

Chapter- 3

Phonology

3.1 Consonants

Phonemes of Liangmai are organized into seven manner of articulation viz, stops, nasals, fricatives, affricate, laterals, trill and semi-vowel. There are 20 consonants, 6 vowels and 9 diphthongs. In the following sections each phoneme will be described and presented with its allophones whenever applicable, and illustrated with examples. Evidence of contrast for consonants and vowels is illustrated with minimal pairs.

3.1.1 Overview of Consonant Phonemes

The consonants found in Liangmai are – p, p^h, b, t, t^h, d, k, k^h, g, m, n, ŋ, s, z, h, ts, l, r, w and y. They are found to occur in five places of articulation – bilabial, alveolar, palatal, velar and glottal. There is distinction between aspirated and un-aspirated stops, voiced and voiceless stops. There are nine phonemic oral stops. The stops have three places of articulation, bilabial /p, p^h, b/, alveolar /t, t^h, d/, velar /k, k^h, g/. There are three nasal phonemes in Liangmai. They occur in three places of articulation, bilabial /m/, alveolar /n/, and velar /ŋ/. The nasals, /m, n, ŋ/ are also found to be unreleased [mg, ng, ŋg] when they occur in the word final position. There are two voiceless fricatives and one voiced fricatives in two places of articulation, voiceless alveolar /s/, voiced alveolar /z/ and voiceless glottal /h/. One voiceless affricate in one place of articulation: alveolar /ts/. /l/ is a voiceless, alveolar Lateral. Phoneme /r/ is a voiceless trill. There are two voiceless approximant, in place of articulation bilabial and palatal i.e. /w/ and /y/. The consonantal phonemes of Liangmai are provided in table below.

Manner of articulation		Place of Articulation									
		Bilabial		Alveolar		Palatal		Velar		Glottal	
		<i>v</i> ^l	<i>v</i> ^d	<i>v</i> ^l	<i>v</i> ^d	<i>v</i> ^l	<i>v</i> ^d	<i>v</i> ^l	<i>v</i> ^d	<i>v</i> ^l	<i>v</i> ^d
Stops	Unasp	<i>p</i>	<i>b</i>	<i>t</i>	<i>d</i>			<i>k</i>	<i>g</i>		
	Asp	<i>p^h</i>		<i>t^h</i>				<i>k^h</i>			
Nasals		<i>m</i>		<i>n</i>				<i>ŋ</i>			
Fricatives				<i>s</i>	<i>z</i>					<i>h</i>	
Affricate				<i>ts</i>							
Lateral				<i>l</i>							
Trill				<i>r</i>							
Approximants		<i>w</i>					<i>y</i>				

Table 1: The inventory of consonants phonemes

3.1.1.1 Consonants and their Allophones

Stops

The stop series occurs at three distinctive places of articulation: bilabial /p, p^h, b/, alveolar /t, t^h, d/ and velar /k, k^h, g/. There are six unaspirated stops phonemes /p, b, t, d, k and g/. And three aspirated stops /p^h, t^h, k^h/. The voiced unaspirated stops /b, d, g/ occur only word-initially. Unaspirated stops /p, t, k/ are phonetically unreleased /p̚, t̚, k̚/ when they occur word-finally.

Bilabial stops

The phonemes /p/ is a voiceless unaspirated bilabial stop. In the articulation of this sound, the lower and upper lips are in contact each other. It occurs in word-initial, medial and final position, the phoneme /p/ is a voiceless, un-aspirated, bilabial stop it has two allophone viz /p/ and [p̚]. The phoneme /p/ occurs in all position, word initially, medial and final position and the [p̚] occur elsewhere.

/più/ [più] ‘wears’

/tsapìu/ [tsapìu] ‘medicine’

/tap/ [tap̚] ‘break’

Word-finally, the phoneme /p/ is a voiceless, unreleased, unaspirated bilabial stop [p̚]

/tap/ [tap̚] ‘break’

/tsap/ [tsap̚] ‘stand’

The phoneme /p^h/ is a voiceless, aspirated, bilabial stop. The phoneme [ph] is attested in word-initial and middle position.

/p^hiù/ [p^hiù] ‘seek’

/tsap^hài/ [tsəp^hài] ‘shawl’

The phonemes /b/ is a voiced, unaspirated, bilabial stop, it occur in word-initial and medial position.

/bái/ [bái] ‘hide’

/kabún/ [kəbún] ‘snow’

Alveolar stop

The phonemes /t/ is a voiceless, unaspirated alveolar stop. It has two allophone viz /t/ and [t̚]. The phoneme /t/ occurs in word-initial and medial positions and the phoneme [t̚] occur word finally. In the articulation of this sound, the tongue is in contact with the teeth.

/tiak/ [tiak] ‘back biting’

/matip/ [mətip] ‘tight’

Word-finally, the phoneme /t/ is a voiceless, unreleased, unaspirated bilabial stop [t̚].

/kʰət/ [kʰət̚] ‘one’

/tat/ [tət̚] ‘walk’

The phonemes /tʰ/ is a voiceless, aspirated, alveolar stop. It occurs in word-initial, and medial position.

/tʰum/ [tʰum] ‘over flow’

/təthán/ [tətʰán] ‘deer’

The phonemes /d/ is a voiced, unaspirated, alveolar stop. It occurs in word-initial and medial position

/dim/ [dim] ‘cut into pieces’

/tədùì/ [tədùì] ‘water’

Velar stop

The phoneme /k/ is a voiceless, unaspirated velar stop [k].The phonemes /k/ can occur in all positions in the Liangmai word or syllable.

/kəp/ [kəp] ‘cry’

<i>/tsəkúi/</i>	[tsəkúi]	‘tiger’
<i>/təruak/</i>	[təruak]	‘bread’

Word-finally, the phoneme /k/ is a voiceless, unreleased, unaspirated velar stop [k̚].

<i>/diak/</i>	[diak̚]	‘leave behind’
<i>/hiak/</i>	[hiak̚]	‘pluck’

The phonemes /k^h/ can occur in word-initial and medial positions.

<i>/k^hən/</i>	[k ^h ən]	‘patience’
<i>/mak^hiu/</i>	[mæk ^h iu]	‘coughs’

The phonemes /g/ can occur in word-initial and medial positions.

<i>/gom/</i>	[gɔm]	‘to cover’
<i>/nagu/</i>	[nəgu]	‘yours’

Nasal

There are three nasal phonemes in Laingmai. They occur in three places of articulation, bilabial /m/, alveolar /n/, and velar /ŋ/. All the nasal phonemes occur in all the position in the language.

The phonemes /m/ is a voiced, bilabial nasal continuant [m] which is attested in word-initial and word final positions:

<i>/mərəi/</i>	[mərəi]	‘love’
<i>/tsəmèn/</i>	[tsəmèn]	‘image’
<i>/sum/</i>	[sum]	‘three’

The phonemes /n/ is attested in word-initial, medial and final-positions. It is released as voiced, alveolar nasal [n].

/naŋ/ [naŋ] ‘you’

/tsəníu/ [tsəníu] ‘snake’

/min/ [min] ‘catch’

The phonemes /ŋ/ is voiced, velar nasal continuant [ŋ] which is attested in word-initial, medial and final positions.

/ŋá/ [ŋá] ‘opening mouth’

/maŋám/ [məŋám] ‘shy’

/pìŋ/ [pìŋ] ‘afraid’

Fricatives

There are three fricatives phonemes in Liangmai, viz s, z, h. The phoneme /z/ is a voiced alveolar fricative, the fricative phonemes /s/ is the voiceless alveolar fricative and /h/ is the voiceless glottal fricative. All Fricatives occur in word initial and medial position.

The phonemes /s/ is a voiceless, alveolar fricative [s] which is attested in word-initial and medial position.

/sàŋ/ [sàŋ] ‘dry’

/kasán/ [kəsán] ‘new’

The phonemes /z/ is a voiced, alveolar fricative [z] which is attested in word-initial and medial positions.

/zu/ [zu] ‘face’

/tazài/ [təzài] ‘blood’

The phonemes /h/ is attested in word-initial and medial positions.

/hú/ [hú] ‘brave’

/kahùm/ [kəhùm] ‘pray’

Affricate

The phonemes /ts/ can occur in word-initial and in intervocalic positions. The phoneme /ts/ is realized as a voiceless alveolar, unaspirated affricate [ts].

/tsəp/ [tsəp] ‘stand’

/pətsi/ [pətsi] ‘male’

/tsiew/ [tsiew] ‘hear’

Lateral

The phonemes /l/ is a voiceless, alveolar, lateral [l] which is attested in word-initial and medial position.

/liŋ/ [liŋ] ‘plant’

/malum/ [məlum] ‘believed’

Trill

The phonemes /r/ is a voiceless, alveolar flap [r]. The phoneme /r/ is attested in word-initial and medial position.

/rao/ [rao] ‘write’

/parèn/ [pərèn] ‘old’

Approximants

Liangmai attests two semi-vowel: bilabial semi-vowel /w/ and palatal semi-vowel /y/. The phoneme /w/ is a voiced, bilabial semi-vowel [w] which is attested in word-initial, syllable-initial and medial positions:

/wàŋ/ [wàŋ] ‘come’

/pawàn/ [pəwàn] ‘time’

The phonemes /y/ is a voiced, palatal semi-vowel [y] which is attested in word-initial and medial positions:

/yeo/ [yɔ] ‘yes’

/k^htyàng/ [k^híyàng] ‘sour’

3.1.1.2 Consonant Minimal Pairs

Minimal pairs and near-minimal pairs illustrating the distinctiveness of the consonant phonemes in Liangmai are given below:

/p/ vs. /b/

/pa/ ‘he’ /pàn/ ‘kick’ /pámbo/ ‘hug’

/ba/ ‘broke’ /bàn/ ‘rice’ /bambo/

‘available’

/p/ vs. /p^h/

/pàŋbo/ ‘foolish’ /pòŋ/ ‘sink’ /piŋ/ ‘needle’

/p^hàŋbo/ ‘received’ /p^hòŋ/ ‘carry’ /p^{hi}ŋ/ ‘twist’

/t/ vs. /d/

/tab/ ‘break /tùŋbo/ ‘push’ /tàn/ ‘stick

/dab/ ‘fight’ */dùṅbo/* ‘short’ */dàṅ/* ‘classifier’

/k/ vs. /g/

/ka/ ‘white’ */kiùbo/* ‘climb up’ */kú/* ‘tall’

/ga/ ‘locative’
to’ */giùbo/* ‘to dry’ */gù/* ‘belongs to’

/k/ vs. /k^h/

/kìṅ/ ‘satisfied’ */kàṅbo/* ‘dry or bell’ */keṅbo/* ‘read’

/k^hìṅ/ ‘retreat’ */k^haṅbo/* ‘come up’ */k^heṅbo/* ‘asking’

/m/ vs. /n/

/maṅ/ ‘dream’ */mai/* ‘referred to human’ */mùn/* ‘mouth’

/naṅ/ ‘you’ */nài/* ‘with’ */nùn/* ‘weep’

/n/ vs. /ṅ/

/nam/ ‘smell’ */nau/* ‘wife’ */ban/* ‘rice’

/ṅam/ ‘win’ */ṅau/* ‘see’ */baṅ/* ‘classifier’

/m/ vs. /ṅ/

/mam/ ‘price’ */madiùbo/* ‘test’ */màùbo/* ‘wrong’

/ṅam/ ‘win’ */diùbo/* ‘far’ */ṅaùbo/* ‘see’

/s/ vs. /z/

/sibo/ ‘know’ */subo/* ‘start’ */sa/* ‘bad’

/zibo/ ‘sleep’ */zubo/* ‘pull’ */za/* ‘ok’

/s/ vs. /t/

/su/	‘starts’	/siŋ/	‘wood’	/sambo/	‘shortcut’
/tu/	‘accusative’	/tiŋ/	‘rain’	/tambo/	‘less’

/ts/ vs. /z/

/tsam/	‘taste/jump’	/tsapbo/	‘stand’	/tsámbo/	‘equal’
/zam/	‘hurt’	/zapbo/	‘hit’	/zánbo/	‘distribute’

/ts/ vs. /s/

/tsáŋ/	‘real’	/tsúm/	‘pointed’
/sáŋ/	‘dry’	/súm/	‘three’

/n/ vs. /l/

/ni/	‘pant’	/núŋ/	‘melt’	/nun/	‘weep’
/li/	‘tongue’	/lúŋ/	‘live’	/lun/	‘appearance’

/d/ vs. /l/

/dàŋbo/	‘block’	/diubo/	‘far’	/dinpad/	‘speak out’
/làŋbo/	‘cook’	/liubo/	‘buy/purchase’	/linpad/	‘pill out’

/l/ vs. /r/

/labo/	‘skinning’	/lak/	‘neg. maker’	/lùn/	‘appearance’
/rabo/	‘say/bone’	/rak/	‘opening eyes’	/rùn/	‘pour’

/p^h/ vs. /h/

/p ^h iù/	‘seek’	/p ^h uìbo/	‘look’	/p ^h ut/	‘leave’
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/hiu/ ‘moon/month’ */hùibo/* ‘cut’ */hú/* ‘brave’

/t^h/ vs. /h/

/t^hèŋ/ ‘long’ */t^hùn/* ‘stick’ */t^hai/* ‘today’

/hèŋ/ ‘red’ */hùnŋ/* ‘blow’ */hai/* ‘it/this’

/k^h/ vs. /h/

/k^hiù/ ‘wash’ */k^ha/* ‘bitter’ */k^hai/* ‘keep’

/hiu/ ‘moon/month’ */ha/* ‘nill’ */hai/* ‘it/this’

/p^h/ vs. /t^h/

/p^hiù/ ‘seek’ */p^háŋ/* ‘received’ */p^hiŋ/* ‘knitting’

/t^hiù/ ‘sing/hot’ */t^haŋ/* ‘congested’ */t^hiŋ/* ‘hold’

/t^h/ vs. /k^h/

/t^ham/ ‘tasteless’ */t^hum/* ‘over flow’ */t^hai/* ‘today’

/k^ham/ ‘stop’ */k^hum/* ‘revenge’ */k^hai/* ‘keep’

/t/ vs. /k/

/tèŋ/ ‘work’ */tìm/* ‘wet’ */tùm/* ‘push’

/kèŋ/ ‘read’ */kìm/* ‘sensitive teeth’ */kùm/* ‘coming down’

3.1.1.3 Distribution of Consonants Phonemes

All of the consonant phonemes in Liangmai take word initial and medial positions. Out of 20 consonants phonemes in Liangmai, only six phonemes can occur in all the position, the phonemes which can occur in all the position are; /p/, /t/ and /k/ in stop

series and /m/, /n/ and /ŋ/ in nasal. The phonemes which cannot occur in final position are: /p^h/, /b/, /t^h/, /d/, /ts/, /k^h/, /g/, /s/, /z/, /h/, /l/, /r/, /w/ and /y/.

phonemes	Initial	Medial	Final
p	+	+	+
p ^h	+	+	-
b	+	+	-
t	+	+	+
t ^h	+	+	-
d	+	+	-
ts	+	+	-
k	+	+	+
k ^h	+	+	-
g	+	+	-
m	+	+	+
n	+	+	+
ŋ	+	+	+
s	+	+	-
z	+	+	-
h	+	+	-

l	+	+	-
r	+	+	-
w	+	+	-
y	+	+	-

Table 2: Distribution of Consonants Phonemes

3.1.1.4 Consonant Sequence

The term consonant sequence in the present analysis refers to the combination of more than one consonant occurring across the syllable boundary. The consonants sequence of Liangmai is given below:

Stop+stop

- /-kb-/* */pəkbo/* ‘run’
- /-kg-/* */mikgiu/* ‘eye lash’
- /-kp-/* */ɲekpuì/* ‘toad’
- /-kk^h-/* */tsək^hiù/* ‘wealth’
- /-tk-/* */lətkeŋ/* ‘word’

Stop+nasal

- /-dm-/* */tədmibo/* ‘gone’
- /-tn-/* */nitnai/* ‘Sunday’
- /-tm-/* */piratmai/* ‘hair cutter’

Stop+fricatives

/-ks-/	<i>/k^haksi/</i>	‘squash’
/-kz-/	<i>/kəbbəkzan/</i>	‘pork meat’
/-tz-/	<i>/latzàn/</i>	‘judgement’
/-tč-/	<i>/lətčəp/</i>	‘promise’

Stop+lateral

/-kl-/	<i>/miklím/</i>	‘eye lid’
/-tl-/	<i>/tətlo/</i>	‘go’

Stop+tap/trill

/-dr-/	<i>/tsələdriən/</i>	‘sentence’
/-kr-/	<i>/mikremài/</i>	‘enemy’
/-pr-/	<i>/tulepra/</i>	‘rib’
/-tr-/	<i>/patra/</i>	‘to come’

Nasal+stop

/-mb-/	<i>/tsambo/</i>	‘similar’
/-mt-/	<i>/pumtan/</i>	‘strength’
/-ŋt-/	<i>/niŋtiŋ /</i>	‘knowledge’
/-ŋt ^h -/	<i>/tiŋt^hèŋ/</i>	‘forever’

Nasal+nasal

/-mn-/	<i>/zumnia/</i>	‘two inches’
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/-nm-/ /benmui/ ‘left side’

/-ɲm-/ /tiɲmik/ ‘day’

/-ɲn-/ /tiɲnu/ ‘west’

Nasal+aveolar

/-ɲts-/ /paɲtsiu/ ‘easy to break’

/-nts-/ /wantsák/ ‘time/ watch’

Nasal+fricatives

/-nz-/ /benzat/ ‘right side’

/-mh-/ /karamhiú/ ‘march’

Nasal+lateral

/-ɲl-/ /buɲlin/ ‘tumeric’

/-ml-/ /kamlen/ ‘what for’

Nasal+trill/tap

/-mr-/ /samriú/ ‘thirty’

/-ɲr-/ /tiɲrún/ ‘south’

Nasal+semi vowel

/-nw-/ /tsunwibo/ ‘happy’

 /t^hunwibo/ ‘nice to squeeze’

3.1.1.5 Consonant Clusters

Liangmai permits up to two consonants clusters in a syllable-initial and medial positions. It is observed that the consonants clusters in Liangmai are very few in number. The initial consonants clusters in Liangmai can be unaspirated voiceless stop /p/ and /k/, while the lateral and tap sound /l/ and /r/ occupy their positions as the second members of the consonant clusters. The initial occurrences of clusters in Liangmai are given below in term of reduplicated words:-

/pr-/	<i>prai ràì</i>	‘drizzling of rain’
/pl-/	<i>plik lik</i>	‘clicking/twinkling’
/kr-/	<i>kriu rìu</i>	‘sound of falling tree’
/kl-/	<i>klaŋ laŋ</i>	‘sound of ringing bell’

3.1.1.6 Germination

Germination is defined as the clustering of identical consonants adjacent to one another within a phonological word. The phonetic value of germinate consonants is discerned to be different to single consonants on the basis of clearly audible length. The consonants /p/, /t/, /b/, /k/, /m/ and /n/ are attested as germinate in Liangmai.

The consonants /p/, /t/, /b/, /k/, /m/, and /n/ are attested as germinates in Liangmai lexical items:

/-pp-/	<i>/kəppak/</i>	[kəppak]	‘to break the wood into pieces’
/-tt-/	<i>/pəttə/</i>	[pəttə]	‘stop coming out’
/-bb-/	<i>/kəbbak/</i>	[kəbbak]	‘pig’
/-kk-/	<i>/pəkakkagá/</i>	[pəkakkagá]	‘sometimes’
/-mm-/	<i>/bamme/</i>	[bamme]	‘present’

/-nn-/ /kùanniam/ [kùanniam] ‘donkey’
 /lonni:a/ [lonni:a] ‘twice’

3.2 Vowels

3.2.1 Overview of Vowel Phonemes

Liangmai has six vocalic phoneme /i, e, a, o, u and ə/. As shown in table below.

	Front	central	back
high	<i>i</i>		<i>u</i>
Mid close	<i>e</i>		<i>o</i>
mid		<i>ə</i>	
low		<i>a</i>	

Table 3: Vowels

As shown in table 3 above, Liangmai have six vocalic phonemes. There are two vowels each at the front, central and back. The vowel /i/ is a close front un-rounded and the vowel /e/ is a mid close un-rounded vowel. The two central vowel are the mid central un-rounded vowel /ə/ and the open central un-rounded vowel /a/. The two back vowel are the close back rounded vowel /u/ and the close back rounded vowel /o/.

3.2.2. Distribution of Vowel Phonemes and their Allophones

The phoneme /i/ is a short, unrounded, high front vowel [i] which is attested in word-initial, medial and final positions:

/i/ [i] ‘I’
 /lin/ [lin] ‘plant’
 /tsali/ [tsəli] ‘pot’

The phonemes /e/ is a short, mid close, unrounded, front vowel [e] which is attested in word medial and final positions:

/kɛŋ/ [kɛŋ] 'many'

/re/ [re] 'torture'

The phonemes /ə/ is a central, mid, unrounded vowel [ə] which is attested in word-initial and medial positions:

/agu/ [əgu] 'mine'

/maŋ/ [məŋ] 'dream'

The phonemes /a/ is a low, back, unrounded vowel [a] which is attested in word-initial, medial and final positions:

/arì/ [arì] 'my axe'

/tazán/ [təzán] 'name'

/tsarà/ [tsərə] 'god'

The phonemes /o/ is a mid close, back, rounded vowel [o] which is attested in word-medial and final positions:

/ròŋ/ [ròŋ] 'from among'

/dibo/ [dibo] 'big'

The phonemes /u/ is a high, back, rounded vowel [u] which is attested in word-medial and final positions:

/hún/ [hún] 'blow'

/hú/ [hú] 'brave'

3.2.3. Articulatory Description of the Vowel Phonemes

The following is the list of vowel phonemes and allophones of Liangmai along with its description.

<u>Phonemes</u>	<u>Allophone</u>	<u>Description</u>
/i/	[i]	high close front un-rounded vowel
/e/	[e]	close-mid front unrounded vowel
/ə/	[ə]	mid central unrounded vowel
/a/	[a]	low central unrounded vowel
/u/	[u]	high back rounded vowel
/o/	[o]	mid back rounded vowel

3.2.4. Vowel Contrast

This section shows the vowel contrast in Liangmai.

/i/ vs /a/	<u>Medial</u>	
	/p ^h iŋbo/	‘twin’
	/p ^h aŋbo/	‘getting’
/i/ vs/e/	<u>Medial</u>	
	/liŋ/	‘plant’
	/lèŋ/	‘for’
	<u>Final</u>	
	/pi/	‘head’

	<i>/pe/</i>	‘grandmother’
<i>/e/ vs /ə/</i>	<u>Medial</u>	
	<i>/ken/</i>	‘read’
	<i>/pən/</i>	‘kick’
	<i>/meŋ/</i>	‘foolish’
	<i>/məŋ/</i>	‘dream’
<i>/e/ vs /a/</i>	<u>Final</u>	
	<i>/ke/</i>	‘horn’
	<i>/ka/</i>	‘white’
	<i>/re/</i>	‘tortur’
	<i>/ra/</i>	‘born’
<i>/ə/ vs /a/</i>	<u>Medial</u>	
	<i>/sək/</i>	‘drink’
	<i>/sa/</i>	‘bad’
	<i>/səŋ/</i>	‘dry’
	<i>/sàŋ/</i>	‘thousand’
<i>/u/ vs /o/</i>	<u>Medial</u>	
	<i>/súm/</i>	‘three’
	<i>/sóm/</i>	‘erect’
	<u>Final</u>	

/lu/ 'buy'

/lo/ 'request'

/o/ vs /a/ Medial

/sóm/ 'erect'

/sam/ 'shortcut'

3.3 Diphthongs

The word Diphthong comes from Greek, which means 'double sound'. Finding of diphthong in Liangmai includes /ia/, /iu/, /au/, /ao/, /ou/ /ui/, /ei/, /ai/, and /oi/ respectively. Occurrence of diphthongs in word initial position is limited in Liangmai. The only diphthongs in initial position are /ui/ and /ei/. It is also to be noticed that /ui/ occur more frequently than other diphthongs in the medial and final position in the language. All the diphthongs are found in word final position in Liangmai. Diphthongs of Liangmai are show in table given below.

First vowel

	i	e	a	o	u
[i] 'second vowel'		ei	ai	oi	ui
[u] 'second vowel'	iu		au	ou	
[e] 'second vowel'					
[o] 'second vowel'			ao		
[a] 'second vowel'	ia				

Table 4: Diphthongs

/ei/ is the close diphthong starting from a close mid front unrounded vowel to a close front un-rounded vowel position. Diphthongs */ei/* occurs in all the positions. Examples of the off-glide */ei/* are given below.

<i>/ei/</i>	‘okay’
<i>/tsəkeihíu/</i>	‘december’
<i>/gə^hèi/</i>	‘piece of cloth to cover chest’
<i>/teikàò/</i>	‘rice container’

/ai/ is the diphthong starting from the open central un-rounded vowel to a close front un-rounded vowel position. It occurs in medial and final positions. Examples are given under.

<i>/naimik/</i>	‘sun’
<i>/bài/</i>	‘hide’

The Diphthong */oi/* started from the mid close back rounded vowel and ends in close front un-rounded vowel. This diphthong */oi/* occurs in medial and final positions.

<i>/sòibo/</i>	‘mistake’
<i>/kəlòibo/</i>	‘end’
<i>/tuhoi/</i>	‘now’

The diphthong */ui/* is a close diphthong which began with a close back un-rounded vowel and close front un-rounded vowel position. Diphthong */ui/* can occurs in all the position in Liangmai, initial, medial and final positions. The example is given below.

<i>/uilàm/</i>	‘that side/far away’
<i>/puikí/</i>	‘road’
<i>/saisúi/</i>	‘according’

/iu/ is a close diphthong started from close front un-rounded vowel and move toward the close back un-rounded vowel. Diphthong */iu/* occurs only in medial and final positions.

/^hiuniu/ ‘suffering’

/giu/ ‘to dry’

Similarly the diphthong */au/* starting from the open central un-rounded vowel and ends with a close back un-rounded vowel. Diphthong */au/* occur medial and final positions.

/masúan/ ‘long before’

/táu/ ‘sit/burn’

/ou/ is the diphthong which started from mid close back rounded position to and close front un-rounded vowel position. Diphthong */ou/* occurs in the medial and final positions. Examples are show below.

/zòubo/ ‘drop’

/dòu/ ‘meet’

/zóu/ ‘wine/liquor’

/ao/ is the diphthong which starting from the open central un-rounded vowel and ends with a close back rounded vowel. Diphthong */ao/* occurs only in medial and final positions.

/pàokakbo/ ‘answer’

/tsərào/ ‘tomb’

/ia/ open diphthong started from the close front unrounded vowel and the open central unrounded vowel. Diphthong */ia/* only occurs in medial and final positions. The occurrence of the */ia/* is show in example.

/dian/ 'closer'

/hiak/ 'pluck'

/bia/ 'sweep'

3.4 Syllable Structure

A syllable is a sequence of phonemes with one peak of sonority. The sequence can be divided into three parts, these three parts are referred to as (i) onset, the opening segment of the syllable is the onset (the consonant which begins with syllable), (ii) nucleus, the central segment of the syllable is the nucleus or peak, (iii) coda, the closing segment of the syllable is the coda. The Liangmai syllabic structure word can be described as under.

3.4.1 Monosyllabic Word

Monosyllabic words are considered to be the most common type of word found in Liangmai. In Liangmai CV and CVC patterns can be derived to different kind of words and it is considered to be in majority form. The syllable patterns of monosyllabic words in Liangmai can be illustrated as follows.

V structures in Liangmai are found to be very rare and limited; there are only a few instances of them as shown in the following examples:

/i/ 'I'

/e/ 'agree'

The CV structure are shown below:

/lu/ 'take'

/su/ 'rise'

/si/ 'know'

/wi/ 'good'

CVC structure of Liangmai are:

/sum/ 'three'

/tam/ 'less'

/pak/ 'run'

/bak/ 'break'

/bum/ 'egg'

/pek/ 'flap'

CCVC structures are also found to be very rare in Liangmai as shown in example.

/prim/ 'smell'

/klick/ 'thunder light'

CVVC structures of word are found to be lesser than CV and CVC structure:

/buàŋ/ 'crawl'

/hiak/ 'pluck'

/tsuam/ 'drum'

/kiak/ 'small pieces of glass'

3.4.2 Open Syllables and Closed Syllables

An open syllable as defined by crystal (2003: 448) is a syllable not closed by another consonant. On the other hand a closed syllable, which is also called a checked syllable by crystal (2003: 70), is a syllable that ends at a coda position with a consonant.

Open syllables

In Liangmai open syllable can be filled in by either monophthongs or diphthongs as shown in example given below.

/si/ 'know'

/su/ 'rise'

/ni/ 'slippery'

/sai/ 'death'

/sao/ 'who'

/kai/ 'hundred'

/hui/ 'cut'

/bai/ 'hide'

/lui/ 'buy'

Closed syllables

In Liangmai closed syllable can be filled in by unaspirated stop or by nasal as shown in example given below.

/kəp/ 'cry'

/tsəp/ 'stand'

/nəŋ/ 'you'

/məŋ/ 'dream'

/dun/ 'sit'

/dun/ 'short'

/pək/ 'run'

/hum/ 'sweet'

In addition to monosyllabic patterns illustrated above, Liangmai have disyllabic, trisyllabic, tetra-syllabic, pentasyllabic and hexasyllables words as shown below. Below are examples (.) marks the syllable boundary.

3.4.3 Permissible Syllabic Sequences in a Disyllabic Word

The disyllabic word is considered to be the most common type of word in Liangmai. In Liangmai it is interesting to note that most of the different word formation systems were observed with this disyllabic word-type. The following are some of the permissible syllabic sequences in disyllabic words:

V.CV	<i>/əkil/</i>	'my house'
V.CVC	<i>/əmikl/</i>	'my eye'
V.CVV	<i>/əzail/</i>	'my blood'
V.CVVC	<i>/əriakl/</i>	'book'
CV.CV	<i>/məkəl/</i>	'lazy'
CVC.CV	<i>/t^hiŋnal/</i>	'bird'
CV.CVV	<i>/tsəkui/</i>	'tiger'
CV.CVC	<i>/kətiŋ/</i>	'old age'
CVC.CCVV	<i>/k^hamprai/</i>	'beam'
CVC.CVC	<i>/tiŋkum/</i>	'year'
CV.CVVC	<i>/tsəriariŋ/</i>	'rope'

3.4.4 Permissible Syllabic Sequences in a Trisyllabic Word

In Liangmai trisyllabic words are considered to be the second most commonly used words, and they include both verbs and noun. The following are some of the permissible syllabic sequences in trisyllabic words:

V.CVC.CV	<i>/əridbo/</i>	‘heavy’
CV.CV.CV	<i>/tsəmira/</i>	‘bone’
CV.CVVC.CV	<i>/kəsienki/</i>	‘market’
CVC.CVC.CVV	<i>/kamsatbo/</i>	‘kill’
CV.CV.CVC	<i>/tsərapen/</i>	‘flower’
CV.CV.CVC	<i>/pəmənam/</i>	‘spices’
CV.CVVC.CVVC	<i>/tsəgwaŋriaŋ/</i>	‘neck’
CV.CVC.CVC	<i>/tsəbenraŋ/</i>	‘finger’
CV.CV.CVC	<i>/naimətsaŋ/</i>	‘daily’

3.4.5 Permissible Syllabic Sequences in a Tetrasyllabic Word

Tetrasyllabic words in Liangmai include adjective and numeral. The following are some of the permissible syllabic sequences in tetrasyllabic words:

CV.CVC.CV.CV	<i>/pasensabo/</i>	‘unlucky’
CV.CVC.CVC.CV	<i>/pəkakkaggə/</i>	‘sometimes’
	<i>/təzəntsənbə/</i>	‘admission’
CV.CVC.CV.CVV	<i>/pəmùnwibo/</i>	‘sharp’
CV.CVC.CV.CVC	<i>/təkumkəsan /</i>	‘new year’

CVV.CVC.CV.CVC /kai^hətzəsəm/ ‘one hundred and three’

3.4.6 Permissible Syllabic Sequences in a Pentasyllabic Word

There are few words with pentasyllabic in Liangmai. The following are some of the permissible syllabic sequences in pentasyllabic words:

CV.CV.CV.CV.CVV /tsəkɪhəbomai/ ‘homeless’

CV.CV.CVC.CV.CVV /wikətsəŋbomai/ ‘best person’

CVC.CV.CVC.CVC.CV /dɪnkətsəmpənbol/ ‘example’

CVV.CVC.CV.CV.CVV /kai^hətzəməŋju/ ‘one hundred and five’

CVV.CVC.CV.CV.CVC /kai^hətzətətsət/ ‘one hundred and eight’

3.4.7 Permissible Syllabic Sequences in a Hexasyllabic Word

Hexasyllabic words are the least commonly found in the language. The following are some of the permissible syllabic sequences in hexasyllabic words:

CV.CV.CVC.CV.CVC.CVC /kəməhinbolədkeŋ/ ‘secret word’

CVV.CV.CVV.CV.V.CVV /kaimədaizəətai/ ‘four hundred and forty’

CVC.CV.CVV.CVV.CV.CVC /wəŋməduik^haibobəm/ ‘gathering place’

3.5 Morphophonemics in Liangmai

It refers to the analysis and classification of the phonological factors which affect the appearance of morphemes, or correspondingly, the grammatical factors affect the appearance of morphemes. Burquest (2001: 81) defines morphophonemics as, “when the sounds of morphemes vary as a result of being adjoined to other morphemes, the pattern is referred to as morphophonemics”

3.5.1 Neutralisation

The phoneme /t/ and /d/, and /p/ and /b/ are separate phonemes, but both sometimes function like the allophone of the other. They are neutralisation in Liangmai when it comes in syllable final position. The distinction of voice and voiceless are neutralized at the syllable final position.

Examples:

<i>/pət/</i>	<i>/pəd/</i>	‘out’
<i>/tət/</i>	<i>/təd/</i>	‘go’
<i>/tsəp/</i>	<i>/tsəb/</i>	‘stand’
<i>/kep/</i>	<i>/keb/</i>	‘shoot’
<i>/k^hət/</i>	<i>/k^həd/</i>	‘one’
<i>/təp/</i>	<i>/təb/</i>	‘break’

3.5.2 Consonant Deletion

In Liangmai two consonants of the same quality cannot occur in two consecutive syllables, in which case the second one is drooped.

Examples

<i>/kəbak/</i>	+ <i>/ki/</i>	<i>/kəbaki/</i>	‘pig house’
pig	house		
<i>/ɲut/</i>	+ <i>/tao/</i>	<i>/ɲutao/</i>	‘enter and sit’
enter	sit		
<i>/ariak/</i>	+ <i>/ki/</i>	<i>/ariaki/</i>	‘school’

book house

3.5.3 Morphologically Conditioned Changes

/ga/ and /lam/ are the allomorphs of the same morpheme for the indication of location as well as locative case marker. But the two locative marker /ga/ and /lam/ are used in different ways, /ga/ the locative marker is used or indicates in specific place or in particular area whereas the locative marker /lam/ used in vast area.

a) *pen tǎblo ri ga bamme* 'pen is on the table'

pen table up LOC ASP

b) *i deli lam bamme* 'I am in delhi'

I delhi LOC ASP

(i) Syncope

The loss of unstressed vowels or consonant in the middle position of a word is called syncope. When the morphemes of personal pronouns are combined with the genitive marker /gu/ to form possessive pronoun, the final velar of the second personal pronoun is dropped. Thus in genitive formation the first singular personal pronoun /i/ changes into /ə/.

Examples:

/i/ 'I' /əgu/ 'my'

/nəŋ/ 'you' /nəgu/ 'yours'

(ii) Apocope

Apocope refers to the loss of a sound or sounds at the end of a word. Thus in Liangmai the last consonant of the final cluster is dropped from the borrowed words.

Examples:

/ləmp/ */ləm/* ‘lamp’

/siment/ */simen/* ‘cement’

/karent/ */karen/* ‘current’

3.5.4 Epenthesis

Epenthesis are process or change in which successive sound are separated by an intervening segment. Thus in Liangmai borrowed words are used to form an epenthesis.

Examples

/ghari/ */ghaori/* ‘watch’

/inc/ */inci/* ‘inch’

3.5.5 Elision

The process by which a vowel at the end of a word is lost or elided, and before another vowel at the beginning of a word that follows. On the other hand it is the omission of speech between syllables or words in the connected speech.

- (i) **Initial deletion:** loss of sound from the beginning of a word is called procope.

Examples:

/tsəlu/ */lu/* ‘field’

/əgu/ */gu/* ‘mine’

/tsərapen/ */rapen/* ‘flower’

- (ii) **Middle syllable deletion:** loss in the middle position of a word is called syncope.

/ləmbomai/ */ləmmai/* ‘dancer’

/əriakzonbomai/ */əriakzonmai/* ‘book seller’

- (iii) **Final syllable deletion:** loss of sound from the end of the word or syllable is called appocope.

/səŋkhət/ */səŋ/* ‘thousand’

/dətiŋ/ */də/* ‘ancient time’

3.6 Tone

Tone is a feature of the syllable. It is marked on the vowel of the syllable, which is its nucleus. As Peter Ladefoged defines “pitch patterns that affect the meanings of individual words are known as tones”. If syllables have a rising or falling pitch in comparison to the pitch level of the normal speech they are said to have a rising (high), high low or falling (low) tones respectively. The syllables whose pitch level remains constant are said to be having level tone. The combination of the pitch levels i.e., rising- falling is possible. According to K.L. Pike, tone language is “a language having lexically significant, contrastive but relative pitch on each syllable”. In other words meaning distinction between words can be made by tone in tonal languages. Tone is one of the significant features of Tibeto-Burman languages as most of the languages are tonal. Generally, meaning distinction between words is made by tones in TB languages.

The whole tone system of Liangmai can be classified into three tones as High /^h/, mid tone is unmarked and Low /^l/ as below:

3.6.1 Tone System

High

<i>/tsəri/</i>	‘war’	<i>/kám/</i>	‘make/do’	<i>/tán/</i>	‘strong’
<i>/əriák/</i>	‘book’	<i>/núi/</i>	‘laugh’	<i>/sán/</i>	‘new’

Mid

<i>/nuan/</i>	‘sin’	<i>/dom/</i>	‘wrāp’	<i>/wi/</i>	‘good’
<i>/matai/</i>	‘salt’	<i>/tun/</i>	‘push’	<i>/mau/</i>	‘wrong’

Low

<i>/tsəmi/</i>	‘fire’	<i>/mərə/</i>	‘play (as toy)’	<i>/nù/</i>	‘soft’
<i>/tsəgàu/</i>	‘frog’	<i>/tài/</i>	‘plaster’	<i>/məkè/</i>	‘lazy’

H

M

L

<i>/pá/</i>	‘read’	<i>/pə/</i>	‘foot print’	<i>/pà/</i>	‘he’
<i>/mərə/</i>	‘shout’	<i>/mərə/</i>	‘sick’	<i>/mərə/</i>	‘play (as toy)’
<i>/pəké/</i>	‘branch’	<i>/pake/</i>	‘horn’	<i>/pəkè/</i>	‘corner’
<i>/tsəmi/</i>	‘meat’	<i>/tsəmi/</i>	‘widow’	<i>/tsəmi/</i>	‘fire’