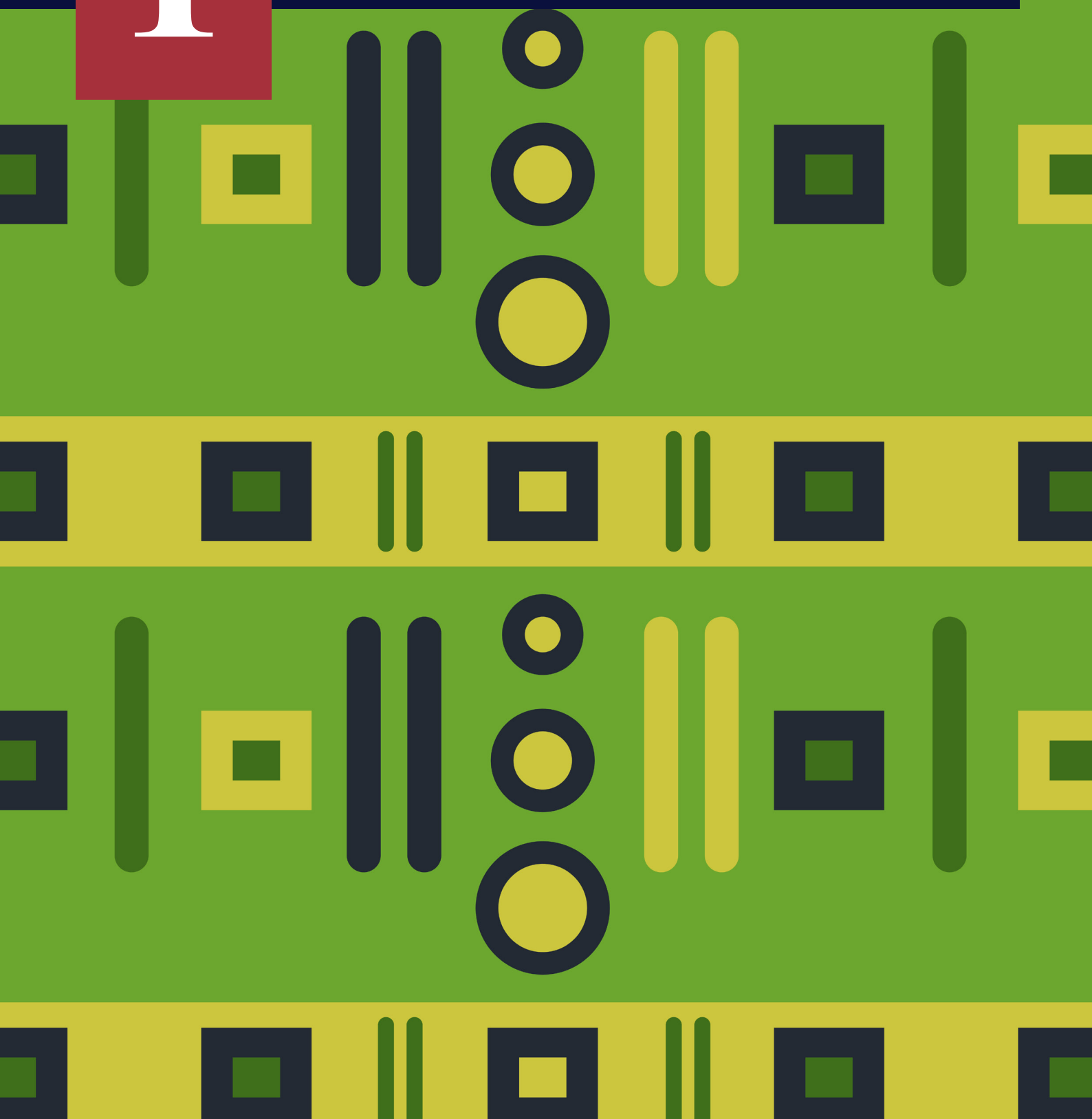


SECTION

1

SOUNDS OF THE LANGUAGE



ORAL CONVERSATION

Phonology (Speech Sounds of A Ghanaian Language)

INTRODUCTION

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.

After 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/			
/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.

THE CONCEPT OF CONSONANT

As was mentioned earlier in the section, consonant is another type of speech sounds apart from vowel. The concept consonant refers to a speech sound in which during production the breath, which we have termed airflow, is at least obstructed. Based on this explanation, we can contrast vowel and consonant by saying that while in the production of vowels there is very minimal or no

obstruction of airflow, there is significant obstruction of airflow when producing consonants. We combined vowels and consonants form a word

Kɔ̃nsonante

Dwaɲa sɔ̃-dwi delo keini maɲa ne choom fee na wora vio kom nuɲim maɲa ne ye ko wae ko woli de vawole ko mɔ̃ne selabole to.

Ka-maɲe kɔ̃nsonanta seina

Dé ná lage dé maɲe kɔ̃nsonante seina, wonnu mo wora na mae te maɲe de. Wonnu telo tetɔ̃ na mae te maɲe de to ye: kwor-ɲwanno kikia, sɔ̃ kom keim jeiga, de sɔ̃ kom na ke tei to. Dé wó bwɛ te dedɛ kuri ne dé daare dé pa maana na maɲe to.

Sɔ̃ kom keim jeiga:

Konto tɛ ɲwaɲa zola na tui daane tei kɔ̃nsonante sɔ̃ro keim maɲa ne to mo. Ne n na nɛ sinii kom ne tei to, kasem ne, sɔ̃ro tem na ke jei selo to sedwonna mo ye nivɔ̃ de nivɔ̃, nivɔ̃ de yeila, nimɔ̃ɲɔ̃ de dindeilimi, karemalakka, dideiga etc.

- Nivɔ̃ de nivɔ̃: Nivɔ̃ de nivɔ̃ sɔ̃ keim maɲa ne, dé yeini dé pa nivɔ̃ro telei tem mo ba daane se te wane te ke sɔ̃ kom. Maana: /p, b, m, w /.
- Nimɔ̃ɲɔ̃ de dindeilimi sɔ̃: Se n ke nimɔ̃ɲɔ̃ de dindeilimi sɔ̃, dé yeini dé pa dindeilimi dem yiga seeni mo dwei nimɔ̃ɲɔ̃ kom. Maana: /t, d, s, n/.
- Nivɔ̃ de yeila sɔ̃: Sɔ̃ konto keim ne, kuri nivɔ̃ kom mo gwaane de baɲa yeila yam pae sɔ̃ kom laam ke. Maana: /f, v/
- Karemalakka sɔ̃: Konto keim ne dindeilimi dem tetare mo yeini de dwei karemalakka kam. Maana: /j, ny, ch, r, y/
- Dideiga sɔ̃: Dé ná wora dé ke dideiga sɔ̃, dé yeini dé yigi dindeilimi dem kwaga seeni mo pa de jwoori de maa tu kwora kam pa se ko dwei dideiga kam. Maana: / ɲ, k, g /

Activity

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

Sɔ̃ kom na ke tei to:

Konto tɛ ɲwaɲa zola na tui daane tei ɲwaɲa sɔ̃ro keim maɲa ne to mo. Kɔ̃nsonanta keim zege vio kom na nuɲi tei to mo ne; bagem, foosem, aferekeiti, momɔ̃ɲɔ̃ro, laterale etc

- Bagem sɔɔro: Ne yere dem na bere tei to, te keim maɲa ne, ŋwaɲa zola yam yeini ya che vio kom mo ye ko laam pɔ pɔ ko nuɲi de dane bedwe baɲa pa ko bage baɲa baɲa. Ko nam tɔge mɛ vio kom na wó da ko nuɲi to mo, momɔɲɔɔ ne naa ni dem ne pa ko ji momɔɲɔɔ naa ni sɔɔro. Momɔɲɔɔ nyena yam ;/m, n, ny, ŋ/; ni nyena yam /p, b, t, d, k, g, w/.
- Foosem sɔɔro: Tendo keim ne, vio kom maama ba cho ni dem ne, ko nuɲim maa ye fee fee mo ye ko foosa. Maana: /f, v, s, z /
- Aferekeiti sɔɔ: Konto keim ne, vio kom yeini ko che mo ye ko laam nuɲi fee fee ni dem ne. Maana: /j, ch/
- Leterale sɔɔ: Konto keim maɲa ne, dindeilimi dem chechɔga kam seeni mo yeini de dwei nimɔɲɔ kom ye vio kom laam tɔge de de sem ko nuɲa. Maana: /l/
- Ferem sɔɔ: Konto ke dindeilimi dem baɲa ne mo kuni dedɛ, de yeini de fere mo lela lela. Maana: /r/

Kwora ŋwanno kikia:

Zenzameso, wonnu tetɔ tu dé na mae dé maɲe kɔsonante sɔɔ to mo ye kwora ŋwanno kikia. Kwora **ŋwanno** kikia che kuni belei mo. Dé jege kwora zuzugim kɔsonanta de kwora zuzugim tera kɔsonanta mo. Kwora zuzugim kɔsonanta yam keim ne, kwor-ŋwanno tem zuzugi mo. Maana mo ye /g/, /d/, /m/, /b/ ye kwora zuzugim tera kɔsonanta yam keim ne, kwor-ŋwanno tem ba zuzuga. Maana mo ye /f/, /s/, /k/, /t/, /p/, etc.

Activity

- 1a. Watch a YouTube video on how speech consonants sounds are produced. Please click here: <https://www.youtube.com/watch?v=dfoRdKuPF9I>.
- 1b. 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.
- 1c. Discuss the content in class based on the three parameters for describing consonants in your Ghanaian language of study.

Sound distribution

Ɔwɔɔna sɔɔ na tui tei botarebu wone to

Ɔwɔɔna sɔɔ na tui tei botarebu wone to boboŋe dem bere we n ná kwei botarebu, n wó maane we Ɔwɔɔna sɔɔro tem dedoa dedoa yeini te jege mɛ te na wora to mo. Taane maama jege tei Ɔwɔɔna sɔɔro tem na zoore botarebu wo to. Ɔwɔɔna sɔɔ zega jei botarebu wone ye kuni betɔ mo; boboa ne, tetare ne, de kwola ne. Pa dé bobo de vawola zega jei botarebu wone.

Vawole na zoore botarebu wone tei to

Vawole zega jei kuri mo ye, vawole na zege mɛ botarebu wone to mo. Vawola yadwonna zege botarebia boboa ne mo, yayam maa wo tetare ne ye yadaara wo botarebia kwola ne. Vawole ná zege botarebu boboa ne, ba bwoi ko we botarebu boboa mo, de maa ná zege botarebu tetare ne, ba maa bwoi ko we botarebu tetare ye de ná zege botarebu kwola ne, ba bwoi ko we botarebu kwola mo. Ko lamma se n maane we vawola yadwonna ware ya zege jei setɔ sem ne bedwe baŋa ne botarebu wone, kwata kwata bedwe naa belei mo de zega. Maana: Ni vawole dento ‘a’ na zege mɛ botarebia banto wone to:

1. abam
2. kam
3. tega

Boboa maana yam ne, /a/ vawole dem zege botarebu wom boboa ne mo. Konto bere we /a/ sɔɔ kom wae ko bobo botarebu. Maana yalei tu wom ne de, /a/ sɔɔ kom wo botarebu wom tetare ne mo, konto de maa bere we /a/ sɔɔ kom wae ko zege botarebu tetare ne. Maana betɔ tu ne, /a/ mo ye sɔɔ kolo na kweeli botarebu wom to ye ko bere we /a/ wae o kweeli botarebu.

Activity 1

- a. List all the vowels in your Ghanaian language of study in the table below.
- b. For each vowel provide a corresponding word in your language that begins with the vowel.
- c. Share with your colleague your observation on the answers you provided regarding which vowels cannot occur at word-initial position.
- d. 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

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

Vowel	Word-medial
A	

Activity 3

- List all the vowels in your Ghanaian language of study in the table below.
- For each vowel provide a corresponding word in your language that ends with the vowels.
- Share with your colleague your observation on the answers you provided paying attention to which vowels cannot occur at word-final position.
- 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

- a. List all the consonants in your Ghanaian language of study in the table below.
- b. For each consonant provide a corresponding word in your language that begins with it.
- c. Share with your colleague your observation on the answers you provided focusing on consonants that cannot occur at word-initial position.
- d. 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

- a. In pairs, list all the consonants in your Ghanaian language of study in the table below.

- b. For each consonant provide a corresponding word in your language in which the consonants occur in the middle.
- c. Share with your colleague pairs your observation on the answers.
- d. 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

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

Consonant	Word-final
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P	
B	
T	
D	
E	
F	
G	
H	
I	
J	
K	

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/, /ε/, 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 parametres 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. /ε/	Front	Mid	Unrounded
iv. /ɔ/	Back	Mid	Rounded

3. The following are the 3 parametres 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

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

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