

SECTION

1

SOUNDS OF THE  
LANGUAGE



# ORAL CONVERSATION

## Phonology (Speech sounds of a Ghanaian language)

### INTRODUCTION

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Dear learner, you are welcome to this section which discusses the foundation of language (speech sounds). You will be introduced to the concepts of vowels and consonants of your language of study and how speech sounds are described (parametre). It will focus on where the speech sounds occur in words of a Ghanaian language. For example, where vowels and consonants can occur in a word of a Ghanaian language such as initial position, medial position, or final position of a word. Again, Dear learner you will be introduced to the distribution of vowels and consonants in their language, aiding them to form meaningful words and facilitate effective speaking and reading in the language. This section is essential for learners not only in the context of Ghanaian language studies but also to establish links with related subjects such as English and other languages. This section equips you with foundational knowledge and functional understanding of speech sounds and their role in language learning. In summary, you should be able to identify, explain, produce, and label vowel charts and consonant tables of your language of study.

#### At the end of this section, you should be able to:

1. Describe the vowels of a Ghanaian language using the right parameters (e.g., lip posture, tongue height and part of the tongue).
2. Describe the consonants of the Ghanaian language using the right parameters (e.g., voicing, place of articulation and manner of articulation).
3. Explain the distribution of vowels of the Ghanaian language (e.g., word initial, medial and final).
4. Explain the distribution of consonants of the Ghanaian language (e.g., word initial, medial and final).

### Key ideas

Production refers to the making or saying of a speech sound in language. Speech sound is a sound used in the formation of words for human communication. The production of speech sound involves obstruction which is the interruption of free flow of air during production of speech sounds. Sounds are distributed in languages and this refers to the place or position in a word where a sound can appear. Sound involves airflow which is a mass movement of air that is meant for the production of speech sounds. Another term for it is *airstream*.

## TYPES OF SPEECH SOUNDS

Speech sounds can be grouped into two main types, namely vowels and consonants. It is the combination of these two types of sounds that produces words. In other words, all words are made up of individual speech sounds. For examples, the word *pan* consists of three individual speech sounds, that is, /p/, /a/, /n/. The sound /a/ is a vowel, whereas the sounds /p/ and /n/ are consonants. In the following topics we discuss both vowels and consonants focusing on how each is produced in a Ghanaian language.

### The concept of vowel

The concept *vowel* refers as a speech sound in which production there is a little or no obstruction of the flow of air in the oral cavity. In other words, a speech sound which when being produced the air is not obstructed or it is minimally obstructed in the oral cavity is referred to as a vowel. Since in their production there is no or very little obstruction of airflow, vowels are comparatively heard louder when they are produced. Vowels are very important part of words. There cannot be a word without a vowel or vowel-like sound. This important role vowel plays in a word will later on in your second year be discussed when we are talking about the *syllable*.

### Description of vowels

Dear learner, in describing vowels of a Ghanaian language, there are certain properties we use. These properties are often termed *parametres*. Parametres simply refer to the characteristics that a vowel possesses. The main parametres used in describing vowels are the tongue height, lip posture, and part of the tongue

used during the production of the vowel sound. In addition to the three, there is a fourth parameter called advancement of the tongue root in some Ghanaian languages such as Akan. Let us begin the discussions of these parameters.

## Lip position/posture

The parameter lip posture is used to determine the position your lips assume when you are producing a vowel. So, at this level, the lips assume two main postures or positions, namely rounded or unrounded. That is, whether the lips are rounded or they are not rounded when a vowel sound is being produced. Based on this posture of the lips, we can divide vowels of a Ghanaian language into two, namely ‘**rounded**’ and ‘**spread/unrounded.**’ Some examples of rounded vowels are /u, o, ɔ/. examples of unrounded vowels, on the other hand, are /i, e, a/.

### Activity

At this point, produce rounded and unrounded/spread vowels of your Ghanaian language of study.

## Tongue height/Height of the tongue

This refers to the position of the tongue in reference to the root of the mouth when producing vowel sounds. It is assumed that when we are producing vowels, the mouth opens when we drop the jaw. This can be **high**, **mid**, or **low**. When we drop our jaws to the lowest possible position, the vowels produced in this way are referred to as low vowels. Examples of low vowel is /a/, and in some Ghanaian languages [æ]. When we open our mouth wide enough but not as low as when producing low vowels, then the vowels we produced are termed mid vowels. Some examples of mid vowels in a Ghanaian language are /e, o/. In producing high vowels, on the other hand, the mouth is significantly opened but not as wide as mid vowels, thereby allowing enough air to flow through the oral cavity. Some examples of high vowels in a Ghanaian language are /i, u/.

### Activity

Begin practicing the production of vowels in your language of study focusing on how high or how low you raise your jaws or open your mouth.

## Part of the tongue

This parametre refers to the area of the tongue where the vowel sound is produced. It is assumed that when we are producing vowels, some parts of the tongue move. We cannot easily feel this movement though. Three parts of the tongue are assumed to be involved when a vowel sounds is being produced. These parts are the front part, middle part, and back part. Based on that, the parametre gives us three classes of vowels, namely **front**, **mid**, and **back** vowels. In producing front vowels, it is the front part of the tongue that moves. Some examples of front vowels of a Ghanaian language are /i, e, ε/. For the production of mid vowels, the middle of the tongue is assumed to move. Therefore, the following vowel is an example of a mid-vowel: /a/. For back vowels, on the other hand, as the name suggests, it is the back of the tongue that is involved in their production. Some examples of back vowels of a Ghanaian language are: /u, o, ɔ/.

### Activity

Practice how to produce vowels of your language of study with focus on the part of the tongue.

Having finished discussing the main parametres we use in describing vowels of a Ghanaian language, there is a fourth parametre as mentioned earlier in this sub-strand which is not common among Ghanaian languages. This parametre is advancement of the tongue.

*Advancement of the tongue root (ATR): (Please, discuss only if applicable in your language).* This parametre, which is prominent in a few Ghanaian languages including Akan, Dagbani, etc. It is used to determine the position the tongue root assumes when a vowel is being produced. By this parametre, we try to find out if there is tension or pressure on the tongue or not during production of vowels. When a vowel is produced with pressure on the tongue thereby causing the tongue root to draw back, we say that vowel is produced with Advanced Tongue Root (ATR) i.e. (+ATR) vowels. When vowels are produced with the tongue root in its natural neutral position, we label those vowels are Unadvanced Tongue Root i.e. (-ATR) vowels. Some examples of (+ATR) vowels are: /i, e, u, o/, and examples of (-ATR) vowels are /ɪ, ε, ɔ/.

## Activity

Produce all the vowels of language Ghanaian language of study paying attention to the movement of your tongue root to distinguish advanced tongue roots (+ATR) from unadvanced tongue root (-ATR) vowels.

## Activity

Complete the table using the parametres you have learnt for describing a vowel

Vowel	Lip Posture	Tongue Height	Part of the tongue
/i/	spread	High	Front
/e/			
/u/			

Vowel	Lip Posture	Tongue Height	Part of the tongue
/ɛ/			
/ɔ/			
/o/			
/a/			

Having discussed the nature of vowel sounds and the parametres used in describing the vowel sounds of your language, we now focus our attention on the production of consonants.

## Kɔnsonantinima buyisibu

Ti yi bɔri ni ti buyisi kɔnsonanti, di malila so' sheŋa di ni mali n-kuri lala bukaata maa. Soya ata sheŋa di ni mali m-buyisiri kɔnsonantinma n-nyɛ: luy' shɛli pɔhim ni gbaara, pɔhim ni yiri na shɛm, ni kumsi. Ti ni kahigi soya ata ŋɔ yini kam ka ti shɛhira n-neeɪ li.

## Luy' shɛli pɔhim ni gbaara

Dimbɔŋɔ nyɛla luy' shɛli yaɣa ayi ŋan tumdi tuma kɔnsonantinima nambu puuni ni shihiri taba. Ka ti ni di nya bachikɔba kumsi sinii, luy' sheŋ pɔhim ni gbaara

Dagbani sheŋa n-nyɛ naŋgbampiba, zuɣusaa nyina mini gbunni naŋgbampibili, nyinvia, tayiŋga, lɔŋ, ŋan pahi. Ɖan do gbunni nyɛla pɔhim ni gbaari luy' shɛli ni kumsi sheŋa ŋan namdi ni.

- Naŋgbampiba: Naŋgbampiba kumsi nambu ni, ti naŋgbampiba miriti n-ti layindi taba ni. Shehira, /p, b, m/.
- Nyinvia: Ti yi namdi nyinvia ni kumsi, ti zilinli tooni shihirila ti nyinvia. Nyinvia ni kumsi shehira sheŋa n- /t, d, s, n/.
- Zuɣusaa nyina mini gbunni naŋgbampibili: Zuɣusaa nyina mini gbunni naŋgbampibili kumsi nyɛla ŋan nambu yiri zuɣusaa nyina ni shihiri gbunni naŋgbampibili. Shehira, /f/.
- Tayiŋga: Tayiŋga ni kumsi nambu ni, ti wuyiri zilinli sunsuuni ka di shihiri tayiŋga. Tayiŋga ni kumsi shehira n-nyɛ /j/.
- Lɔŋ ni: Ti yi namdi lɔŋ ni kumsi, ti daari zilinli nyaanɔ n-kpari ti tayimballi polo. Lɔŋ ni kumsi shehira sheŋa n-ny /k, g/.

### Activity

Provide examples of Ghanaian languages word that begins with each of the places of articulation you have learned.

## Pɔhim ni yirina shɛm

Dimbɔŋɔ n-nyɛ muɣisugu sheŋa ŋan paari pɔhim yibu na ni paai shɛm kɔnsɔnantinima nambu saha. Shehira, kɔnsɔnantinima sheŋa puuni, ŋa nambu ni ŋaribu bee muɣisugu, ni pɔhim shɛli din yiyri na maa bahibu yim. Ɖaribu bee muɣisugu ni paai shɛm zuɣu, ti ni nya Dagbani kɔnsɔnanti sheŋa pɔhim ni yiri na shɛm. Yay' sheŋa ŋan tumdi tuma kumsi nambu ni bɔri taba shee ka kperi taba ni yeltɔɣa kumsi nambu ni. Kɔnsɔnantinima pɔhim ni yirina shɛm shehira sheŋa n-nyɛ, ŋan yirina ni yaa, ŋan yirina balim, ŋan sɔra, ŋan yirina nyeeɛni, ŋan liriŋir zilinli, ŋan pahi. Ɖan do gbunni ŋɔ nyɛla pɔhim ni yirina shɛm ni Dagbani kɔnsɔnanti kumsi sheŋa ŋa ni namdi shehira

- Ɖan yiri na ni yaa: Kamani yuli maa ni wuhiri shɛm, kumsi ŋan yiri na ni yaa nambu puuni, pɔhim shɛli din yiri na sapira ni maa gbaarimi zaani yim biɛla. Pɔhim shɛli din gbaai zani maa bahirila yim. Shehira, /p, b, t, d, k, g, m, n/. Luy' shɛli pɔhim maa ni bahira, ti ni tooi pu ŋan yiri na ni yaa buyi, ŋannima n-nyɛ ŋan pɔhim yiri na noli ni ni yaa ni ŋan pɔhim yiri na nyee ni ni yaa. Di yi niŋ ka pɔhim shɛli di ni gbaai zali maa yi yi na noli ni, ti booni li la *ŋan yiri na ni yaa*, shehira /p, b, t, d, k, g/. Din pahi, di yi niŋ ka pɔhim

sheli di ni gbaai zali maa yi yi na nyee ni, ti booni li la *ɲan yiri na nyee ni yaa*, shehira /m, n/.

- Dan yiri na balim: Dan sɔri ɲun nambu ni, muɣisugu dii bi paari pɔhim maa amaa ka bi che ka pɔhim sheli din yi sapuyu maa ni maa yen chani la biɛlabiɛla ka di che ka di sɔra. Dan yiri na balim shehira sheɲa m-bɔɲɔ /f, s/.
- Dan sɔra: Kumsi ɲan sɔri nambu puuni, yaya ayi m-beni; tuuli muɣisugu paari pɔhim maa ka di bahigu ka pɔhim maa yiri na biɛlabiɛla (pa yim). Di shehira Dagbani ni m-bɔɲɔ /tʃ/.
- Dan lirigiri zilinli: Kumsi ɲan lirigiri zilinli nambu puuni, zilinli tooni shihiri la nyinvia ni ka che ka pɔhim yiri la noli yay' sheli. Dan lirigiri shehira n-nyɛ /l/.
- Dan zilin' piem tɔra: Kumsi sheɲa ɲan zilin' piem tɔra nyɛla ɲan namdi ni zilinli, dina n-nyɛ yay' sheli din vuura, n-shihiri yay' sheli din bi vuura; nyinvia ni yomyom m-pari taba. Dan zilin' piem tɔra kumsi shehira n-nyɛ /r/.

## Kumsi

M karimbi' yurigu, so' sheli din pahi ata ti kɔnsonantinima buyisibu ni n-nyɛ kumsi. Ti yi namdi kumsi, ti lɔɲ cheba, ɲan be ti kukolaa ni malila biehisu ayi; ka di sɔhiri bee ka di bi sɔhira. Lɔɲ cheba maa yi sɔhira, kumsi sheɲa ti ni namdi yɛla ɲan kɔnsonanti ɲan kumda. Dimbɔɲɔ nyaɲa, ti yi niɲ ka lɔɲ cheba maa bi sɔhira ti boonila kɔnsonantinima din bi kumda. Kɔnsonantinima ɲan kumda shehira n-nyɛ /g/, /d/, /m/, /b/, ka ɲan bi kumda shehira n-nyɛ /f/, /s/, /k/, /t/, /ʃ/, ɲan pahi.

### Activity

1. Watch a YouTube video on how speech consonants sounds are produced. Please click here: <https://www.youtube.com/watch?v=df0RdKuPF9I>.
2. After watching the video, practise articulating all consonants by placing your forefinger at your larynx in front of your neck as you mention the consonants, and determine which of them are voiced and which ones are voiceless.
3. Discuss the content in class based on the three parameters for describing consonants in your Ghanaian language of study.



## Bachikɔba kumsi ni yirina shem bachinima ni

Bachikɔba kumsi ni yirina shem bachinima puuni kuli nyɛla bachi puuni luy' shɛli yɛltɔya kumsi ni ni tooi yina yɛltɔya ni. Zuliya kam malila di ni sayi ni di ni bi sayi ti ni yɛltɔya kumsi doni bachi ni. Luy' ata shɛɲa yɛltɔya kumsi ni tooi doni bachinima nyɛla, piligu/tooni, sunsuuni, bee nyaɲa. Chɛliya ka ti pili alizama n-jɛndi vaawulinima yibu na.

## Vaawulinima ni yirina shem bachinima ni

Vaawuli ni yirina shem kuli nyɛla luy' shɛɲa vaawuli ni tooi doni Dagbani bachi ni. Di yi niɲ ka vaawuli yina bachi piligu, ti ni yɛli ni di dola **bachi tooni**. Di yi yina bachi sunsuuni, ti ni boli li lala dooshes maa sunsuuni, di yi ti leei bachi bahigu, di boonila bachi nyaɲa dooshee. Kahigir' shɛli din do zuyusaa ɲɔ ni, di neei ti ni waliginsim be yɛltɔya kam ni wuhiri vaawuli ni yirina shem yɛltɔya ni. Di lahi kpa talahi ni di baɲ ni vaawuli shɛɲa nyɛla ɲan ni tooi doni dooshehi ata ɲɔ zaa ni yɛltɔya ni. Chɛliya ka ti yuli shɛhira shɛɲa ɲan do gbunni ɲɔ ni vaawuli /a/ bachinima ni:

1. adaka
2. dam
3. daba

Shɛhira 1 ni, vaawuli /a/ yirina bachi piligu. Dimbɔɲɔ ni, ti ni yɛli ni /a/ ni tooi doni bachi tooni. Shɛhira 2 ni yaha, /a/ maa dola bachi sunsuuni ka ti yɛli ni /a/ ni tooi doni bachi sunsuuni. Shɛhira din pahi ata ni, /a/ n-nyɛ kumsi shɛli din bahindi bachi maa dinzuyu, /a/ ni tooi doni bachi nyaɲa.

### Activity 1 (word-initial vowels)

1. List all the vowels in your Ghanaian language of study in the table below.
2. For each vowel provide a corresponding word in your language that begins with the vowel.
3. Share with your colleague your observation on the answers you provided regarding which vowels cannot occur at word-initial position.
4. The pair should present their observations for class discussion.

**NB:** It is important to note that the vowels to be listed are the phonetic vowels (vowels we speak) and not orthographic vowels (vowels we write).

Vowel	Word-initial
e	

### Activity 2 (word-medial vowels)

1. List all the vowels in your Ghanaian language of study in the table below.
2. For each vowel provide a corresponding word in your language in which the vowels occur in the middle.
3. Share with your colleague your observation on the answers you provided paying attention to which vowels cannot occur at word-medial position.
4. The pair should present their observations for class discussion.

Vowel	Word-medial
a	

### Activity 3 (word-final vowels)

1. List all the vowels in your Ghanaian language of study in the table below.
2. For each vowel provide a corresponding word in your language that ends with the vowels.
3. Share with your colleague your observation on the answers you provided paying attention to which vowels cannot occur at word-final position.
4. The pair should present their observations for class discussion.

Vowel	Word-final
u	

## Consonant Distribution

The concept consonant distribution simply refers to the position in a word where a consonant can occur in a particular Ghanaian language. A consonant that occurs at the beginning of a word is referred to as **word initial** consonant. When a consonant occurs at the middle of a word, we refer to it as **word medial** consonant. When a consonant occurs at the end of a word, we refer to it as **word final** consonant. Let us note that some consonants can occur in all positions of a word. For example, in some Ghanaian languages, the consonant /m/ can occur in the three positions in a word.

In the following activities, we will consider consonants of a Ghanaian language and the position the consonants can occur in a word.

### Activity 1 (word-initial consonants)

1. List all the consonants in your Ghanaian language of study in the table below.
2. For each consonant provide a corresponding word in your language that begins with it.
3. Share with your colleague your observation on the answers you provided focusing on consonants that cannot occur at word-initial position.
4. The pair should present their observations for class discussion. (Provide a table that reflects all consonants of your Ghanaian language of study).

NB: Please, note that the consonants to be listed are the phonetic consonants (spoken consonants) and not orthographic consonants (written consonants).

Consonant	Word-initial
p	
b	
t	
d	
k	
g	
f	
m	
n	
w	
s	

## Activity 2 (word-medial consonants)

1. In pairs, list all the consonants in your Ghanaian language of study in the table below.
2. For each consonant provide a corresponding word in your language in which the consonants occur in the middle.
3. Share with your colleague pairs your observation on the answers.
4. The pair should present their observations for class discussion.

Consonant	Word-medial
p	
b	
t	
d	
k	
g	
f	
m	
n	
w	
s	

### Activity 3 (word-final consonants)

1. In your groups list all the consonants in your Ghanaian language of study in the table below.
2. For each consonant provide a corresponding word in your language that ends with the consonants.
3. Share with another group your observation on the answers.
4. The group should present their observations for class discussion.

Consonant	Word-final
p	
b	
t	
d	
k	
g	
f	
m	
n	
w	
s	

# REVIEW QUESTIONS

1. Vowels and consonants are speech sounds, in your own words explain two ways in which they differ.
2. Using the three parametres, describe each of the following vowels of your language of study: /o/, /i/, /ɛ/, and /ɔ/.
3. Using the parametres place of articulation, manner of articulation, and voicing, how do you describe the following consonants? /f/, /g/, /m/, /t/.
4. Draw a table similar to the one below and provide examples of words of your Ghanaian language of study in the positions in which vowels can occur.

Vowel	Word initial	Word medial	Word final

5. Draw a table similar to the one below and provide examples of words of your Ghanaian language of study in the positions in which consonants can occur.

Consonant	Word initial	Word medial	Word final

# SUGGESTED ANSWERS TO REVIEW QUESTIONS

The following are suggested responses to the review question.

1. While in the production of vowels there is little or no obstruction of airflow, in producing consonants there are varying significant degrees of obstruction of airflow. Again, while all vowels are voiced, not all consonants are voiced; some consonants are voiceless.
2. The following are the three parameters used for the description of vowels.

Vowels	Part of tongue	Height of tongue	Lip position/posture
i. /o/	Back	Mid	Rounded
ii. /i/	Front	High	Unrounded
iii. /ɛ/	Front	Mid	Unrounded
iv. /ɔ/	Back	Mid	Rounded

3. The following are the 3 parameters used in describing the following consonants: /f/, /g/, /m/, /t/.

Consonants	Place of articulation	Manner of articulation	Voicing
i. /f/	Labio-dental	Fricative	Voiceless
ii. /g/	Velar	Stop (plosive)	Voiced
iii. /m/	Bilabial	Stop (nasal)	Voiced
iv. /t/	Alveolar	Stop (plosive)	Voiceless

**NB:** Responses to questions four and five are Ghanaian language-specific. Therefore, the learners will do self-assessment.



## EXTENDED READING AND RESOURCES

1. Dolphyne, F. A., (2006). *The Akan (Twi-Fante) language: Its sound systems and tonal structure*. Accra: Woeli Publishing Services.
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