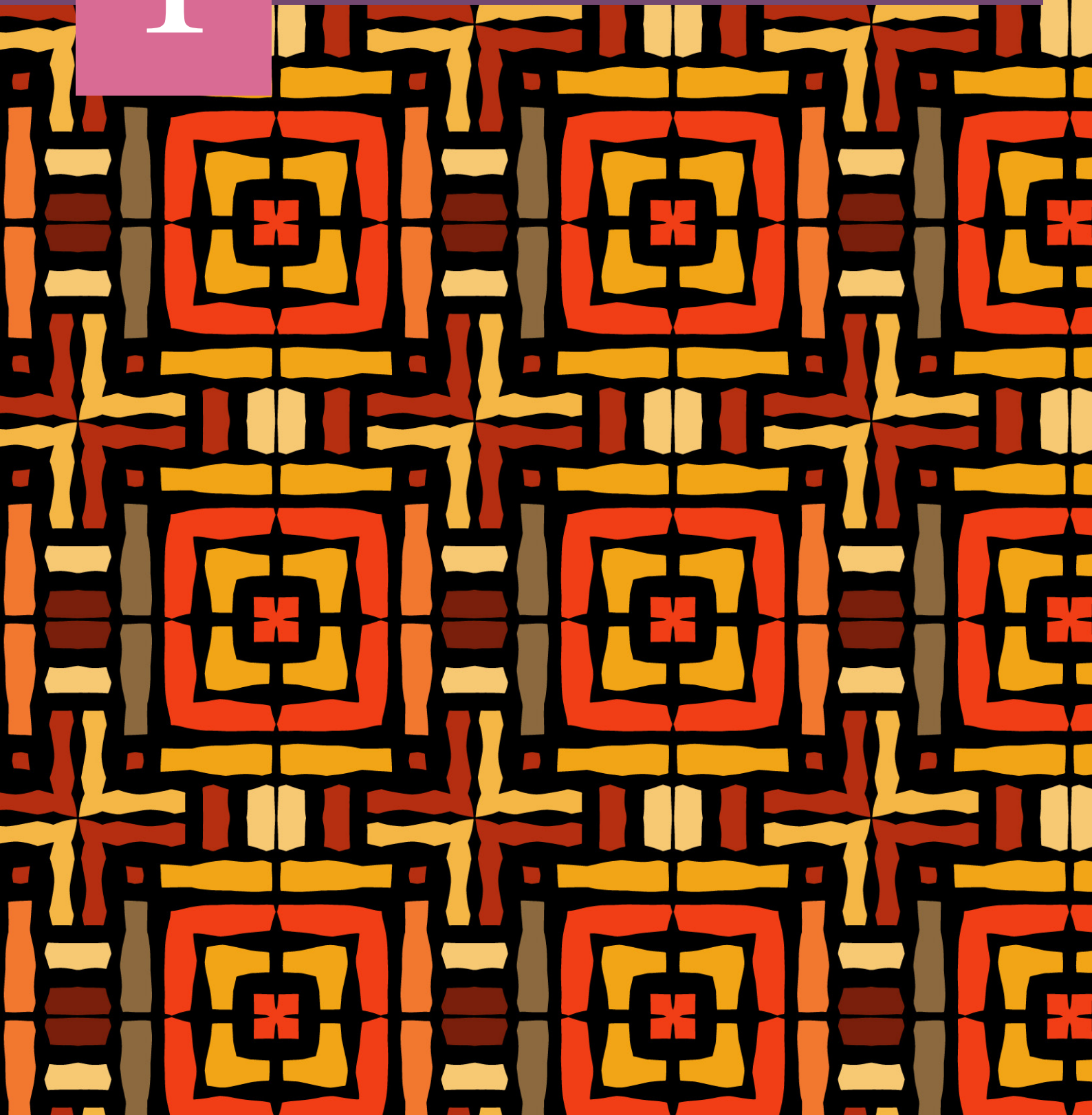


SECTION

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 *parameters*. Parameters simply refer to the characteristics that a vowel possesses. The main parameters

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 vowel 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.

Description of consonants

Sɛ yɛpɛ sɛ yɛkyɛrɛkyɛrɛ anom nnyigyɛi su a, yɛwɔ akwan ahorow bi a yɛfa so yɛ no. Akwan ahorow abiɛsa yɛfa so kyɛrɛkyɛrɛ anom nnyigyɛi su no ne: beae a yɛyɛ nnyigyɛi no, nnyigyɛi no yɛbea, ne dwɛdwɛɛwa no yɛbea. Yɛde nhwɛso ahorow a ɛsɛ fata bɛkyɛrɛkyɛrɛ akwan ahorow abiɛsa yi mu biara mu.

Beae a yɛyɛ nnyigyɛi no:

Eyi yɛ beae a honam akwaa abien no hyia no mu wɔ bere a yɛrɛyɛ anom nnyigyɛi/konsonante ahorow no. Mmɛae a yɛyɛ Akuapem Twi kasa anom nnyigyɛi ahorow te sɛ nea yɛhu no wɔ sini no mu bi ne anofafa, anobatase, seakyi, dadam dennen,, dadam bɛtɛɛ ne nea ɛkeka ho. Mmɛae ahorow a yɛyɛ Akuapem Twi kasa anom nnyigyɛi no mu bi na edidi so yi:

- Anofafa: Saa nnyigyɛi yi yɛ mu no, yɛn ano soro ne fam no ka bom. Nhwɛso: /p, b, m/.
- Seakyi: Sɛ yɛyɛ sɛ akyi nnyigyɛi a, tɛkrɛma no ano ma ne so kɔ Seakyi. Nhwɛso: /t, d, s, n l, r/.
- Anobatase: Saa nnyigyɛi yi yɛ mu no anofafa no ma ne ho so kohyia ɛsɛ a ɛwɔ soro no For Nhwɛso, /f/.
- Dadam dennen: Yɛrɛyɛ dadam dennen nnyigyɛi a, tɛkrɛma no mfinimfini ma ne mu so kɔ dadm dennen ho. Nhwɛso/j/.
- Dadam bɛtɛɛ: Sɛ yɛrɛyɛ dadam bɛtɛɛ nnyigyɛi a, tɛkrɛma no akyi twe ne ho kɔ dadam bɛtɛɛ ho. Nhwɛso: /k, g/.

Activity

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

Nnyigyɛi no yɛbea:

Eyi kyɛrɛ ɔkwan a kasa no nkwadɔm no fa so danna mframa a efi yɛn ahurututu anaa ahrawa mu ba no wɔ bere a yɛrɛyɛ anom nnyigyɛi ahorow no. Yɛwɔ akwan ahorow ɔkasa nkwadɔm no fa so danna mframa no mu wɔ bere yɛrɛyɛ nnyigyɛi ahorow no. Yɛwɔ ɔkwan ahorow a ɔkasa nkwaadɔm no fa so danna mframa no mu wɔ bere a yɛrɛyɛ nnyigyɛi ahorow no. Nhwɛso: anom nnyigyɛi no bi yɛ mu no, ɔkwan a ɛda anom no mu tow pru ma mframa no de ahoɔden no pue prɛkɔpɛ. ɛma yɛhu ɔkwan a nkwaadɔm no danna wɔn ho nam so ma yɛhu Akuapem Twi kasa anom nnyigyɛi no mu nkyɛkyɛmu. ɔkwan a yɛfa so yɛ anom nnyigyɛi

ahorow no mu na edidi so yi: agyinae, nkyeremu, agyinae-nkyeremu, hwenem, ne nea ekeka ho. Nea edidi so yi ye akwan ahorow a wɔfa so ye nnyigyei no ne emu biara ho nhweso wɔ Akuapem Twi..

- **Agyinae:** Senea ne din si te no, se yereye agyinae nnyigyei no a, mframa efi yen ahrawa anaa ahurututu mu ba no begyina ano a emu atow no akyi. Afei mframa no de ahoɔden pue prekopɛ Nhweso. /p, b, t, d, k, g, m, n/. Esiane se mframa efi yen ahurututu anaa ahrawa mu reba no gyina wɔ ano a emu atow no akyi nti na ema yefre no agyinae nnyigyei no.
- **Nkyeremu:** Yereye saa nnyigyei yi a, anofafa no mu ntow pru na mmom egya kakra to mu ma mframa a efi yen ahurututu no mu reba no ho kyere no. Nkyeremu nnyigyei ho nhweso: /f/. Esiane se mframa efi yen ahurututu anaa ahrawa mu reba no ho kyere no wɔ bere a erepue no nti na yefre no nkyeremu nnyigyei no.
- **Agyinae-nkyeremu:** Se yereye agyinae nkyeremu nnyigyei a, mframa a efi yen ahurututu anaa ahrawa mu reba no begyina ano a emu atow no akyi afei, na mframa no apue breoo. Nhweso /tʃ/ Esiane se mframa efi yen ahurututu anaa ahrawa mu reba no gyina wɔ ano a emu atow no akyi na ema mframa no pue breoo a ne ho kyere no nti na yefre no agyinae-nkyeremu nnyigyei no.
- **Latera:** Se yereye latera nnyigyei a, tekrema no anim ma ne ho so kɔ seakyi wɔ bere a mframa efi yen ahurututu anaa ahrawa mu reba no pue fa tekrema no nkyenkyen. Latera nnyigyei ho nhweso ne /l/. Esiane se tekrema no anim ma ne mu so kɔ seakyi na mframa a efi yen ahurututu anaa ahrawa mu reba no pue fa tekrema no nkyenkyen nti na ema yefre no Latera nnyigyei no.
- **Mmobɔe:** Yede tekrema no na eye mmobɔe nnyigyei no a eno ne akasa akwaa a ekeka ne ho wɔ bere a ebobɔ seakyi a enkeka ne ho hɔ no mpen pii. Mmobɔe nnyigyei ho nhweso ne /r/. Esiane se tekrema no anim bɔ seakyi hɔ mpen pii no nti na ema yefre no mmobɔe nnyigyei no.

Dwedwɛɛwa gyinabea:

Okwan a eto so abiesa a yefa so kyerekyere anom nnyigyei su mu ne Dwedwɛɛwa gyinabea. Se yereye anom nnyigyei a ntini a ewɔ yen dwedwɛɛwa mu no kɔ gyinabea ahorow abien mu, se emu bepo anaa se emu rempo. Se ntini no mu po a, yenza anom nnyigyei a emu piw ena se ntini no mu ampo a yenza anom nnyigyei a emu mpiw. Anom nnyigyei a emu piw no bi ne /g/, /d/, /m/, /b/, ena anom nnyigyei a emu mpiw no bi ne /f/, /s/, /k/, /t/, /ʃ/, ne nea ekeka ho.

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 parametres for describing consonants in your Ghanaian language of study.

Sound distribution

Se yɛka se nnyigyei dwumadi a, na yerepɛ akyerɛ beae a nnyigyei bi tumi di anaase ɛba ɛwɔ asemfua bi mu. Okasa biara wɔ mmara a ɛfa beae a nnyigyei bi tumi di anaa ba wɔ asemfua bi mu. Beae ahorow abiɛsa a nnyigyei tumi di anaa ɛba wɔ asemfua mu nonom ne asemfua anim, asemfua mfinimfini ne asemfua awiei anaa akyi. Ma yenhɛɛ enne nnyigyei dwumadi ho mpensempensemu no ase.

Enne Nnyigyei Dwumadi

Enne nnyigyei dwumadi kyere beae a enne nnyigyei dwumadi bi hye anaa tumi di wɔ asemfua mu. Enne nnyigyei no bi tumi di asemfua anim, ebi nso tumi di asemfua mfinimfini ɛna ebi nso tumi di anaa twa asemfua to/awiei. Se enne nnyigyei bi ba asemfua anim a, yɛka se edi **asemfua no anim**. Se ɛba asemfua no mfinimfini a yɛka se edi **asemfua no mfinimfini** ɛna se ɛba asemfua no awiei anaa akyi a yɛka se edi **asemfua no awiei**. Se yɛhwɛ nkyerekyeremu a ɛwɔ soro hɔ no mu a ɛda adi pefee se okasa biara wɔ mmara anaa nhyehyɛɛ a ɛwɔ enne nnyigyei dwumadi ho. Hye no nso se enne nnyigyei no mu bi tumi di beae ahorow abiɛsa no nyinaa mu wɔ asemfua mu. Momma yɛnhwɛ enne nnyigyei /a/ dwumadi wɔ asemfua mu. Momma yɛnhwɛ enne nnyigyei ho mfaso a ɛwɔ fam hɔ no mu.

1. asem
2. ɔdan
3. ɔbea

Nhweso a edi kan no, enne nnyigyei /a/ di asemfua no anim/ahyɛase. Eyi mu no, yɛka se /a/ no tumi di asemfua anim. Nhweso a ɛto so abien mu no nso /a/ tumi di anaa hye asemfua no mfinimfini nti yɛka se /a/ no di asemfua no mfinimfini. Nhweso ɛto so abiɛsa no nso, /a/ tumi

di aɛmfua no awiei anaa akyi anaa etwa tow wɔ aɛmfua no to, enti yeka se /a/ tumi di anaa twa aɛmfua tow/awiei.

Activity 1

- 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 begins with the vowel.
- Share with your colleague your observation on the answers you provided regarding which vowels cannot occur at word-initial position.
- 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

- In pairs, list all the consonants in your Ghanaian language of study in the table below.
- For each consonant provide a corresponding word in your language in which the consonants occur in the middle.
- Share with your colleague pairs your observation on the answers.
- 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
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/, /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 AND RESOURCES

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

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