bats
[d ^{zh}]	[d ^{zh} ʌrʌk ^h a]	Juicy
	[d ^{zh} ʌra]	All
	[d ^{zh} ʌmpʌma]	third daughter by birth
	[d ^{zh} ʌmpʌle]	third son by birth
	[d ^z ʌ[tʌrim]	the 8 th month of nepali calendar
[t]	[tʌk ^h iu]	Brain
	[tʌŋk ^h uwa]	Pond
	[tʌibu]	maternal uncle
	[tʌukwa]	wild pheasant
	[tʌenbʌŋ]	Village
[t ^h]	[t ^h ʌkma]	to kick
	[t ^h ʌbuk]	Ash
	[t ^h ʌinma]	to wake up
	[t ^h ʌima]	to throw
	[t ^h ʌogma]	to pour
[d]	[dʌksʌbu]	Rabbit
	[dʌŋk ^h ʌŋ]	Ladle
	[dʌibuŋsa]	Deer
	[dʌukt ^h i]	Pine

	[d̪orika]	main door
[d̪ʰ]	[d̪ʰʌgma]	to chop
	[d̪ʰʌmma]	to pull
	[d̪ʰihon]	River
	[d̪ʰuŋma]	to fall down
	[d̪ʰekma]	to patch
[n]	[nʌk]	Debt
	[nakʰiu]	Snot
	[nas]	Monkey
	[nintʰikʰa]	shaman's drum
	[nukma]	to rub
[p]	[pʌktʌŋwa]	Shoulder
	[pama]	to knit
	[pit]	Cow
	[pogma]	to plough
	[puwan]	Family
[pʰ]	[pʰʌnma]	to exchange
	[pʰema]	to spread
	[pʰonʰsu]	Wicker
	[pʰonma]	to excavate
	[pʰin]	safety pin
[b]	[bʌitʰi]	Axe
	[balanʰkʰa]	Window
	[bitim]	pomegranate
	[bukupe]	Arrow
	[berekwa]	Parrot

[b ^h]	[b ^h ʌguna]	small jar
	[b ^h ukma]	to bury
	[b ^h emma]	to hug
	[b ^h onma]	to make hole
	[b ^h oruk]	Hill
[m]	[mʌk]	Eye
	[madum]	Wife
	[mirip]	Tail
	[mukwa]	Quail
	[mepmʌ]	Sheep
[j]	[jʌŋk ^h ʌ]	Bed
	[jaŋma]	to castrate
	[juwari]	Fog
	[jeŋma]	to peel off
	[joŋbu]	Gourd
[r]	[rʌkma]	to roll up
	[rabma]	to catch
	[ripma]	to weave
	[rupa]	Silver
	[remma]	to erect
[l]	[lʌk ^h ʌmi]	Powerful
	[ladip]	Moon
	[lim ^h oŋ]	Plant
	[luŋmʌ]	Liver
	[leŋma]	to smear
	[wʌisi]	Chestnut

[w]	[wasuri]	Eaves
	[wasep]	Fern
	[wahuma]	to bath
	[wetma]	to hook up
[s]	[sʌkma]	to thrust
	[sitʰiwa]	tailor bird
	[suŋsen]	Jackal
	[sekpa]	bed bug
	[seŋma]	to scrutinize
[h]	[hʌklʌk]	Glance
	[hapʌk]	Boast
	[hitʰibu]	Courtyard
	[hutʰipuk]	Whistle
	[hagma]	to distribute

The data given in the table 2 shows that there are different twenty-five consonant sounds are found in the Dungmali database. In this survey of consonants, dental cluster; [t], [tʰ], [d], [dʰ] is not found. This suggests us that Dungmali phonemic system has only retroflex sounds to cover dentals too. All the identified consonants are checked in the minimal pairs to determine whether they have phonemic value or not.

3.3 Identification vowel minimal pairs

Minimal pairs are suspicious pairs of two similar words having identical environment of sounds. In this procedure, we put the pairs to check their phonemic value. Suspicious pairs of Dungmali language are as follows:

- i. High front and mid-high front [i] vs [e]
- ii. High back and mid-high back [u] vs [o]
- iii. Low back and mid low back [a] vs [ʌ]
- iv. High-mid central and low back [ə] vs [a]
- v. Front high length [i:] vs [i]
- vi. Front high nasal [i~] vs [i]

- vii. Back mid-high nasal [o~] vs [o]
- viii. Front mid-high nasal [e~] vs [e]
- ix. Back mid-low nasal [ʌ] vs [ʌ]

Minimal Pairs of Vowel Sounds

As stated in the section (3.3), now suspicious pairs of vowels can be stated as minimal pairs:

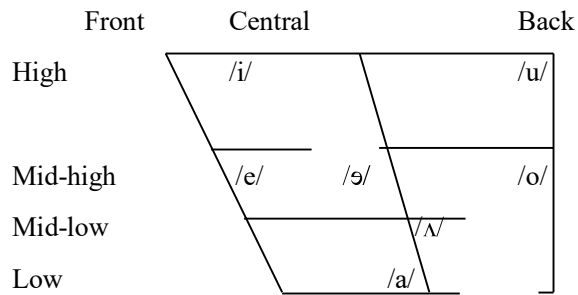
- i. [imma] 'to sleep' /i/
[emma] 'to make cool' /e/
- b. [ɸnma] 'to make fall down' /ʌ/
[anma] 'our mother' /a/
- c. [onma] 'to persuade' /o/
[unma] 'to thunder' /u/
- d. [k\ma] 'fear' /i/
[kama] 'to become satisfied' /a/

With these clear-cut minimal sets, we determine that Dungmali language has seven vowels, which are as follows:

ʌ a i e u o ə

These vowels are presented in the chart 1 below:

Chart 1: Interactive chart of vowels



Identification of Consonant Minimal Pairs

As consonant sounds are projected in (3.2), the suspicious pairs of Dungmali can be stated as follows:

Velar stops	[k] vs [k ^h] and [g] vs [g ^h]
Alveolar affricates	[t ^s] vs [t ^{sh}] and [d ^z] vs [d ^{zh}]
Retroflex stops	[ʈ] vs [ɖ] and [ɖ] vs [ɖ ^h]
Bilabial stops	[p] vs [p ^h] and [b] vs [b ^h]
Glides and Laterals	[j] vs [r] and [l] vs [w]
Nasals	[m] vs [n] vs [N]
Fricatives	[s] vs [h]
Glottal stop	[ʔ]

Minimal Pairs of Consonant Sounds

As suspicious pairs of consonants are presented in (3.5), now phonological oppositions can be stated as minimal pairs below:

i.	[koNma]	'to pierce'	/k/
	[k ^h oNma]	'hardworking person'	/k ^h /
ii.	[goNma]	'heavy weight woman'	/g/
	[g ^h oNma]	'pillow'	/g ^h /
iii.	[t ^s onma]	'to make somebody up'	/t ^s /
	[t ^{sh} onma]	'to pay'	/t ^{sh} /
iv.	[d ^z opuN]	'Chuwa flower'	/d ^z /
	[d ^{zh} opuN]	'a bunch of flowers'	/d ^{zh} /
v.	[ʈima]	'to put in'	/ʈ/
	[ʈ ^h ima]	'to throw'	/ʈ ^h /
vi.	[ɖoNma]	'to play Binayo'	/ɖ/
	[ɖ ^h oNma]	'to make afraid'	/ɖ ^h /
vii.	[pekma]	'to make something sharp'	/p/
	[p ^h ekma]	'a side of a roof'	/p ^h /

viii.	[buksa]	'porcupine'	/b/
	[b ^h uksa]	'to bury'	/b ^h /
ix.	[jaNma]	'to get castrated'	/j/
	[raNma]	'to cut down trees'	/r/
x.	[laNma]	'to make up'	/l/
	[waNma]	'to come in'	/w/
xi.	[s ∅ kma]	'to make clear'	/s/
	[h ∅ kma]	'to weigh'	/h/
xii.	[Na]	'fish'	/ŋ/
	[na]	'elder sister'	/n/
	[ma]	'woman'	/m/
xiii.	[pama]	'to disperse'	[ʔ]
	[pakma]	'to disperse'	[k]

From the clear-cut contrast of abovementioned phonological oppositions of sounds, we come to a conclusion that Dungmali language inherits 25 consonant sounds. Glottal stop [ʔ] is realized in Dungmali, but it has no contrastive pair found. It is concluded here as the different realization of the velar phoneme /k/. We determine the consonant of the language as follows:

k	k ^h	g	g ^h
t ^s	t ^{sh}	d ^z	d ^{zh}
t	t ^h	d	d ^h
p	p ^h	b	b ^h
j	r	l	w
m	n	ŋ	
s	h		

The determined phonemes are presented in the chart 2 below:

Chart 2: Interactive chart of consonants

Place of Articulation

Manner of Articulation	Bilabial	Alveolar	Retro.	Palatal	Velar	Glottal
------------------------	----------	----------	--------	---------	-------	---------

		-v	+v	-v	+v	-v	+v	-v	+v	-v	+v	-v	+v
Stops	-asp	p	b			t	d			k	g		
	+asp	p ^h	b ^h			t ^h	d ^h			k ^h	g ^h		
Affri.	-asp			t ^s	d ^z								
	+asp			t ^{sh}	d ^{zh}								
Nasal	-asp		m		n						ŋ		
	+asp												
Trill	-asp				r								
	+asp												
Frica.	-asp			S								h	
	+asp												
Lateral	-asp				l								
	+asp												
Approx.	-asp		w						j				
	+asp												

Comparison and Contrast of Two Phonemic Inventories

In this section, phonemes of two languages are compared in charts and their contrast are described subsequently. Vowels and consonants are presented in charts and their contrasting features are described in thematic division.

Comparison and contrast of vowels

In this section, vowels of the language are compared with the English vowels. They are presented in tables to overview of their similarities and differences. Then, similarities and differences are explained in thematic subtopics. Table (shows the distinction between English and Dungmali vowels based on the height of the tongue and table (is position of the tongue).

Vowel Distinctions

Dungmali language has seven vowels, while English language has fourteen vowels. All the vowels of English can be found in Dungmali. In terms of height, Dungmali has two vowels; /i/ and /u/, while English has four; /i/, /u/, /ɪ/ and /ʊ/. Vowels belongs to Dungmali in this category

are narrow sounds and different sounds of English except first two phonemes in English are broad sounds. Dungmali consists three mid-high vowels; /e/, /o/ and /ə/, where English has four; /e/, /ə/, /ɜ:/ and /o/. In this, except /ɜ:/ of English, rest of the vowels are same. The number of mid-low vowels are drastic as Dungmali has single vowel /ʌ/, while English has four ; /ɛ/, /ʌ/, /æ/, /ɔ/. The vowel /ʌ/ is like default vowel in all Kiranti languages and the rest of the vowels, found in English in this category can not be found in Dungmali and its neighbour languages. As low vowels, /a/ is default in all Kirati languages including Dungmali, the vowels /æ/ and /ɑ:/ of English is not found so far in Kiranti languages.

Chart 3: Differences of vowels in terms of hight

Hight	Dungmali	English
High	i, u	i, u, ɪ, ʊ
Mid-high	e, o, ə	e, ə, ɜ: o
Mid-low	ʌ	ɛ, ʌ, æ, ɔ
Low	A	æ, ɑ:

Chart 4: Differences of vowels in terms of position

Position	Dungmali	English
Front	i, e	i, e, ɛ, æ
Central	ə, ʌ, a	ɪ, ə, ɜ: ʌ, ʊ,
Back	u, o	u, ɔ, ɑ: o

Consonant Distinctions

In terms of place of articulation, major differences are seen in labio-dental, dental, palato-alveolar and retroflex sounds. English has two labio-dental and dental sounds each, while Dungmali lacks these vowels. Dungmali does not have palato-alveolar sounds, where English has four palato-alveolar sounds. Unlike, Dungmali inherits four retroflex sounds, English does not have this series of sounds.

Aspiration is phonemic in Dungmali but its only phonetic variation in English. All stops have got aspiration in Dungmali as it has 12 stops sounds but English has only 6 stop sounds. There is major difference in affricate sounds in two languages; Dungmali has two alveolar

affricates against two post-alveolar affricates in English. Nasal and laterals are same number and varieties in both languages. Fricatives are more in number in English than Dungmali. Dungmali has only /s/ and /h/, while English inherits 9 fricatives; /f/, /v/, /θ/, /ð/, /s/, /z/, /ʃ/, /ʒ/ and /h/.

Chart 5: Differences of consonants in terms of place of articulation

Place	Dungmali	English
Bilabial	p, p ^h , b, b ^h , m, w	p, b, m
Laio-dental		f, v
Dental		θ, ð
Alveolar	t ^s , t ^{sh} , d ^z , d ^{zh} , n, r, s, l	n, t, d, s, z, r, l
Palato-alveolar		ʃ, ʒ, tʃ, dʒ
Retroflex	ʈ, ʈ ^h , ɖ, ɖ ^h	
palatal	J	j
Velar	k, k ^h , g, g ^h , ŋ	k, g, ŋ, w
glottal	H	h

Chart 6: Differences of consonants in terms of manner of articulation

Manner	Dungmali	English
Stops	p, p ^h , b, b ^h , ʈ, ʈ ^h , ɖ, ɖ ^h , k, k ^h , g, g ^h	p, b, t, d, k, g
Affricate	t ^s , t ^{sh} , d ^z , d ^{zh}	tʃ, dʒ
Nasal	m, n, ŋ	m, n, ŋ
Trill	R	
Fricative	s, h	f, v, θ, ð, s, z, ʃ, ʒ, h
Lateral	L	l
Approximant	j, w	r, j, w

Application: Formula of Phonemic Inventory First

Phonemic inventory is systematic presentation of a language sounds system. We will be able to build phonemic inventory, when we learn the fundamentals of phonemes and its parameters to determine phonemes. As we have seen the procedures of phoneme determination in previous sections, we can determine the phonemes of any language. In Nepal, there are many undescribed languages; even they do not have phonemic inventories and writing systems. Due to the varies phonemic system with the medium of instruction, such as, Nepali and English, majority of language learners from different mother tongues have been facing problems on pronunciation, perception of sounds and even writings. For example; Dunmali people generally do not get the point of labio-dental contrast in English, because Dungali do not labio-dentals, instead they pronounce English labio-dentals as bilabials they do have in their mother tongue system. Because of English is mandatory in present day world, from the instances of Dungmali, we can apply contrastive analysis in two ways; teaching pronunciation and phonemic awareness for reading and writing.

The first challenge in English language teaching class is undoubtedly pronunciation. Phonemic systems of students' mother tongue and English are varied. Phonemic system of one's mother tongue influences English pronunciation. If there are retroflex sounds in a language, such as Newari, Magar Dhut and Dungmali, students tend to pronounce English dentals as retroflex sounds. The languages spoken in Nepal, do not have labio-dentals, it leads to students to pronounce English labio-dentals as bilabials. Aspiration is obvious in Nepalese languages having phonemic value, but it lacks in English. Students and teacher merely have thought of phonetic aspiration of English as they think aspiration is phonemic. It is difficult to pronounce palato-alveolar fricatives of English to Nepalese students. This is the reason making phonemic inventory of students' mother tongue should be carried first to diagnose the mother tongue influence in learning English. It guides teacher to find out the areas of problems students make while learning.

In Nepalese context, students are not taught what writing system is? They are compelled to follow the alpha-numeric tradition, which is taught in classrooms. Our teaching learning system never allows students to contrast the phonemic system of their mother tongue and target language. Griffith and Olson (1992, p. 522) say "Extensive research has indicated the importance of phonemic awareness as prerequisite for understanding the alphabetic principle, namely that letter stand for the sounds in spoken words. It suggests us the first thing we do in teaching and learning should be started from literacy of phonemes. Nepalese students pronounce the word 'school' as [iskul] instead of /sku:l/ and [simentʃi] instead of /si'ment/ for 'cement'. The reason behind is /sk/ and /nt/ never come in a syllable in their mother tongues. Phonemic awareness helps students to cope with syllabic falsification. Syllabic words are

thought as letters in Nepali orthography. On the other hand, Isakson, Martella and Martella (2011, p.77) suggests that educators cannot assume that all young English language learners have had similar linguistic background and hence, should not expect that a one size fits all approach will create able students.

Conclusion

We speak multiple languages in daily life. Our linguistic behavior depends upon social and field-based contexts. Though, speaker's mother tongue makes vital effect to learn target language. With the instance of phonemic system of Dungmali and its comparison to English has excavated contrastive analysis of two phonemic systems. The number of phonemes and their status, phonemes and their classified differences show the clear picture of the contrastive divisions. Being a global lingua-franca, English has become attraction of all corner and it has been a matter of dignity to master English. Students are not out of fear-boundary as they think this is a most hard subject to learn. On the other hand, guardians are rolling ahead to make their children to admit in English medium schools, so that their dream of getting good job come true. In these scenario, English language teaching learning should be reason-based; how to teach? What is coherent teaching/learning? And why it should be defined first? This research insists phonemic inventory first formula to teach mother tongue and target language.

As seen in the picture, target languages have different numbers of phonemes and their systems, they should be defined. Linguistic background of each student should be carefully observed. Distinctions make huge difference in learning, because students feel humiliate if they do not pronounce correctly or if they can not perform as required. They feel so because their feelings of hardship are fundamentally yet to discover. Phonemic inventory has key to open the door for solving this kind of problem.

Through this research, we can have three kinds of recommendations; policy related, practice related, and further research related. Government should find out the mother tongues of all along with their documentation of phonemic system, at least. In curriculum, contrastive analysis of each mother tongue with target language should be incorporated. One should go with the phonemic awareness in the classroom. Classroom activities or real teaching learning comes under practice. Classrooms should be equipped with computer labs. Students should take part the learning with the help of audio-lingual-visual technique to grab the learning correctly. Studies on contrastive analysis should be carried out to disseminate results to employ scientific methodology of language learning.

References

Dobrovolsky, M. (1997) Phonology: The Function and patterning of Sounds. *Contemporary Linguistics: An Introduction*. New York: St. Martin's Press.

- Geigerich, H.J. (1992). *English Phonology: An introduction*. New Delhi: Cambridge University Press.
- Griffith, P.L. & Olson, M.W. (1992) *Phonemic Awareness Helps Beginning Readers Break the Code*. Wiley: International Literary Association.
- Isakson, L, Martella, M. N. & Martella, R.C. (2011) Assessing the effects of the "McGraw Hill Phonemic Awareness" program with preschool Children with Developmental Delay: A Case.Study. *Education and Treatment of Children*. USA: West Virginia University Press.
- Rai, M.K. (2015). *Dungmali-Nepali-English Dictionary*. Bhojpur: Kirat Rai Dungmali Bhasa Sanskriti Samrakchhan Munch (Forum for Kirat Rai Dungmali language culture preservation).
- Rai, N. & Kissan, B. (2016) *Phonemic Inventory of Lapcha Language*. Ilam: Rong Sejum Thi.
- Rai, N. (2011). The Description of Dungmali: A case of linguistic inclusion and language endangerment. An unpublished research report submitted to Social Inclusion Research Fund, SNV Secretariat.
- Rai, N. (2016) Phonemic Analysis of English Bantawa and English Sounds. M.Ed. Thesis submitted to Tribhuvan University.
- Rai, N. 'Batas' (2015). *Dungmali Byakaran* (in Nepali). Bhojpur: Kirat Rai Dungmali Bhasa Sanskriti Samrakchhan Munch (Forum for Kirat Rai Dungmali language culture preservation).
- Rai, N.K & Rai, R. (2009). *Bantawa Byakaran* (in Nepali). Pachthar: Novel Kishore Rai.
- Rowe, M. B & Levine, D.P (2006) *A Concise Introduction to Linguistics*. United State of America: Pearson.
- Sapir, E. (1921) *Language: An introduction to the speech*. New York: Harcourt, Brace and Company.
- Yule, G. (2003) *The Study of Language*. United Kingdom: Cambridge University Press.