1 CONSONANTS AND VOWELS

1.1 Consonant and Vowel Charts

Table 1 Consonants chart in the IPA

	PLACES OF ARTICULATION				
MANNERS OF ARTICULATION	Bilabial	Alveolar	Palatal	Velar	Glottal
Plosive vl	p	t		k	ʔ
vd	b	d		g	
Fricatives		(s)	tz		h
Nasals	m	n		ŋ	
Flaps		(ɾ)			
Liquid		l			
Glide	w		j		

Table 2 Vowels chart

	FRONT	CENTRAL	BACK
CLOSE	i		u
OPEN-MID	ɛ		ɔ
OPEN		ɑ	

2. **DETERMINING THE DIFFERENT SOUNDS OR PHONEMES** (alphabets) of a language.

Two or more sounds or phonemes (written in the **International Phonetic Alphabet** or IPA) are said to be distinct when the meaning of a word changes when one sound/phoneme/alphabet is replaced with another sound/phoneme/alphabet. We check if the position in words has to do with changes in meaning or if position has nothing to do. Sounds or phonemes (alphabets) are checked for word initial position, word mid position, and word final position.

Examples:

1. /p/ vs /b/

Example:

(1) *bahul*	'fault, sin'	(5) *nablih*	'ruptured'
(2) *pahul*	'spear'	(6) *napˀlih*	'wind-swept (rice plant)'
(3) *kaltib*	'scissors'	(7) *ʔabokˀ*	'(sleeping) mat'
(4) *katˀtipˀ*	'water bug'	(8) *ʔapokˀ*	'drizzling (rain)'

Since /p/ and /b/ are constrastive in meaning in identical environments (word initial position to word final position) phoneme /p/ and phoneme /b/ can be concluded that they are distinct phonemes.

2. /d/ vs /t/

Example:

(1) *ʔipaddun*	'compare'	(5) *ʔodnan*	'hold'
(2) *ʔipatˀdun*	'allow to shelter'	(6) *ʔotˀnan*	'place on top of'
(3) *hapid*	'leaf of a certain vine'	(7) *tudukˀ*	'prick with something'
(4) *hapitˀ*	'speech'	(8) *tutukˀ*	'very close'

Since /d/ and /t/ are constrastive in meaning in identical environments (word initial position to word final position) phoneme /d/ and phoneme /t/ can be concluded that they are distinct phonemes.

Note that we only check sounds or phonemes that are very close to each other. Nearness has to do with the point of articulations in the vocal apparatus.

3. /d/ vs /l/

Example:

(1) *kadana*	'where'	(4) *lulug*	'knee'
(2) *ʔalana*	'he gets'	(5) *patal*	'to light'
(3) *dulug*	'put between gap'	(6) *patad*	'level/flat'

4. /k/ vs /g/

Example:

(1) *makan*	'food, edible'	(6) *paghing*	'pointed foot of rooster'
(2) *magan*	'drying'	(7) *takˀhing*	'a game using flat stones'
(3) *hulug*	'to give-in'	(8) *kilatˀ*	'lightning'
(4) *huluk*ˀ	'extra/excess'	(9) *gilatˀ*	'dread/ phobia'

5. /k/ vs /ʔ/ Examples:

(1) kolong	'pinch'	(3) *kakan*	'eat more'
(2) *'olong*	'nose'	(4) *ka'an*	'remove'

(5) *huluk*˺ ‘excess/extra’

(6) *hulu’* ‘my trap’

6. /m/ vs /n Examples:

(1) *madan* ‘be ready’

(2) *nadan* ‘readied’

(3) *danop*˺ ‘removing grass'

(4) *damɔt*˺ ‘weight’

(5) *banhom* ‘you borrow’

(6) *banhon* ‘to borrow’

7. /n/ vs /ŋ/ Examples:

(1) *nadan* ‘readied’

(2) *ngadan* ‘name, what?’

(3) *danop*˺ ‘removing grass’

(4) *dangom* ‘your beetle’

(5) *dalan* ‘way/path’

(6) *dalang* ‘flame’

8. /h/ vs /ʔ/ vs /ø/ Examples:

(1) *hi* ‘noun marker’

(2) ‘*i* ‘from (place)’

(3) *hinah* ‘there’

(4) ‘*inah* ‘mother (animal)’

(5) ‘*ina* ‘mother (address)’

(6) *munhu’leh* ‘loosening the soil’

(7) *mun’uleh* ‘go slowly’

(8) ‘*idoh* ‘python’

(9) ‘*idu’* ‘my spoon’

(10) ‘*idɔ* ‘red bird’

9. /w/ vs /y/ Examples:

(1) *wagid* ‘throw by hand’

(2) *yaggitˀ* ‘showy movement’

(3) *gawang* ‘young duck’

(4) g*ayang* ‘a kind of spear’

(5) *lawlaw*

‘loose’

(6) *laylay* ‘to wither’

2.2 Vowels

1. /i/ vs /ɛ/ Example:

(1) ‘*i*

‘from (place)’

(2) ‘*e*

‘go’

(3) ‘*ina*

‘mother (address)’

(4) ‘*ena*

‘he/she goes’

(5) *munˀuḻih*

‘sprain’

(6) *munˀuleh* ‘go slow’

2. /ɛ/ vs /a/ Example:

(1) ‘*umeh*

‘to go’

(2) ‘*umah*

‘kaingin/clearing’

(3) *bolheh*

‘separate/ divorce’

(4) *bolhah*

‘pocket’

3. /u/ vs /ɔ/ Examples:

(1) *kidul*

‘thunder’

(2) ‘*adol*

‘body’

(3) *hupˀhupˀ*

(6) *ʻinadoh*

ʻto suckʼ

ʻgarden in the rice

(4) *hopˀhopˀ*

fieldʼ

ʻto coverʼ

(5) ʻ*inaduh*

ʻspatulaʼ

4. /ɑ/ vs /ɔ/ Examples:

(1)

hapˀhapˀ ʻto send

ʻto awayʼ

choppʼ

(4) ʻ*itudokˀ*

(2) *hopˀhopˀ*

ʻto coverʼ ʻto writeʼ

(3)

ʻ*itudakˀ*

PROPOSED IFUGAO ALPHABETS

The Ifugao alphabets may be written in orthographic representations as the following: Aa Bb Kk Dd Ee Gg Hh Ii Ll Mm Nn NG/ng Oo Pp Tt Uu Ww Yy and glottal (‘). It may be necessary to include Rr and Ss to accommodate foreign place names, personal names as well as barrowed objects, concepts and ideas.

The glottal stop , /ʔ/ in IPA , is a consonant in the alphabet. They can be written as [**‘**] or the hyphen [**-]**. Thus words like [***haʔʔon***] can either be written as ***ha’’on*** or ***ha-on***, [***munʔulih***] can either be written as ***mun’ulih*** or ***mun-ulih***. But the use of hyphen [-] has problem in consistency when found at the end of words; word like [***bagiʔ***] could not be written as ***bagi-*** but it can be written as ***bagi’***. For consistency, it may be good to write glottal stops as [**‘**] and glottal stops appearing in word initial may be left unwritten so that [***ʔumeh***] may be written as ***umeh***.

The velar nasal , /ŋ/ in IPA, may be written as it is or it can be written as ***ng.*** But if we want Ifugao orthography to be similar with tagalong then we may have to use ***ng*** in place of /ŋ/.

The voiced palatal fricative consonant, /***tz***/ in IPA, found in Ayangan and Mayoyao (including Burnay-Boliwong) may be written in orthographic representation either be written “***ch***” or simply as “***d***”. Mayoyao written literatures wrote /***tz***/ as “***ch***” but it written simply as “***d***”, the same as the *voiced velar plosive* /***d***/ in Ayangan literatures. DepEd may decide to used “***ch***” for voiced palatal fricatives /***tz***/.

Thus words like the pronoun [***tzitza***] and [***tzotag***]in the Ayangan and Mayoyao languages may be written as “***chicha***” and “***chotag***” respectively.

The palatal glide , sometime referred to as **palatal approximant** /***j***/ in IPA, may be written in Ifugao orthographic representation as “***y***”. Words like [***joggod***] and [***lajlaj***] may be written as “***yoggod***” and “***laylay***” respectively.

Table 1 Consonants chart in proposed Ifugao Alphabets (Orthography)

	PLACES OF ARTICULATION				
MANNERS OF ARTICULATION	Bilabial	Alveolar	Palatal	Velar	Glottal
Plosive vl	p	t		k	’
vd	b	d		g	
Fricatives		(s)	ch		h
Nasals	m	n		ng	
Flaps		(r)			
Liquid		l			
Glide	w		y		

Table 2 Vowels chart in proposed Ifugao Alphabets (orthography)

	FRONT	CENTRAL	BACK
CLOSE	i		u
OPEN-MID	e		o
OPEN		a	

MORPHOPHONOLOGICAL PROCESSES

Morphophonological processes refers to the changes that occurs in words or group of words when other words or affixes are added.

2.5.1 Insertion of Palatal Glide/Approximant / y/

In cases where the roots end in front vowels; e, the e changes to ɑ when the suffix -ɑn is attached, and the approximant *y* is inserted before the suffix, and when it end in close front vowel *i, i* remain unchanged and the approximant *y* is inserted before the suffix -ɑn. In both cases suffix -ɑn changes to -on.

Example: (1) bɑleh + ɑn *bɑlehɑn* ***balehan*** 'to put up houses on'

(2) l̪il̪i + ɑn *liliyon* ***liliyon*** 'to complain on'

(3) hu'l̪e + ɑn *hu'layon* ***hu'layon*** 'to have the soil be loosened'

However, in cases where the root is a repeated syllable, ɛ remains and the approximant j is attached before the suffix -ɑn that changes to -ɔn.

Example:

(4) l̪ɛl̪ɛ + ɑn *l̪ɛl̪ɛjɔn* ***leleyon*** 'to overstretch something'

(5) ɟɛɟɛ + ɑn *ɟɛɟɛjɔn* ***gegeyon*** 'to rock the baby'

2.5.2 Insertion of Bilibial Glide (Bilibial Approximant) / w /

In cases where the roots end in back vowels; o, the o becomes ɑ when the suffix -on is attached, and the approximant w is inserted before the suffix -on, while *u* remain unchanged.

Example:

(6) ʔugo + ɑn *ʔugawon* ***ugawon*** 'to have the rain be stopped'

(7) dɑŋlo + ɑn *daŋlawon* ***danglawon*** ‘to make something slippery’

(8) hulu + ɑn *huluwon* ***huluwon*** ‘to have something be trapped’

Even in circumfix ending in -on like ʔɑ--on, and pɑ--on, the change from /e/ to /ɑ/ and the approximant /y/ is inserted; and o still changes to /ɑ/.

Example:

(9) dokˀce *ʔadokˀkayon* ***adokkayon*** ‘to have lengthen something’

(10) dokˀce *padokˀkayon* **padukkayon** ‘to cause something to be lengthened’

(11) dɑŋlo *padaŋlawon* ***padanglawon*** ‘to cause something to be slippery’

2.5.3 Dropping of phoneme / h / in final coda and phoneme / u / in clitic

In the central Ifugao dialect or language, when the possessive pronoun clitic for first person singular is ***=’u*** and the 2nd person singular suffix is ***=mu*** is attached to the root ending with a vowel or h, the possessive pronoun suffix for 1st person singular =’u has two allomorphs: [=’u] and [=’], and the possessive pronoun for 2nd person singular also has two allomorphs: [=mu] and [=m]. The final coda /h/ is dropped. In these cases, the vowel u in the suffix is dropped during affixation because it is weak.

Example:

(12) mɑtɑ+ʔu → *mataʔ* ***mata’*** ‘my eye’

mɑtɑ+mu → *matam* ***matam*** ‘your eye’

(13) bɑle+ʔu → *baleʔ* ***bale’*** ‘my house’

	bɑle+mu	→ *balem*	***balem***	'your house'
(14)	lɑmoh+ʔu	→ *lamoʔ*	***lamo'***	'my flesh'
	lɑmoh+mu	→ *lamom*	***lamom***	'your flesh'

2.5.4 Dropping of alveolar nasal / n /

Verbs ending in alveolar nasal, the final nasal drops out before the personal pronouns suffix is added. The personal pronoun suffix for 1st person singular is [='u], the 2nd person singular is [=mu]. However, when it involves a suffix that starts with a semi vowel /y/ like the 3rd person plural =yu, no change in the word it attaches to.

Example: noun/verb forms ___+ 'I' ___+ 'You (sg)' ___+ 'You (pl)'

(15)	tupigˀ/tupigon	*tupigo'*	*tupigom*	*tupigonyu*	'to stab'
(16)	hɔŋpɑl/hɔŋpɑlon	*hongbalo'*	*hongbaom*	*hongbalonyu*	'to box'
(17)	puhik/puhikon	*puhiko'*	*puhikom*	*puhikonyu*	'to break'
(18)	ʔɔgɑh/ ʔogɑhon	*ogaho'*	*ogahom*	*ogahonyu*	'to drop'
(19)	gɔlgɔl/golgolon	*golgolo'*	*golgolom*	*golgolonyu*	'to saw'

Example (18) ʔogɑh 'to drop' has free variations: *ʔogɑhon* can be oghon; *ʔogaho'* can be *ogho'*; *ʔogahom* can be o*ghom*; and *ʔogahonyu* can be o*ghonyu*.

In these cases, the vowel /*a*/ is dropped and resyllabication took place. (Resyllabication is separate topic but could not be covered here.)

However when the root or word ends with a consonant other than h, the word does not undergo any morphological change when the possessive pronouns and personal pronouns are attached.

Example:	my _____	your (sg) ___	'You (pl)___	
(20) mujuŋ	*muyung'u*	*muyungmu*	*muyungyu*	'___ forest'
(21) gɑʔudˀ	*ga'ud'u*	*ga'udmu*	*ga'udyu*	'___ shovel'

2.5.5 Dropping of phoneme / o / and/ or phoneme /n/

Words with a sibilant onset and an open-mid-back vowel /o/ coda in final syllable would be shortened when the suffix [ɑn] is added. No other reason could be found for this phenomenon except economy. Examples 22 and 23 illustrate this. Contrast these with examples 24 to 26.

Example:

noun form	verb form	__ + 'I'	__ + 'You (sg)'	__ + 'You (pl)'	
(22) dɔŋɔl	dɔŋlɔn	*donglo'*	*donglom*	*donglonyu*	'hear'
(23) pulɔh	pulhɔn	*pulho'*	*pulhom*	*pulhonyu*	' grab'
(25) gɑʔud	gɑʔudɔn	*ga'udɔ'*	*ga'udom*	*ga'udonyu*	'to shovel'
(26) gɑʔud	gɑʔudɑn	*ga'uda'*	*ga'udam*	*ga'udanyu*	'to farm'

The last two examples above show that suffix =an and =on are two different inflections. They shall be studied more in detail in later seminar.

2.5.6 Nasal assimilation processes

The process of nasal assimilation occurs very regularly in the morphophonemic processes; that is, when the affixes are attached to words.

2.5.6.1 muN-, for infinitive form

Example:

(1) muN +kɔdɔh	→ *muŋkɔdɔh*	***mungkodoh***	'to beg'
(2) muN +pɑjɔh	→ *mumpajɔh*	***mumpayoh***	'to build rice field'
(3) muN +bɑjuh	→ *mumbajuh*	***mumbayoh***	'to pound'
(4) muN +tɑnɔm	→ *muntanɔm*	***muntanom***	'to plant'
(5) muN +dɑlɔm	→ *mundalom*	***mundalom***	'to file a case'
(6) muN +kɑntɑ	→ *muŋkanta*	***mungkanta***	'to sing'
(7) muN +gɑʔud˥	→ *muŋgaʔud˥*	***mungga'ud***	'to shovel'

2.5.6.2 hin-, for one (quantifying/ quantity)

Example:

(1) hiN+hɑlub˥	→ *hinhalub˥*	***hinhalub***	'one ganta'
(2) hiN+pɑhɔn	→ *himpahɔn*	***hinpahon***	'one shoulder load'
(3) hiN+bɑŋɑ	→ *himbaŋa*	***himbanga***	'one pot-full'
(4) hiN+tɑnɔm	→ *hintanɔm*	***hinranom***	'one planting (quantity)'
(5) hiN+dɑŋɑn	→ *hindaŋan*	***hindangan***	'one palm width'
(6) hiN+kɑhun	→ *hiŋkahun*	***hingkahon***	'one box-full'

2.5.6.3 nun-, for perfective tense

Example:

(1) nun+hɑʔʔut˺ → *nunhaʔʔut˺* ***nunha''ut*** 'lied'

(2) nun+pɑlɑ → *numpala* ***numpala*** 'shoveled'

(3) nun+bɔllɑd˺ → *numbɔllad˺* ***numbollad*** 'undressed'

(4) nun+tɑnɔm → *nuntanɔm* ***nuntanom*** 'had planted'

(5) nun+dɑlɔm → *nundalɔm* ***nundalom*** 'had filed a case'

(6) nun+kɑntɑ → *nuŋkanta* ***nungkanta*** 'had sung'

(7) nun+gɑwɛh → *nuŋgawɛh* ***nunggaweh*** 'had reached for something'

2.5.6.4 pun- plus noun, would turn the noun-root into a verb with the noun as instrument/object

Example:

(1) pun+hɑpid˺ → *punhapid˺* ***punhapid*** 'to use as hapid in a betel nut'

(2) pun+pɑtɛh → *pumpatɛh* ***pumpateh*** 'to use as in killing s.t./s.o.'

(3) pun+bɑlɑh → *pumbalah* ***pumbalah*** 'to use as bullet of s.t.'

(4) pun+mɔmɑh → *pummɔmah* ***pummomah*** 'to use as momah in betel nut'

(5) pun+tɑnɔm → *puntanɔm* ***puntanom*** 'to use as planting instrument'

(6) pun+dɑluh → *pundaluh* ***pundaluh*** 'to use as cleaning instrument'

(7) pun+nɔmnɔm → *punnɔmnɔm* ***punnomnom*** 'manner of thinking'

(8) pun+kɑhuh → *puŋkahuh* ***pungkahuh*** 'to use as one's dog'

(9) pun+gɑwɛh → *puŋgawɛh* ***pungaweh*** 'to use to reach something'

(10) pun+ŋɑdɑn → *puŋŋadan* ***pungngadan*** 'to use as name'

2.5.6.5 pa- plus verb, would connect the verb to the object as instrument or patient.

Example:

(1) pa+hɑpidˀ → *panapid* ***panapid*** 'to use a leaf as hapid'

(2) pa+pɑtɛh → *pamatɛh* ***pamateh*** 'to use s.t. as killing instrument'

(3) pa+bɑlɑh → *pambalah* ***pamalah*** 'to use s.t. as bullet'

(4) pa+tɑnɔm → *pananɔm* ***pananom*** 'to use s.t. as planting material'

Metathesis

Metathesis is a morphological process whereby two or more phonemes in the root and an affix interchange their position when they are joined together. Central Ifugao language employs metathesis in some verb roots and their affixes. Consider the illustrative examples

ROOT	AFFIX	INFLECTED VERB	GLOSS

(1) ʔubun	<iNm>	ʔi**num**bun	‘sat’
(2) ʔuyuŋ	<iNm>	ʔi**num**yuŋ	'became sad'
(3) bokon	<iNm>	bi**num**kon	'slighted'
(4) baduŋ	<iNm>	bi**mm**aduŋ	‘struggled’

From the limited data we can say that; (1) when infix *iNm* is inserted into syllable of a word having a back vowel (*u* or *o*), phoneme /*m*/ of the infix and the vowel of the root metathesized; and (2) when the vowel from the root is the open-mid back rounded vowel, it is raised (changed to high back unrounded vowel /*u* /) in a morphological process called assimilation to the point of articulation of the preceding consonant /*n* /.

2.5.10 Deletion

Deletion is a morphological process whereby a phoneme or a string of phonemes in a word or strings of words are dropped whenever the environment permits. The language employs maximum deletion for purposes of economy. Single phonemes, as well as strings of phonemes are observed to be dropped. Table 2.4 below gives us examples of deletions in the language.

Table 2.4 Deletion

Words and phrases	Resulting word/phrase	Gloss
(1) *ʔala -on*	*‘alan*	‘get’
(2) *maʔʔid*	*mid*	‘non-exist’
(3) *wada hi bale*	*wadah bale (or, wah baleh)*	‘exist in the house’

(4) *wada hitu*	*wahtu*	'exist here'
(5) *wada hidi*	*wahdi*	'exist there'
(6) *ʔimme hi ʔad dalimgan*	*'immed dalimgan*	'went to PLN.dalimgan'
(7) *wada hidi hi ʔad domaŋ*	*wad domang*	'exist there across'

In (1) */ʔala -on* / is shortened by dropping /o/ of the affix –on; In (2), three phonemes from word ***maʔʔid*** 'non-exist' were dropped without any other reason except economy, ***mid*** then is a free variation. Words ending in open syllable has the tendency to atracts less important words, like demonstrative pronouns, personal pronouns, markers, and linker) to themselves, and drop strings of phonemes in the process especially vowels and weak consonants like (h, w, and ?). In (3) the words ***wada*** 'exist' and the case marker ***hi*** are merged into one word, and become ***wadah*** *(*or even ***wah****).* In (6) and (7), the process of attracting and deleting, as had happened in (3), continues to do the same process with the following words it can find. The process can be explained in a graphic representation illustrated below.

(6) ʔimme hi ✳ ʔimmeh ʔad ✳ ʔimmed dalimgan ✳ ʔimmed dalimgan

/i/ dropped out ✳ /hʔa/ dropped out ✳ (the process stopped)

There is no more possible word to attract and so the process stopped there.

Another way of illustrating the possible alternative in expressing the clause 'It is there across' to illustrate what is happening in morphophonemic process of deletion may be seen in another way. Take for example (7), it can take any the following forms and remain grammatically correct and naturally possible in the language.

(7) ***wada hidi hi ʔad domaŋ*** '(It) is there across.'
wadah did domaŋ '(It) is there across.'

wadad domaŋ	‘(It) is there across.’
wad domaŋ	‘(It) is there across.’