READING FOR ETHIOPIA'S ACHIEVEMENT DEVELOPED TECHNICAL ASSISTANCE (READ-TA)

INTRODUCTION TO LANGUAGE AND LINGUISTICS

(MT 212)

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READING FOR ETHIOPIA'S ACHIEVEMENT DEVELOPED TECHNICAL ASSISTANCE

(READ-TA)

MODULE 5

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The Module 5: **Introduction to Language and Linguistics (MT 212)** has been developed by a team of reading specialists and linguists from Florida State University in collaboration with the Ethiopian Ministry of Education, Teacher Professional Development; Regional State Education Bureaus and Zones; and faculty from Colleges of Teacher Education from all regions of Ethiopia.

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The following MT Language Instructors from the Colleges of Teacher Education (CTE) and representatives from MOE participated in the development of the final English version of module 5. They began working on this module from a prototype provided by the Florida State University, and made sure to align the contents of the module with the primary curriculum (grades 1-8).

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We hope this module will contribute to improving the reading and writing skills of fifteen million Ethiopian children in the near future.

The Florida State University Team

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[1] This module deals with very complex issues related to language and linguistics. The authors have used the most recent research-based studies to provide an overview of the foundations of mother-tongue language teaching and learning in the primary grades. It is possible that not all languages used in Ethiopia are represented in this module. The study of language groups in Ethiopia is evolving and more recent research may not be published yet to be included in this module at the present time.

Table of Contents

ACRONYMS

COP	Chief of Party
CTE	College of Teacher Education
DCOP	Deputy Chief of Party
FSU	Florida State University
GA	Graphophonemic Awareness
ICT	Information Communication Technology
IP	Implementation Plan
IR	Intermediate Result
LSI	Learning Systems Institute
LTTA	Long Term Technical Assistance
MOE	Ministry of Education
MT	Mother Tongue
MTCDT	Mother Tongue Curriculum Development Team
MTTF	Mother Tongue Task Force
READ TA	Reading for Ethiopia's Achievement Developed Technical Assistance
READ CO	Reading for Ethiopia's Achievement Developed Community Outreach
RSEB	Regional State Education Bureau
RTI	Research Triangle Institute
SB	Student Book
SC	Save the Children
SCC	School Cluster Center
SIL-LEAD	Summer Institute of Linguistics – Language Education and Development
STTA	Short Term Technical Assistance
TF	Task Force
TG	Teachers Guide
TT	Teacher Trainers
USAID	United States Agency for International Development
ZED	Zonal Education Department

INTRODUCTION TO THE MODULE

Dear student teachers!

This module introduces the nature and the scientific study of language. Specifically, it focuses on the origin and features of languages, the nature and articulation of sounds, words, phrases, and sentences, and how the understanding of linguistic features can enhance the teacher's ability to support literacy development of learners.

This module has five chapters. The first chapter briefly introduces students to the concepts of language and linguistics. Here, ideas such as the universal characteristics of human languages, the role language plays in society, language variations within speech communities, the classification of languages, and the International Phonetic Alphabet (IPA) are discussed. The second and the third chapters emphasize speech sounds. In these chapters, concepts such as articulation of speech sounds and their distinctive features, the sound systems of languages, the coordination of speech sounds to create meaningful units, and the phonotactics of languages are thoroughly described. Understanding these concepts is necessary for teachers who are developing the literacy skills of early grade students. The fourth chapter discusses how words and units of meaning are joined together. In this chapter, concepts such as morpheme, word formation processes, and parts of speech are explained. Understanding these concepts is crucial for teachers when they are working to improve the vocabulary knowledge of their students. The last chapter focuses on sentence construction. This chapter discusses how sentences are organized and structured to convey meaning.

Generally, this course provides fundamental knowledge on the concepts of language by providing the basic linguistic concepts and discussing the general nature of languages. Literacy is best taught by teachers and best achieved by students when there is a strong connection with the associated language features.

⏭ **MODULE LEARNING OUTCOMES**

At the end of this module, student-teachers will be able to:

- Describe the origin and characteristics of language.

- Appreciate variation and diversity in students' language skills.

- Define language and linguistics.

- Discuss phonetics and its branches.

- Classify consonant and vowel speech sounds depending on how they are produced.

- Apply knowledge of IPA symbols to transcribe MT words.

- Differentiate between phoneme, phone and allophone.

- Discuss phonological processes.

- Differentiate between morpheme, morph and allomorph.

- Identify types of morphemes.

- Understand how morphological knowledge helps students when learning to read and write.

- Demonstrate an understanding of sentence structure of their MT using tree diagrams.

- Describe the types of phrases and clauses of their MT.

THE STRUCTURE OF THE MODULE

This module is organized by chapters and sections. Each chapter includes learning outcomes, content outlines, assessment techniques, teaching and learning techniques, activities, a chapter summary, review questions, and self-assessment activities. Chapter references and a glossary of words and terms used are found at the end of the module.

LEARNING ACTIVITIES, MODES OF TEACHING AND TIME ALLOCATED

Explicit teaching strategy is widely introduced in this module. It is intended to be student-centered. Student-centered teaching requires interactive classrooms where students take an active role in several forms of activities, including small group work, project work, and participating in peer discussions, demonstrations, reflections. Teacher-talk and lectures should be kept to a minimum, wherein the lecturer provides the essential concept information, then provides students time to practice and discuss the concepts presented in the module. When teaching students with disabilities, instructors should take into consideration how these concepts can be understood, particularly by students with visual or hearing impairments. Visually impaired students can use the IPA Braille version of the IPA. Students with hearing

impairments will need explicit instruction on the place and manner of articulation of sounds, using Visual Phonics if necessary.

This module provides multiple opportunities for student-teachers to review the concepts of language and linguistics. The content approaches and teaching strategies presented in this module are aligned with the new primary mother tongue curriculum.

The course has been intended to be offered in four credit hours. The estimated time required for completing each chapter is indicated at the beginning of each chapter. Teachers are advised to allocate sufficient time to complete each task depending on the total amount of time planned for each chapter.

ASSESSMENT TECHNIQUES

Continuous assessment techniques are expected to be used for evaluating student-teachers' learning. These techniques may be used in the form of individual/peer reflection, project work, oral and written presentations, and examinations (mid-term and final). The following are suggested techniques of continuous assessment (with recommended time allocations).

Table 1 - ASSESSMENT TECHNIQUES

No	Continuous assessment technique	Expected percentage (%)
1	Presentation of individual, pair, and group work	20
2	Project work	20
3	Mid Exam	20
4	Final Exam	40
	Total	100

ICONS USED

Please note that the following icons or symbols are used in this Module for making reference easier for you. The table below lists all the icons used in this module followed by their illustration.

This tells you that there is an introduction to the module, unit, and section.

This tells you that there is a question to answer or to think about in the text.

This tells you that there is an activity to do.

This tells you to note and remember an important point.

This tells you that there is a self-test for you to do.

This tells you that there is a checklist of the main points.

This tells you that there is written assignment.

This tells you that these are the answers to the activities and self-test questions.

This tells you that there are learning outcomes to the Module or Unit.

This tells you that there is an activity to do.

This tells you that there is a conclusion to the unit.

This tells you that there is an assignment to do.

This tells you that there is a student textbook or teacher's manual to use.

CHAPTER ONE: LANGUAGE AND LINGUISTICS

Outline of Contents

Introduction

This chapter provides a brief introduction to language and linguistics. The origin of language and universal characteristics that are found in all languages are discussed. The roles that language plays in a society are also presented. Students will learn about how languages vary and change across peoples and regions, resulting in dialects and usage differences. The Ethiopian language families are described. Finally, an introduction to the International Phonetic Alphabet allows students to understand how language sounds are represented internationally, across all writing systems.

Learning Outcomes

At the end of this chapter, student teachers will be able to:

- Define language.
- Discuss the origin of language.
- Describe the various characteristics of language.
- Discuss the role of language.
- Identify the Ethiopian language families.
- Define linguistics.
- Explain the use of language in different social contexts.
- Discuss how languages vary and change.
- Explain how the International Phonetic Alphabet is used.

Teaching and Learning Techniques

- Interactive lecture
- Independent study
- Group discussion

Assessment Techniques

- Oral questions and answers
- Individual, pair, and group work
- Peer reflection and learning
- Class work and homework

Instructional Materials

- The map of Ethiopia
- IPA Chart
-

1.1 Definition of Language

Language is more than just a set of sounds or a set of words with meaning. **Language** is the primary way in which people communicate, and this communication typically takes place within a social context. People use language to interact socially and emotionally, and to express friendliness, love, anger, and pain. Language enables ideas to be communicated and tasks to be

accomplished (tell a story, provide information, complain, or ask for help). Effective communication requires more than just an understanding of the words of the language being used. Effective communication requires an understanding of how the words of the language are being used by those speaking it.

Oral language develops naturally in children through their interaction with other people. Children's oral language development begins in the years prior to school, and usually without direct instruction (Brown, 2008). This development continues throughout childhood. When children use language to learn to read and write, direct instruction is needed, including instruction about how the language is organized.

Language is the foundation of reading and literacy instruction, and it is therefore important for teachers to understand how language works. When teachers and students with different mother tongues come together for learning experiences, it is the teachers' responsibility to foster linguistic understanding and acceptance within the classroom. It is also important for the teacher to know how to instruct students with diverse language skills.

Activity 1: Pair Work

Discuss the above definition of language with your partner and reflect your understanding to the class.

1.1.1 Origin of Language

Many theories of language origin exist (Yule, 2006). Two of the more popular hypotheses (beliefs) concerning the origin of language are the Divine Creation Hypothesis and the Natural Evolution Hypothesis. The Divine Creation Hypothesis states that language is the gift of gods and humans were created with an innate capacity to use language. According to this hypothesis, language and society are inseparable. Wherever humans exist, language exists.

The second hypothesis is the Natural Evolution Hypothesis. This hypothesis states that humans evolved to have more intelligence, which made language invention and learning possible. The simple vocalizations and gestures gave way to a system of language, perhaps within one or two generation(s). According to the Natural Evolution Hypothesis, as soon as humans developed the capacity for creative language, the next step would have been the development of a specific system of forms (words) with meanings.

Activity 2: Group Reflection

Answer the following questions based on the above explanations. Share your ideas within your group, and then reflect your group ideas to the class.

1. What are the basic ideas behind the Divine Creation Hypothesis and the Natural Evolution Hypothesis on the origin of language?

2. Compare and contrast the above hypotheses and reflect your position towards them. Then, explain why you support either of these hypotheses.

1.1.2 Characteristics of Language

Universal properties of language are categories or rules which all human languages have in common. Language is a systematic, human trait, and everyone using the language must understand the rules associated with the language. All languages contain the elements of **phonetics**, **phonology**, **morphology**, and **syntax.** These elements address different components of the language, particularly sounds and sound patterns, word structure, and sentence structure. All languages also use **word categories** such as noun and verb (Parker & Riley, 2010). Not only do languages use word categories, but they also have phrases and clauses to help clarify meaning (these will be discussed throughout the subsequent chapters of this module).

All languages have the characteristic of productivity (are able to add new words as needed), and variation (according to the situation or purpose of use; Fasold & Connor-Litton, 2006). Language productivity refers to the speakers' ability to create new words and add modifiers to phrases, creating long sentences that express specific ideas. As time moves on, new words are introduced to describe new technology or ideas. Every language operates in a speech community in which language variation is evident among the speakers. Dialects are part of language variation and allow communities to develop distinct cultures associated with their specific dialect. Since language is used for communication, it does not develop automatically without a culture and use. These are passed on to the younger generations.

Other specific characteristics of language include:

a) Language is a discrete symbolic system. This means that language is a system of spoken or written symbols (sounds and words) which people, who belong to a social group and participate in a culture, communicate. Language makes use of clearly distinguishable and identifiable symbols (sounds and words). One can clearly

distinguish between /s/, /I/ and /t/ in the word 'sit'. When a speaker wishes to communicate, he or she must use the language system that is understood by the listener (Mukherjee, 2016).

b) Language is human. Language is a purely human method of communicating ideas, emotions, and desires by means of a system of voluntarily produced symbols (Sapir, 1921).

c) Language is a form of social behavior. 'Language is the institution whereby humans communicate and interact with each other by means of habitually used oral-auditory arbitrary symbols' (Hall, 1968). Language must be acquired and learned, it does not pass from parent to a child genetically. Learning of language is made possible in society. A human child learns to speak the language of the community or group in which he or she is placed.

d) Language is arbitrary. "Language is a system of arbitrary vocal symbols by means of which a social group cooperates" (Bloch and Trager, 1972, as cited in Mukherjee, 2006). This means that there is no natural connection between sounds and symbols, or between symbols and their referents; for example, the animal known as 'dog' in English is also known as 'Woshicho' in Sidaamu Afoo; 'Kanaa' in Wolaytta; 'Wusha' in Amharic; 'Saree' in Afaan Oromoo; 'Wishichcho' in Hadiyyisa; 'Kelbi' in Tigrigna; and 'Ey' in Af-Soomaali. Thus, the relation between a word and its meaning is quite arbitrary; it is a matter of how we communicate the concept.

e) Language is dynamic. Language keeps changing at all the levels-sounds, words, word-meanings, and sentences. Language is changing, growing every day, and new words continue to be added to it in the course of time. Each generation modifies and changes its languages to adapt to changing needs and demands of the people who use it. Language is thus open-ended, modifiable, and extendable (Mukherjee, 2016).

Activity 3: Group Work

The instructor will divide the class into groups of 4-6, with each group comprised of females and males as much as possible. Each group will be assigned two of the characteristics of language listed above. In each group:

1. Summarize the characteristics of language assigned to your group using your own words.
2. Discuss how these two characteristics apply specifically to your mother tongue.

3. Share your findings with the class.

1.1.3 The Role of Language

Language has many functions within society. Language can be descriptive, evaluative, emotive, evocative, persuasive, interrogative, directive, performative, and recreational.

- **Descriptive:** When language is used to describe factual information or provide descriptive information about a situation or object (e.g., She usually wears a beautiful, hand woven, Ethiopian scarf; or, the girl drove the car down the road,).
- **Evaluative:** When language is used to make a value judgment. This type of language expresses opinions (e.g., Drinking alcohol seriously affects health; or, the coffee ceremony was nice,).
- **Emotive:** When language is used to express emotion (e.g., I am disappointed by her absence today; or, I strongly agree with you,).
- **Evocative:** When language is used to evoke an emotional response in an audience (e.g., Let's stand and work together to eradicate illiteracy from our country; or, this is important for our country's future,).
- **Persuasive:** When language is used to persuade someone to accept an idea, agree with a perspective, or act in a certain way (e.g., We should keep forests very carefully, because they are homes for wild animals,).
- **Interrogative:** When language is used to elicit information. This type of language requests information without necessarily using questions. (e.g., They will tell us why they refused to accompany us; or, I am waiting for your answer).
- **Directive:** When language is used to tell someone to do something (e.g., Take these pills twice a day,).
- **Performative:** When language is used to constitute an action (e.g., I sentence you to 10 years in prison,).
- **Recreational:** When language is used for fun or enjoyment, such as in the telling of a joke.

Language allows people to form a connection with one another and with their community. It also allows individuals to establish their identity.

1.1.4 Ethiopian Language Families

In Africa alone there are more than 2000 distinct languages, and Ethiopia has over 80 languages and 200 dialects (SIL, 2016)! The languages of the world are grouped into different super-families. These groupings are based on their ancestral relation, linguistic features, word order,

tone and stress, morphological structure, etc. From the four major language super-families in Africa (Niger-Congo, Afro-Asiatic, Nilo-Saharan, and Khoisan), the languages in Ethiopia belong to the Afro-Asiatic and the Nilo-Saharan super-families. These families are built on shared linguistic features such as morphology, syntax, and semantic features. The Cushitic, Omotic, and Semitic languages are subgroups of the greater Afro-Asiatic super-family. The Nilo-Saharan super-family is genetically distinct from Afro-Asiatic. Nilo-Saharan languages are spoken in the western part of Ethiopia along the border with Sudan, mainly in Gambella and Benishangul Gumuz regions (Hudson, 2003; Abebayehu & Endashaw, 2009).

1.1.4.1. Afro-Asiatic

A) CUSHITIC

The Cushitic languages are mostly spoken in central, southern and eastern Ethiopia (mainly in Afar, Oromia, Soomali, and SNNP regions). Cushitic languages spoken in Ethiopia include: Afaan Oromoo, Afar, Af-Soomali, Alabissa, Arbore, Awngi, Burji, Dhasenech, Gawada, Gedeuffa, Gidole, Hadiyyisa, Kambatisa, Kamir, Kemant, Konso, Libido, Mossiya, Qabena, Saho, Sidaamu Afoo, Tambarisa, and Tsamay, etc.

B) OMOTIC

The Omotic languages are predominantly spoken between the Lakes of Southern Rift Valley and the Omo River. The Omotic languages are also spoken in Benishangul Gumuz region. The Omotic languages spoken in Ethiopia are: Ari, Basket, Bench, Chara, Dime, Dizi, Gamo, Ganjule, Gofa, Hamer, Kachama, Kafinoon, Kontta, Korete, Male, Mao, Mello, Mer, Mocha, Nao, Oyda, She, Sheko, Shinasha, Wolaytta, Yemsa, Zayse, and Zergula, etc.

C) SEMITIC

The Semitic languages are spoken in northern, central and eastern Ethiopia, mainly in Tigray, Amhara, Harar, and the northern part of the SNNP regions. The Semitic languages spoken in Ethiopia are: Amharic, Argobba, Gurage varieties, Harari, Siltigna, and Tigrinya, etc.

1.1.4.2. NILO-SAHARAN

Languages categorized under the Nilo-Saharan super-family are largely spoken in the western part of Ethiopia along the border with Sudan, mainly in Gambella and Benshangul Gumuz regions. There are also some languages of this family spoken in SNNPR, particularly in South Omo Zone. The Nilo-Saharan languages spoken in Ethiopia include: Anywak, Berta, Bodi,

Fadashi, Gamili, Gebato, Gumuz, Koman, Kunama, Kwama, Mabaan, Me'en, Mesengo, Murssi, Nyangatom, Shita, and Suri, etc.

Activity 4: Pair Work

Working with a partner, discuss the 2 language families and 3 sub-families spoken in Ethiopia. Identify the language family of your mother tongue and identify other languages in the same family.

1. Are these languages in the Afro-Asiatic or Nilo-Saharan super-family?
2. What is the role of language in society?

1.2 Linguistics

Linguistics is the scientific study of language. As an academic discipline, the development of this subject has been relatively recent and rapid. Linguistics studies sounds, words, phrases, and meanings. It has the following subfields: phonetics, phonology, morphology, syntax, and semantics. **Phonetics** refers to the production and perception of speech sounds. **Phonology** refers to the organization, distribution, and function of speech sounds. **Morphology** refers to the structure of words and smaller meaning units. **Semantics** refers to the meaning of words, sentences or utterances. **Syntax** refers to the structure of phrases, clauses, and sentences.

1.2.1 Language Use

Linguistics is concerned with the study of language in interaction with other disciplines. There are many branches of linguistics. **Sociolinguistics** is one branch of linguistics which addresses aspects of the relationship between language and society. This branch is important for helping teachers understand language variation and change, and will help them support diverse students' literacy skills. Language is one of the most powerful emblems of social behaviour. We use language to send social messages about who we are, where we come from, and who we associate with. In social situations, it is common for individuals to be judged based on their language, dialect, or the words they choose to use. Given the social role of language, it makes sense that at least one part of language study should concentrate on the role of language in society (Wardhaugh, 2006).

Sociolinguists research how languages are used by the people, and how languages change over time. Languages are constantly changing, so teachers must maintain a positive, open linguistic attitude, particularly when their students are multilingual. Sociolinguistics has become an

increasingly important and popular field of study, as cultures around the world begin to form relations with each other. The relationship between language and society affects a wide range of experiences - from international meetings to individual relationships. The study of language in its social context tells us about how we organize our social relationships within a particular community (Romaine, 1994).

Another concern with language and society is the effect of specific social situations on language structure. People begin to create special words and ways of speaking when speakers from different language groups need a common language for communication, such as for trading. For example, people coming from two different languages need to communicate in order to trade; therefore, they use words from both languages and create new words in order to understand one another. This new language is called a pidgin. A pidgin becomes a creole language when children learn the pidgin as their mother tongue.

1.2.1.1. Language Variation

Activity 5: Brainstorming

What differences in language use have you noticed among the speakers of your mother tongue? Explain why those differences might happen.

The study of language variation is an important part of sociolinguistics because it addresses social factors. Languages vary from one place to another, from one social group to another, and from one situation to another. It is a universal feature of all human languages that they vary in different social groups. Language variation happens in many ways, and for many reasons. Languages may vary consciously or unconsciously for the speaker. Some of the ways language variation happens are: the meanings of words are changed, the pronunciations of words are changed, new words are adopted, old words are no longer used, sayings change, and the structure of phrases, clauses, and sentences are changed. Sometimes as children acquire the language or languages of their parents, the use or pronunciation is slightly modified. We vary our language or languages through life, as we adjust to new social conditions. Language is an important part of personal identity, and individuals sometimes modify their language to signal group identity. Two specific types of language variation are dialect and accent.

a) Dialect

Dialect is systematic differences in pronunciation, grammar, and vocabulary from other varieties of the same language. Everyone speaks dialect; in fact, many dialects at different levels of discourse. The people who speak a certain dialect are called a speech community. Everyone has small differences between the way they talk and the way even their family and best friends talk, creating minimal dialect. Hence, the term dialect carries no negative connotations but it simply a neutral level to refer to any variety of language, including the standard variety (Behravan, 2012).

b) Accent

The term accent is restricted to the description of aspects of pronunciation that identify where an individual speaker is from, regionally or socially. For example, when we compare Bole Amharic with countryside Amharic, both speakers use the Amharic language, but may pronounce words slightly differently. Note that accent refers only the pronunciation of the language, whereas dialect includes the pronunciation, grammar, and vocabulary used by a speaker.

1.2.1.2. Language Change

Often language changes as a result of contact with speakers of other languages and their cultures. Language change can also happen through modernization and civilization. A language change can occur at the word or a phrase levels. Another form of language change refers to changes to the structure and use of the language itself. The way people use the language changes, and these changes become permanent. In general, a language change can be in the form of phonological change, morphological change, syntactic change, or a semantic change.

Sociolinguists relate language change with code-mixing, code-switching, and code shifting. **Code** refers to the **modality** of a language component (the language: English, French, Amharic, Afaan Oromoo, etc.; or a dialect: American English, British English, Australian English, etc.).

a) Code Mixing

Code-mixing is the use of two different codes (languages or dialects) in the same conversation or interaction. This typically happens as bilingual children are acquiring language. This behavior may reflect the child's lack of differentiation between the two separate languages.

b) Code Switching

Code switching, on the other hand, is the intentional use of two different languages in a conversation or interaction (Ayeomoni, 2006). Code switching is a skilled use of language by bilinguals for symbolic, strategic, or communicative purposes. Code switching is sometimes done for the following reasons: to speak to a specific topic, to quote another person's speech, to express strong emotion, to express group identity, to exclude or include other people in the conversation, or to provide words unavailable in the language being spoken (Blom, Gumperz, & Hymes, 1972). Code-switching is common practice in the speech patterns of bilingual individuals who must converse in multiple languages, sometimes in a single social interaction. This skill is extremely important in multilingual or multi-dialectal communities.

"Sociolinguistics considers code mixing and code switching as the byproducts of bilingualism. In code-mixing, a fluent bilingual changes the language by using words from other language without any change at all in situation, whereas in code switching, anyone who speaks more than one language chooses between them according to circumstances and according to the language comprehensive to the persons addressed, the purpose is to get the right effect of communication" (Hudson, 1996, P. 53).

c) Code Shifting

Code shifting is when an individual or community changes the primary language he or she uses into another language. A code shift within a language can also happen when an individual begins speaking a dialect different from his or her native dialect. For example, when a person moves to a new region (or country) and begins to primarily speak the regional mother tongue (or dialect) instead of his or her own native mother tongue (or dialect). This shift is often permanent and may result in the loss of the native language or dialect. Specific to Ethiopia, the Gafat people are currently transitioning from primarily using the Gafat language to primarily using the Amharic language.

<<< Note for adapters: Provide appropriate examples from your MT on how code mixing, code switching, and code shifting occur. >>>

Activity 6: Group Discussion and Presentation

In your groups, answer following questions and present to the class.

1. What are the similarities and differences between languages and dialects?
2. Why do languages change over time?

3. When do code mixing, code switching, and code shifting happen?

1.3 International Phonetic Alphabet

Every language includes a unique set of speech sounds. How does one show the speech sounds in written form? Many linguists have faced this challenge. In 1888 the members of the International Phonetic Association created a set of written symbols to mark the speech sounds of various languages (Fasold & Connor-Linton, 2006). The **International Phonetic Alphabet (IPA)** provides a universal alphabet to show all speech sounds in the world's languages (the chart is available in the module appendix). Several features of the IPA are listed below. The IPA:

o Is used to show the speech sounds in written form.
o Has symbols that are based on the Roman alphabet and additional symbols from other sources.
o Has symbols that are consistent from language to language.
o Has a one-to-one relationship with language sounds. One IPA symbol represents one sound.
o Includes symbols for consonants, vowels, diacritics, and suprasegmentals.
o Helps us compare speech sounds that are spoken in different languages.

We can view all of the IPA symbols in the complete IPA chart. The chart has several parts. The first part shows the symbols for consonant speech sounds. These are most of the consonants of the world's languages. They are produced with an airstream from the lungs. Where symbols appear in pairs in the same block, the symbol written to the right is voiced. Shaded blocks show articulations that are not possible.

The second section of the IPA chart shows the consonants that are produced without airstream from the lungs. These consonants include the "clicks" used in some languages within African countries. The vowels section shows the vowel sounds are placed in different locations on a figure with four sides. It shows the shape of a speaker's tongue and helps us understand where the tongue is located for each vowel sound.

The final section of the IPA chart shows the **suprasegmental symbols** to indicate the stress, intonation, and tempo of speech (Small, 2016). This section also includes **Diacritic marks**, which are used when there is an alternate way to produce a speech sound, but these are mostly used by advanced linguists. The section on **tone** and word accents indicates how words can be pronounced using different tones (which indicates a different meaning in tonal languages).

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Chapter 1: Summary

Language is a complex, specialized skill which develops without conscious effort or formal instruction, strictly on the basis of needing to communicate. Language serves many functions and varies across locations, social identities of its speakers, and social contexts. Universal properties of human languages include: the elements of phonemics, phonology, morphology, and syntax; use word categories and phrases; have productivity (are able to add new words and can change the use of old words); contain variation (dialects and accents); and they change with time, location, and speakers. From a sociolinguistic perspective, language change includes code-mixing (where children use two dialects or languages during the same conversation), code-switching (intentional use of a different dialect or language during conversation), and code-shifting (when a speaker changes the primary dialect or language he or she speaks). Ethiopian languages are categorized in two super-families of language (Afro-Asiatic and Nilo-Saharan) based on their ancestral relation and shared linguistic features. The Cushitic, Omotic and Semitic languages belong to the Afro-Asiatic super-family and are mainly spoken in the Northern, Central, Southern, and Eastern parts of Ethiopia; whereas other Ethiopian languages categorized under the Nilo-Saharan super-family are largely spoken in the western part of Ethiopia along the border with Sudan, mainly in Gambella and Benishangul Gumuz regions. The International Phonetic Alphabet (IPA) is a set of symbols used to assign graphemes to language sounds without using the orthography of any specific language.

Chapter 1: Review Questions

Individually write the answers to the following questions.

1. Write the definition of language in your own words.
2. Mention at least three functions of language.
3. What are language variations?
4. What is language change?
5. List the Ethiopian language families and the general areas in which they are spoken.
6. What is the International Phonetic Alphabet (IPA), and how is it used?

Chapter 1: Self-Assessment

Below are self-assessment statements. Copy them into your exercise book and put a checkmark "√" mark on the spaces provided in the table if you agree or disagree with the statements. Make sure that you read again those sections that you marked as "disagree."

Statement	Agree	Disagree
1. I can define language.		
2. I can discuss the origin of language.		
3. I can describe the various characteristics of a language.		
4. I can discuss the role of language.		
5. I can identify the Ethiopian language families.		
6. I can define linguistics.		
7. I can explain the use of language in different social contexts.		
8. I can discuss how languages vary and change.		
9. I can explain how the International Phonetic Alphabet is used.		

Chapter 2: Phonetics

Outline of Contents

Introduction

In this chapter you will learn about phonetics, a branch of linguistics which studies speech sounds. Speech sounds in any language can be classified based on the way the speakers coordinate the speech organs. Speakers control the movement of their tongue, lips, and other speech organs, the direction and force airflow, and the on/off function of the vocal cords. An understanding of phonetics is important for multilingual education, and for teaching reading across languages. Phonetics helps us understand the phonemic part of graphophonemic awareness. Graphophonemic awareness is important for reading development. To put a spoken

language into writing, we use symbols (graphemes) to represent the sounds (phonemes). Phonetics has three different branches: Acoustic, Auditory and Articulatory phonetics. This chapter focuses on articulatory phonetics which contain speech organs, speech sounds, syllables, and suprasegmental features.

Learning Outcomes

At the end of this chapter student teachers will be able to:

- Define phonetics and its branches.
- Identify speech organs.
- Identify the place and manner of articulation of consonant sounds.
- Organize consonant sounds according to their place and manner of articulation and voice.
- Organize vowel sounds according to tongue height and advancement, and lip position.
- Describe speech sounds.
- Apply knowledge of the IPA symbols to phonetically transcribe words in their MT.
- Categorize syllable types of the mother tongue.
- Describe the sound structure in syllables of different syllable types.
- Explain suprasegmental features.

Teaching and learning techniques

- Interactive lecture
- Independent study and project work
- Cooperative learning and peer learning
- Group discussion

Assessment techniques

- Individual work, pair and group work
- Project work
- Peer reflection and learning
- Class work and homework

Instructional materials

- Diagram of speech organs
- IPA Chart (mainstream and Braille, if needed)

2.1   Definition of phonetics

Phonetics is the study of production and perception of speech sounds that occur in all languages. It is the science which studies the characteristics of human sound-making, especially those sounds used in speech, and provides methods for their description, classification and

transcription. Transcription of speech sounds involves assigning a separate written symbol to represent each distinct speech sound. The symbols often come from the International Phonetic Alphabet (IPA). You will recall from chapter one that the IPA symbols can be used to represent sounds spoken in any language.

Three branches of phonetics are generally recognized: articulatory, acoustic and auditory.

(a) articulatory phonetics is the study of the way speech sounds are made (articulated) by the speech organs;

(b) acoustic phonetics studies the physical properties of speech sounds, as transmitted between mouth and ear;

(c) auditory phonetics studies the perceptual response to speech sounds, as mediated by ear, auditory nerve and brain (Cristal, 2008).

According to Westermann and Ward (2011), the study of Phonetics:

- is important to understand how speech sounds are pronounced and perceived.
- explains how learners perceive sounds based on their early experiences in learning the mother tongue.
- describes how the learners must compare new sounds to known sounds when they are learning in another language.
- ensures accuracy across languages for how we describe and classify speech sounds.
- explains the phonemic part of graphophonemic awareness necessary to learn reading and writing.

Activity 1: Brainstorming

Think about the sounds of your mother tongue. Answer the questions individually and share to the whole class.

1. What are the difference and similarities in the way you say these sounds:

   [b] and [m], [f] and [v]?

2. How would you describe the sounds from question 1 to someone who had not heard them?

2.2 Articulatory Phonetics

As mentioned earlier, phonetics has several branches such as articulatory phonetics, acoustic phonetics and auditory phonetics. In this course, our primary interest will be in articulatory phonetics, which is the study of how speech sounds are made or articulated (Cristol, 2008). In articulatory phonetics, we investigate how speech sounds are produced using **speech organs**.

2.2.1 Speech Organs

Speech organs are the part of the mouth and throat used to articulate speech sounds. It is important for teachers to know the role of the speech organs in speaking. This section helps us to know the speech organs and how each works for speech. It is possible to divide the speech organs into two groups based on their ability to be moved: active articulators and passive articulators. The **active articulators** move towards the passive articulators in order to constrict and shape the air that is moving out from the lungs. Active articulators include lips, vocal cords which can be opened or closed, and the tongue, which moves up, down, forward, and backward. The **passive articulators** include the alveolar ridge, hard palate, and soft palate or velum, and lie along the top of the vocal tract.
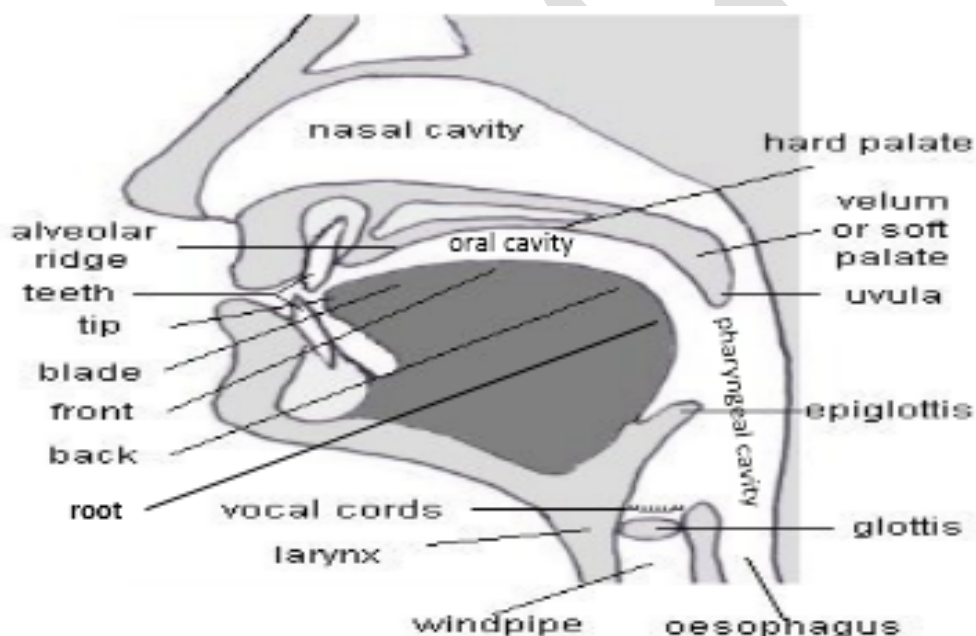
Other speech organs include the structures that help articulate individual speech sounds, such as the resonating cavities. The speech organs and resonating cavities are shown in the figure below, followed by a description of the major organs

Voice is made by the vocal folds in the larynx. The larynx is an important speech organ located on the front side of the neck. Also known as the "voice box", the larynx is home to the vocal folds which make voice happen. The vocal folds open and close rapidly as they vibrate to produce voice (sound). Airflow escapes through the vocal folds each time they open. When we are trying to speak, the airflow moves upward through a series of cavities until it escapes, either through our nose or our mouth. When we open the vocal folds without vocal fold vibration, we are able to shape the airflow into a variety of speech sounds that are voiceless. Voiceless speech sounds are produced without vibration of the vocal folds. Voiced speech sounds require vibration of the vocal folds. All vowels are considered voiced speech sounds. Some consonants

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are voiced while others are voiceless. For example, in English, the consonant /p/ is voiceless; the vocal folds do not vibrate to produce this speech sound. In contrast, a similar sound /b/ is voiced; the vocal folds must vibrate to produce the /b/ sound. If the vocal folds do not vibrate for /b/, the resulting sound is more like the voiceless/p/. A speaker can easily change voicing on and off between sounds in the same word. More information about the voicing feature in consonants is provided in a later section.

The space between the vocal folds is called the glottis. Sometimes we produce sounds in this glottal space. For example, the English consonant sound [h] does not require the vocal folds to vibrate. In Amharic, a sharp puff of air through the glottis is used for some consonants, including [k'] (see ejective consonants in the later section of this chapter).

Activity 2: Pair work

Answer the following questions in pairs.

Think about how you said the sounds [b] and [m], [f] and [v].

1. What speech organs did you use?
2. How would you describe using your breath?
3. Now contrast those with the sounds [k'], [g]. What is the difference?

Articulators:

- **Lips**
    - o Supported by the jaw
    - o Move in a rounded position or retracted (like a smile)
    - o Consider how your lips move when you say "who", "see", and "pear".
- **Teeth**
    - o Upper and lower teeth
    - o Consider how your teeth help you say: [f] in "fan" and [v] in "van".
    - o Consider how your teeth help you say [θ] in "think", and [ð] in "that"
- **Alveolar ridge**
    - o A bony ridge located just behind your teeth.
    - o Front of tongue touches ridge to produce sounds like [d], [l], [s], and [t].
- **Hard palate**
    - o The bony, bowl-shaped part of the roof of your mouth
    - o Separates the oral and nasal air spaces
    - o The tongue and hard palate come together to make sounds [ʃ] in "ship" and [j] in "you".
- **Soft palate, or velum**

- o Muscular structure behind the hard palate
- o Back of tongue reaches the velum to make sounds like [k] and [g]
- o The velum moves up and down to direct the air coming from the lungs and larynx.
  - ▪ A raised velum makes contact with the wall at the back of the throat, known as the pharyngeal wall. When the velum rises, it seals the nasal cavity off from the oral cavity. This process is called velopharyngeal closure. It keeps air out of the nasal cavity. We use a raised velum to make all oral sounds.
  - ▪ A lowered velum allows air to flow into the oral and nasal cavities. If the mouth is closed and the velum is lowered, then you can say nasal sounds such as [m], [n]. We use a lowered velum to make all nasal sounds.

- **Tongue**

The tongue is an important articulator for speech sounds. It is the main articulator for vowel sounds.

The tongue is also used in combination with other articulator structures to produce consonant sounds.

Various parts of the tongue assist with speech sound production: tip, front, central, back, and root.

Parts of the Tongue

Passive articulators which work with parts of tongue:
- · Tip: teeth
- · Front: alveolar ridge
- · Central: palate
- · Back: velum
- · Root: uvula.

- **Uvula**
  - o Fleshy structure at the back end of the velum.
  - o If you look inside your mouth through a mirror, you can see the uvula hanging down.
  - o The uvula connects with the root of the tongue to make uvular speech sounds.
  - o English does not include uvular speech sounds. However, other languages do, including many African languages.

In addition to the speech organs our speech system includes three major **air spaces** (pharyngeal, oral, and nasal cavities). In these air spaces, the airflow from the vocal folds can resonate, or
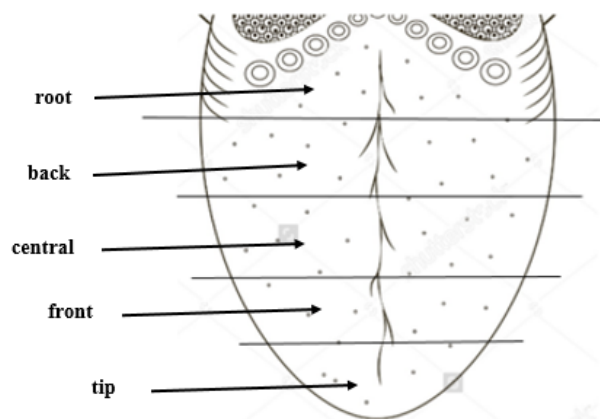
echo. Most speech sounds in English resonate in the oral cavity (the mouth). However, a few speech sounds resonate in the nasal cavity (nose), including nasal consonant sounds [m], [n], and [ŋ].

2.2.2 Speech Sounds

Speech sounds are sounds that are produced by speech organs of human beings; such as tongue, lips, vocal cords, alveolar ridge, palate, and velum. Sounds are the basic building blocks of words. They are the smallest units that make one word different from another (Moats, 2010). For example, the sound /d/ is what makes the word *dot* different from the word *pot*. The basic building blocks of sounds are consonants and vowels. The terms consonant and vowel are used to refer to segments of speech, not the letters or fidels that represent them (Moats, 2010), and can be written using symbols for each sound. This is called phonetic transcription, and requires the use of the IPA.

2.2.2.1 Consonants

A consonant is defined as a speech sound that is made with some restriction of the air stream. Consonant speech sounds often involve a combination of two articulators. We can classify consonants according to the following characteristics:

(a) Where in the mouth the stoppage or constriction is made (its **place of articulation**);

(b) Whether the sound is made with a fully stopped or merely constricted airstream (its **manner of articulation**);

(c) Whether or not the vocal folds are vibrating or not (**voicing).** Sounds are either **voiced** or **voiceless**;

We can compare and contrast the consonant speech sounds in any language based on the following components, where changing just one feature will create a different speech sound. To consider the similarities and differences between speech sounds in a language, we can focus on the following:

Place of Articulation: Where a sound is formed

Manner of Articulation: How it is formed

Voicing: Whether or not the vocal folds are vibrating

a)   Place of articulation

When a consonant sound is produced, there is a constriction somewhere along the vocal tract. The location of that air constriction is called the place of articulation. To know this, we must know which speech organs are passive to produce the consonant sound. Active articulators for each sound are described below. This tells us where in the vocal tract the speech sound is made.

Each place of articulation is defined with examples below.

Bilabials: [b] [p] [m] [w]

o   Lip closure and lip rounding (protrusion)

Labiodentals: [f] [v]

o   Constriction of lower lip and upper teeth

Interdentals: [θ] [ð]

o   Tongue tip/apex protrudes between the front teeth

Alveolars: [t] [d] [s] [z] [l] [n]

o   /d/ /t/; Tongue contact with alveolar ridge
o   /s/ /z/; Groove in the blade of the tongue right behind the alveolar ridge
o   /l/; Tongue tip contact with alveolar ridge
o   /n/; Tongue tip contact with alveolar ridge with sound resonance in nasal cavity

Retroflex: [ɳ], [ɖ], [ʈ]

o   a tip of the tongue is curled back in the direction of the front part of the hard palate.
o   Just behind the alveolar ridge.

Palatals: [ʃ] [ʒ] [ʧ] [ʤ] [ɹ] [j]

o   Central part of tongue elevated toward the palate
o   Tongue tip can be turned back (retroflex) or tongue blade can be bunched
o   Tongue constriction in the palatal area moves to the position of the following vowel

Velars: [k] [g] [ŋ] [ɯ] [k']

o   Back of the tongue contacts roof of mouth stopping airflow
o   Back of the tongue contacts roof of mouth stopping airflow but velopharynx is open to allow airflow to nasal cavity
o   Rounding of lips and arching of tongue near the velum

Uvulars: [q] [G]

o   Back of the tongue retracts to uvula.

Pharyngeals: [ʕ], [ħ]

o   a constriction between the pharyngeal walls and the tip of epiglottis which tilts backwards.
o   To a lesser degree, the lower part of the root of the tongue is also retracted.

Glottals: [h]

o   Airway constriction at the vocal folds
o   Brief closure of the vocal folds; not a phoneme (most often occurs as an allophonic variation of [t] and [d], ladder, butter).

b) Manner of articulation

Manner of articulation refers to the way the airstream changes because of the interaction of the articulators. There are names for classes of speech sounds based on their manner of articulation. In General American English, the manners of articulation include: Stops, Fricatives, Affricates,

Nasals, and Approximates. Approximates has further classes of Liquids, Glides, and Rhotics manner of articulation. Because each language has a different number of "manner" categories, the would-be teacher should be familiar with the manners of articulation for speech sounds in the language(s) of the classroom.

For General American English, each manner of articulation is defined with examples below.

Stops:

- o Complete closure of the vocal tract
- o Pressure builds up, when released = stop burst, stop plosive
- o A stop variation = flap; quick tapping of articulator against a surface; allophones of stops; also referred to as a tap [ɾ].
- o Stops = [p] [b] [t] [d] [k] [g]
  - o **p**ill, **b**ill, **t**ill, **d**ill, **k**ill, **g**ill

Fricatives:

- o Air is forced through a narrow constriction of the airway. The air escaping between the articulators causes air to escape with continuous noise.
- o 9 Fricatives = [f] [v] [θ] [ð] [s] [z] [ʃ] [ʒ] [h]
  - o lea**f**, lea**ve**, tee**th**, tee**the**, bu**s**, bu**zz**, ru**sh**, rou**ge**, **h**e

Affricates:

- o Combination of stop and fricative; pressure builds up and is then released; only in the palatal area
- o affricates = [ʧ] **ch**ur**ch**　　　　[dʒ] **j**u**dge**

Nasals:

- o Complete oral closure and open velopharynx
- o Nasals = [n] [m] [ŋ]　　　　ra**n**, ra**m**, ra**ng**

Liquids:

- o Vowel-like consonant but the sound energy is somewhat more constricted than for vowels.
- o 2 liquids =Lateral liquid and Rhotic liquid
- o Lateral = midline closure of articulators and lateral opening for sound to escape;
  　　　　　　　　1 lateral = [l] **L**ou

- o Rhotic = tongue tip is curled back and tongue is bunched in palatal area, sound passes through opening between tongue and palate; one rhotic = [ɹ]　**r**ue

Glides (Semi-vowels):

- o Vowel-like consonants, but the sound is more constricted than for vowels.
- o Articulators have a gliding motion
- o In English, a glide consonant is always followed by a vowel **sound** (even if it is written followed by a consonant).
  - o 2 glides = [j] and [w];　　**y**ou　　**w**oo　　**wh**en

Implosives: /ɓ/, /ɗ/, /ɠ/

- Non-pulmonic consonants made by drawing air into the mouth instead of bringing air up from the lungs.
- Similar to pulmonic consonants /b/, /d/, /g/, but require the opposite direction in airflow and result in a change in meaning at the word level.

In chapter 1 you were introduced to the International Phonetic Alphabet (IPA). Recall that the second box of symbols on the IPA chart includes phonetic symbols to represent the non-pulmonic consonants. Non-pulmonic consonants do not require air from the lungs. These include sounds that require anterior click releases, implosive consonants, and ejectives. Some languages in Ethiopia may include one or more of these types of non-pulmonic consonants.

Implosive consonants sound similar to the pulmonic stop/plosive consonants /b/, /d/, and /g/, but are used to show a change in meaning. The main difference is that the implosive consonant is produced by sucking air into the mouth, instead of pulling air from the lungs. For example, to make the implosive /ɓ/, you have to hold your breath briefly to increase the pressure in the oral cavity, close your lips as you would for the consonant/b/, and then draw in a little bit of air through your mouth. When the air is drawn or sucked into your mouth through your lips, is makes an ingressive sound. The symbols for implosive consonants are written with a little hook on the bottom of the consonant symbol:

As an example, the following languages in Ethiopia include the implosive phoneme /ɗ/.

- Omotic languages of Gamo, Gofa, Dawro, and Wolayttato, etc.
- Cushitic languages Afan Oromo, Af Somali, Sidaamu Afoo, Rendille
- Nilo-Saharan language of Berta

We can gather all of the English consonants that we have described into a single chart:

	Place of articulation						
		Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Plosive/Stop	p b			t d		k g	ʔ
Fricative		f v	θ ð	s z	ʃ ʒ		h
Affricate					ʧ ʤ		
Nasal	m			n		ŋ	
Approximant	w			l	j	w	

(Manner of articulation is the left vertical label spanning the rows.)

<<Adaptors: list affricates of your language in a separate chart>>

1. What does the term *speech sounds* mean?
2. Compare and contrast the consonants of your MT in terms of place and manner of articulation.

c) Voicing

Activity 4: Brainstorming

Complete the following exercise.

Make the sound [fffff], and keep it going for a count of five seconds. Now make the sound [vvvvv], and keep it going for a count of five seconds. Now alternate these two: [fffff—vvvvv—fffff---vvvvv]. What is different?

You probably noticed that [vvvvv] had a "buzz" that [fffff] did not. That "buzz" is caused by the vibrating of your vocal folds. You can check by putting your fingers on your throat as you alternate between [fffff] and [vvvvv] sounds. Now try the same exercises with the first sounds of the following words: *thigh/thy*, *sip/zip*.

Sounds produced with vibrating vocal folds are said to be **voiced**; those produced without vocal fold vibration are **voiceless**. Languages generally have voiced and voiceless sounds. Pairs of sounds that have the same place and manner of articulation but differ by voicing are called **cognates** or **minimal pairs**. The table below lists the cognate consonants (minimal pairs) of English. The symbols in [ ] are the phonetic representations for the sounds. The remaining English sounds are all voiced [m, n, ŋ, j, w, l], with the exception of [h] which is voiceless.

Place & Manner	Voiceless (no vocal fold vibration)	Voiced (vocal fold vibration)
Bilabial stops	**p**ay [p]	**b**ay [b]
Alveolar stops	**t**oe [t]	**d**oe [d]
Velar stops	**k**ill [k]	**g**ill [g]
Labiodental fricatives	**f**ie [f]	**v**ie [v]
Interdental fricatives	**th**igh [ɵ]	**th**y [ð]
Alveolar fricatives	**s**ip [s]	**z**ip [z]
Palatal fricatives	ru**sh** [ʃ]	rou**ge** [ʒ]
Palatal affricates	**ch**ump [ʧ]	**j**ump [ʤ]

It is important to know the place of articulation, manner of articulation, and voicing for the sounds in their language of instruction. This is true regardless of whether the written form of the language is based on letters (Latin script) or other symbols, fidels (Saba script). Using Amharic as an example of a language with sounds that are written within fidels, it is possible to create a chart to show the consonant sounds using the IPA.

Place of articulation – Amharic Consonants							
		Bilabial	**Labio-dental**	**Alveolar**	**Palatal**	**Velar**	**Glottal**
Plosive/ Stop	**voiceless**	p		T		k	?
	Voiced	b		d		g	
	ejective	p'		t'		k'	
Fricative	**voiceless**		f	S	ʃ		h
	voiced		v*	z	ʒ		
Affricate	**voiceless**				ʧ'		
	voiced				ʤ		
	ejective			s'	Č'		
Nasal	**voiced**	m		n	ɲ		
Lateral				l			
Flap/ trilled				ɾ			
Semi-vowels		w			J		

(Left vertical label: **Manner of articulation**)

Amharic consonant notes: Labialized consonants: [kʷ', gʷ, fʷ, pʷ, bʷ, tʷ, mʷ, hʷ]. /v*/ occurs in Amharic for words borrowed from English; it does not occur in Amharic. ['] = sounds that also can have ejective voicing. (IPA, 2005). These are sounds not described in the table and should be learned.

It is a feature of Amharic to see instances where a consonant may be pronounced as if the glide consonant /w/ immediately follows it, without fully articulating the glide /w/. The labialized consonants [kʷ', gʷ, fʷ, pʷ, bʷ, tʷ, mʷ, hʷ] in Amharic are produced as labial-velar sounds, requiring the lips and soft palate. The glided version of these consonants can be used to signify a slight change in meaning, and are known to be used in derivational morphology.

Examples of Amharic words or concepts that include a labialized consonant in their pronunciation are listed below (Ayalew, 2013).

Labialized consonant	Amharic pronunciation	English meaning
k'ʷ	k'ʷ ät't'ärä	"count"
k'ʷ	k'ʷ ärrät'ä	"cut"
bʷ	däb bʷ älä	"grow round"
bʷ	t-d bʷ äläb bʷ älä	"become round"
gʷ	gʷaggʷ a	"be eager"

With fidels, the chart below shows additional written examples of the lateralized consonants in Amharic:

Activity 5: Pair Work

Discuss questions in pairs, then report to the class.

1. Describe the movement of speech organs in the production of [f] and [s] sounds.
2. What are the passive and active articulators of sounds [t], [s], [b] and [k]?

Then, look at the table below. Think about the way you use the articulators to make sounds and words. List the sound or sounds made using that articulator. The first six are done for you as examples. In the word "nip", we use three articulators to make the sounds in the word (lips for [p], alveolar ridge and tongue tip for [n], and the tongue for [I]).

Word	Lips	Teeth	Alveolar ridge	Hard palate	Soft palate / velum	Tongue	Glottis	Uvula
Nip	[p]		[n]			[I]		
What	[w]		[t]			[a]		
Feel		[f]	[l]			[i:]		

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Who					[o]	[h]	
Ship	[p]		[ʃ]		[I]		
Cheese		[z]	[tʃ]		[i]		
Move							
Stop							
Open							
Book							
Lip							
Jump							

2.2.2.2 Vowels

A vowel is a speech sound that is formed without a significant constriction or blockage of air flow in the oral or pharyngeal cavity. In other words, the vocal tract is very much open when we speak vowel sounds. All vowels are voiced; they are produced with vibrating vocal folds (except when whispered). Vowels are produced solely by changes in jaw, tongue and lip positioning. The sound source for vowels is always at the level of the vocal folds. Vowels change along three dimensions depending on what the tongue and lips are doing: tongue height, tongue advancement, and lip rounding.

a) Tongue height

Tongue height refers to how high or how low the tongue is in the oral cavity when producing a vowel sound. We change the height of the tongue to produce different vowel sounds. Tongue height in the mouth ranges from high to mid to low height. The highest level is when the tongue is close to the top, or roof, of the mouth. When the tongue is placed this high in the mouth, the jaw is usually elevated or closed. With the tongue in the high tongue position in the mouth we are able to make the high vowels. The lowest level is when the tongue is in the bottom of the mouth and the jaw is usually down and open. When the tongue rests in the middle of the mouth, it is said to be in the mid height position.

The following words in English help show us the way the tongue height changes across vowel sounds. Say the following words (in bold) and notice how your tongue's movement changes for each: *meat, mitt, mate, met, mat*. You might notice that the words *meat* and *mat* have the largest

difference in tongue height for the vowels.

meat (high)

mitt (mid-high)

mate (mid)

met (mid-low)

mat (low)

b)   Tongue advancement

Tongue advancement refers to how far forward or back the tongue is in the oral cavity when producing a vowel sound. We can move the tongue back and forth within the mouth to make different vowel sounds. Tongue advancement includes front, central, and back positions of the tongue in the mouth. When the tongue is near the teeth and lips it is at the front of the mouth. When the tongue is closer to our soft palate (velum) and uvula, the tongue is in the back of the mouth. In between these positions is the tongue's central position. As the tongue moves forward in the mouth, we say the tongue is advancing (advancement). When the tongue is moving backward in the mouth, we say the tongue is retracting (retraction).

Look at the words in the list below. Say each set of words. Start with heat-hurt-hoot. Notice how your tongue is moving from the front to the back of your mouth with each vowel sound. Also try to read the words from back to front vowel position (hoot-hurt-heat).

	Front	**Central**	**Back**
1.	heat	hurt	hoot
2.	hat	hut	hot
3.	deed	dud	dude
4.	lick	lurk	look
5.	weigh	were	woe

A helpful way to remember tongue height and advancement for vowel sounds is the figure below. In the example below, the English vowels are listed based on their tongue height (high, mid, low) and tongue advancement (front, central, back). A pronunciation key is located below the vowel box.

English vowels:

	Front	Central	Back
High	i, ɪ		u, ʊ
Mid	e, ɛ	ə, ɝ, ɚ, ʌ	o, ɔ
Low	æ	a	ɑ

Phonetic Symbol	Example word in spelling
i	Bead
ɪ	Bid
E	Bayed
ɛ	Bed
æ	Bad
ʌ , ə	Bud
ɜ, ɚ	Bird
U	Booed
ʊ	Good
o	Bode
ɔ	Pawed
ɑ	Pod

a	

IPA (2005). American English vowels [a] is a mid, central vowel used in American English in some cases as a dialect variation of front vowel [æ] or back vowel [ɑ].

<<During adaptation, provide MT words in the chart above where possible>>

It is important for would-be teachers to know the tongue height and advancement of vowels sounds in their language of instruction. This is true regardless of whether the written form of the language is based on letters (Latin script) or fidels (Saba script). Using Amharic as an example of a language with sounds that are written within fidels, it is possible to create a chart to show the vowel sounds using the IPA. A pronunciation key is located below the vowel box.

In the Amharic vowel sounds box above, the symbols in parentheses ( ) are different ways that Amharic speakers say the central vowel sounds [ɨ] and [ə]. The table below includes vowels not found in English but which occur in Amharic.

Phonetic Symbol	Example word in phonetic symbols	Example word in Amharic spelling	Example word translated in English spelling
i	kis	ኪስ	"pocket"
ɨ	mɨn	ምን	"what?"
ɪ	jih - jɨh	ይህ	"this"

e	kʼes	ቄስ	"priest"
ɛ	jɛmmil	የሚል	"he who says"
a	bal	ባል	"husband"
ə	kəbt	ከብት	"cattle"
ɔ	gʷɔrf	ጎርፍ	"flood"
o	sʼom	ጾም	"fast"
u	bəkkul	በኩል	"direction"
ʊ	kʷʊlf	ቁልፍ	"lock"

IPA (2005). Amharic vowels.

    c) Lip position (rounded/retracted)

Vowel sounds can also be described by the shape the lips take. The shape of the lips for vowel production is either rounded or unrounded. By making the lips round we make the vocal tract longer. In English, only back and central vowels are rounded. There are no front rounded vowels in English, but there are in French, German, and Swedish. For the rounded position, the lips are in the shape of a circle. For the unrounded, or retracted, position the lips are pulled tighter along the sides, such as in a smile. You must change the shape of the lips to accurately pronounce the vowel sounds in the following words.

Say *cheese*. The vowel in this word, [i], has a retracted, unrounded lip shape.

Say *chose*. The vowel in this word, [o], has a rounded lip shape.

Vowel combinations

Sometimes a language can have other types of vowel sounds that are made from the combination of two or more other vowel sounds together. Vowels that move or glide from one vowel sound to another are called **diphthongs**. An example of a diphthong in English is the vowel sound "oy", as in *boy*, phonetically written as [ɔI] to show the combination of the back vowel [ɔ] and front vowel [i]. Say the word *boy*. After the [b] consonant at the beginning of the word, your mouth prepares to make the vowel sound "oy". First your mouth starts with a back tongue position and rounded lips. Your mouth moves quickly to a front tongue position with retracted, or smiley lips. This quick movement between vowel positions is called gliding between vowels. This gliding happens very quickly. Speakers and listeners often hear just one vowel sound, not two. Because diphthongs are two vowels in one, they have a longer duration than the single vowels. Some languages also have three and four vowel combinations, which are even longer in duration. Other languages do not use diphthong vowel sounds (UCLA, 2016).

Note: You may see the term *diphthong* used to describe a grapheme or written symbol that represents a consonant and two vowel sounds together. Amharic is a language where this happens. Amharic has diphthong fidels used in writing and spelling to indicate consonant and diphthongs sounds together in a syllable. This is a different use of the term *diphthong*.

Examples of English diphthongs are listed in the table below.

Diphthong	English
[ai]	As in *my*, *buy*, *ice*
[aʊ]	As in *cow*, *couch*
[ɔi]	As in *boy*, *moist*

Activity 6: Group Work

Work in a small group to complete these activities. Then, reflect to the whole class.

1. Pronounce the initial sounds of the following words and then determine the <u>place</u> of articulation of each.

   hand_____   foot _____
   belly _____   chin _____
   calf _____   knee _____

2. Identify the <u>manner</u> of articulation of the initial sounds in the following words.

   silly _____   crazy _____
   merry _____   dizzy _____
   loamy _____   funny _____

3. Which of the following words end with voiceless (-v) sounds and which end with voiced (+v) sounds?

   crash _____   smack _____
   bang _____   splant _____
   wham _____   fish _____

4. Describe the following consonant sounds in terms of voice and place/manner of articulation: [v], [m], [k'], [g], [f], [s], [h] and [n]

5. Describe the following vowel sounds according to their tongue height, tongue advancement, and lip position.

Item	Tongue height	Tongue advancement	Lip position
1. [a]	low	central	retracted
2. [e]			
3. [i]			
4. [o]			
5. [u]			

2.2.3 Phonetic Transcription

Standard alphabetic writing is unsatisfactory to represent the speech sounds across languages. It is not possible to write a transcription of speech sounds unless some standard, cnsistent method of representation is used (Paul, 2010). In 1888 the International Phonetic Association

(based in Paris) tackled the problem of how to precisely describe any sound the members might encounter in their efforts to describe all the languages of the world. They published symbols for a new alphabet, the International Phonetic Alphabet [IPA] (Fasold, 2006).

A writing system is considered phonetic when one sound corresponds to one symbol. A phonetic alphabet represents all of the sounds in the world's languages so that speech can be described with a common symbol system (Paul, 2010). This writing system reflects only the sounds of the language, not the orthography of the particular language. Therefore, the IPA can be used for languages written using Latin letters and those languages using fidels.

Fidel	Phonetic transcription	Notes
ተ	/ tɛ /, / tə/	There are two speech sounds in the pronunciation of ተ. The first is a consonant sound /t/. The second is a vowel sound. Two possible vowel pronunciations are provided.
ቱ	/tu/	There are two speech sounds (one consonant and one vowel sound) in the pronunciation of ቱ.
ቲ	/ti/	There are two speech sounds (one consonant and one vowel sound) in the pronunciation of ቲ.
ታ	/ta/	There are two speech sounds (one consonant and one vowel sound) in the pronunciation of ታ.
ቴ	/te/	There are two speech sounds (one consonant and one vowel sound) in the pronunciation of ቴ.
ት	/tɨ/	There are two speech sounds (one consonant and one vowel sound) in the pronunciation of ት.
ቶ	/to/	There are two speech sounds (one consonant and one vowel sound) in the pronunciation of ቶ

<<Adaptors: Modify the following table to include a sample word for each sound of the mother tongue and use the proper IPA symbols in the phonetic transcription. Use only words from YOUR respective mother tongue. This will require much discussion amongst the group. Place each IPA symbol that occurs in the MT in one box and follow it with a mother tongue word. Bold the letters/fidels in the MT that represent the symbol. >>

p – **p**op	b - **b**all	t – **t**en	d - **d**o	

Examples of mother tongue phonetic transcription:

<<Adaptors: ensure that words from English and all 7 MTs are represented below. We want to show that the same symbols are used across all 7 languages when words are written using the

IPA>>

MT Orthography	Phonetic Transcription	English Orthography
	English	
➢ Cat	[cæt]	
➢ Beat	[bit]	
➢ Happy	[hæpi]	
	Amharic	
➢ ከብት	[kəb̙t]	cattle
➢ ጾም	[s'ʷom]	fasting
➢ ምን	[mɨn]	what
	Afan Oromo	
➢ Sun	[sun]	that
➢ Nyaate	[ɲa:te]	ate
➢ Dhuunfaa	[ɗu:nfa:]	personal
	Tigrigna	
➢ ከብቲ	[kəb̙ti]	cattle
➢ ድሙ	[dɨm:u]	cat
➢ በለዐ	[bələʕə]	ate
	Sidaamu Afoo	
➢ Anga	[ʔaŋga]	hand
➢ Ille	[ʔille]	eye
➢ Farashsho	[faraʃ:o]	horse
	Hadiyissa	
➢ Aayya	[ʔaajja]	sister
➢ Anga	[ʔaŋga]	hand
➢ Buchcha	[butʃ:a]	soil
	Wolaytta	
➢ Qofa	[k'ofa]	idea
➢ Xaafa	[t'a:fa]	write
➢ Lo'o	[loʔo]	good
	Af-Somali	
➢ Bare	[bare]	teacher
➢ Arday	[ardai]	student
➢ Dugsi	[duksi]	school

Activity 7: Pair Work

Working in pairs or small groups, complete the following chart. Use phonetic transcription to write each word from your mother tongue using the IPA symbols. The first two have been done as examples.

No.	Mother tongue transcription	Phonetic transcription
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

<<adaptors: Choose 10 words in your mother tongue, ranging from simple to moderately complex, and enter then into the column under 'Mother tongue transcription'. Complete the phonetic transcription in the right column for the first 2 words>>

2.2.4 Syllables

A **syllable** is a unit of sound that has a vowel at its core. Syllables are typically larger than a single sound and smaller than a word. However, a syllable can sometimes be a word. Words include one or more syllables. For example, the word *book* is only one syllable, but the word *bookcase* is two syllables (book/case). Here we think of a syllable with the sounds we hear, not the letters or symbols that are written. Each syllable must have one or more vowel sounds to be complete. The syllable may also have one or more consonant sounds in addition to the vowel sound (some syllables have only a vowel, like the first syllable in the word *alone* – a/lone). The construction of a syllable is always organized around a vowel sound which is the syllable's center, or **nucleus.** The consonant sound or sounds that come before the nucleus make up the syllable **onset**. The sound or sounds following the vowel make up the **coda**, or syllable's end (also called **termination**).

The table below shows some examples.

	Onset	Nucleus	Termination	Examples
nucleus only	-	X	-	[e] in "a"
				[ai] in "I"
onset + nucleus	X	X	-	[bi] "bee"

nucleus + termination	-	X	X	[æt] in "at" [ɑf] in "off"
onset + nucleus + termination	X	X	X	[bɛd] in "bed"

a) Syllable perception

From the speaker's view, syllable stress involves using less or more energy to pronounce the syllable. From the listener's view, the syllable stress involves hearing a shorter or longer syllable, particularly the shorter or longer vowels (Harbers, 2013). Thus, vowels play a key role in our ability to perceive individual syllables in words. Intonation is also important for perceiving syllables. The speaker's changes in voice pitch, with rising and falling intonation, helps the listener detect syllable and word boundaries.

In speech, we listen for the vowel patterns as each vowel marks a different syllable. In spoken words we can count syllables based on the vowels produced. However, when we see the words written in print, there may be different rules for dividing syllables based on their spelling. For example, when we hear the word *happy*, we hear four speech sounds: [h], [æ], [p], [i]. When children spell the word *happy*, they see five letters and they are instructed to divide the syllables by drawing a line between the two "p" letters: hap/py. This helps them see the letters associated with the sounds in the word. However, it is important to show them the difference between sounds and letters, or fidels. It would be incorrect to teach them that the word *happy* has five sounds when it only has four sounds because we only say the [p] consonant sound one time, but spell it with two letters "pp".

b) Syllable Structure

In each language there are a variety of syllable structures. One of the common ways to describe syllable types is by syllables that are open or closed. When a syllable ends in a vowel sound (the syllable nucleus), and has no coda, or nothing after the vowel sound, then we say it is an open syllable. Syllables that do have a consonant sound at the end, and thus have a coda, are called closed syllables.

In addition to open vs. closed syllables, we can also look at the syllables by how simple or complex they are. The simplest syllable has only a vowel sound, and nothing else. A very complex syllable has many consonant sounds occurring before and after the vowel sound. Complex syllables that have blends and clusters of consonant sounds are more difficult for children to read and spell than simple syllables. It is difficult for children to hear each consonant sound in the cluster of consonant sounds (Moats, 2000). Below is a list of the syllable types that

occur in <<MT language>>, where C = consonant, V = vowel:

<<During adaptation, note which syllable patterns appear in the Mother Tongue and adapt only those>>

Syllable structure	Example word in English spelling
V	I
CV	me
VC	at
VCC	ask
CVC	cat
CCV	try
CCVC	skin
CVCC	cans
CCVCC	stops
CCCVC	scream
CCCVCC	squeaks
CCVCCC	starts
CCCVCCC	scrimped

Activity 8: Pair Work

Complete the following activities in pair and reflect to the class.

1. Show the structural parts of the following syllables on the chart given below.
   Syllables: men, skin, on-set, in-to-na-tion <<change these after you adapt the cart below>>,

Syllable	phonetic transcription	Onset	nucleus	coda	Open or Closed
man	mæn	m	æ	n	closed
and					
skin					
on					

set					
in					
to					
na (first syllable in na/tion)	ne	n	e	--	open
tion (second syllable in na/tion)					

<<adaptors: in the table above, choose syllables from your mother tongue, then list them at the top of the table in the instructions>>

2.2.5   Suprasegmental features

We usually speak with more than one word. When we speak in strings of words together (connected speech), we control other characteristics to make speech sound natural. These other characteristics are called **suprasegmental**. The prefix supra- means *above*, or *beyond*. The segment of speech can be the sound, syllable, word, or sentence. **Suprasegmentals** are features of speech that affect a whole sentence, including the stress, intonation, and timing aspects of speech production. The suprasegmental features tie the sounds, syllables, words and sentences together to make speech efficient and rhythmic. Each of these features is described in the sections below.

a)   Stress

<<During adaptation use a MT example in the paragraph below (and replace the word 'elephant')>>

Stress is when a syllable or word is pronounced longer, louder, higher-pitched, or more clearly than other syllables or words. Every word spoken by itself has at least one stressed syllable. A stressed syllable is spoken with more articulatory force. A stressed syllable is louder, longer in duration, and higher pitched than an unstressed syllable (Small, 2015). Words with many syllables will have at least one syllable that has more stress than the other syllables in the word. For example, the English word *elephant* has three syllables. One of the syllables in *elephant* has more articulatory force, or emphasis behind it. Can you tell which one? Many English speakers pronounce this as *ELephant*, where the first syllable is stressed. Now change the stress to the second syllable: *elEphant*. What does it sound like to speak with stress on the third and last syllable? *elePHANT*. As a general rule in English, prefixes and suffixes do not carry primary word stress.

Activity 9: Small Group Discussion

Discuss the following questions in group and answer orally.

1. Are there words that look the same when written, but have different meanings in your MT? If yes, do you know the reason why?
2. Read the following sentences and tell meaning difference. Do you know why?
   - ➢ "I am present." (PRESent: capitalized syllable is stressed)
   - ➢ "I will present the project today." (preSENT: capitalized syllable is stressed)

Sometimes a change in word stress helps us tell the difference in meaning between two words that are spelled the same way. In English, the word "present" could be pronounced as *PRESent* with the stress on the first syllable: "I am PRESent." (meaning, "I am here."), or "Thank you for the lovely PRESent." (meaning "Thank you for the gift."). Another option is that this word could have the stress on the second syllable: *preSENT*, "I will preSENT the project today." The word has a different meaning in the sentence based on which syllable is stressed. In the English language, the noun form always receives stress on the first syllable, and the verb form receives stress on the second syllable.

In addition to word stress, we also use sentence stress to express different meanings in speech. Sentence stress helps us emphasize the more important words in our message. Look at the sentence below. Say the sentence three different times, each time with more emphasis on the capitalized word to see how this changes the sentence-level stress.

1. Sam ate the CANDY from the store.
2. SAM ate the candy from the store.
3. Sam ate the candy from the STORE**.**

A speaker can use sentence stress in this way to indicate their intent, or their meaning. In sentence 1, the speaker is expressing importance that Sam ate candy (rather than something else) from the store; in sentence 2, the speaker is stressing the importance that Sam (rather than someone else) ate the candy from the store; and in sentence 3, the speaker is stressing the importance that the candy which was eaten came from the store (rather than from somewhere else). Sentence stress helps us tell the type of information that is being said, and notice the difference between new and old information. Students who are learning another language, or who have difficulty with their hearing, may have difficulty with understanding and speaking both the word and sentence stress patterns.

b) Intonation and Tone

Word and sentence stress involve changes in the pitch (highness, lowness) of the voice. Tone refers to the use of pitch to convey meaning as a word level; intonation refers to the use of pitch to convey meaning in a sentence or discourse level. We use different intonation patterns to ask a question, answer a question, state a fact, or make an exclamation. Intonation may also reflect a speaker's mood. Intonation that has an upward pitch movement is called *rising intonation*. Rising intonation is used when we ask questions that can be answered with a yes or no response: "Are you coming?", "Is it time yet?" or to convey an incomplete thought: "His name is Bill, isn't it?"

Intonation with a downward pitch pattern is called *falling intonation*. Falling intonation is often

used with complete statements and commands that express the final word ("It is time to go.", "That is it.") and questions that begin with Wh-words (Who, What, When, Where, Why, Which). "Where are you going?", "Who is coming?" It is possible to use both types of intonation (rising and falling) in one sentence. "He went to the store, didn't he?" We use both types of intonation patterns throughout our speech every day.

c) Length and Gemination

Length

Our speech can be described in its length, or duration. Tempo is a term used to describe the timing of speech. The average English-speaking adult speaks at a rate of 5 to 5.5 syllables per second (Small, 2015). The length of speech, its overall duration, and tempo depends on how long the individual sounds, syllables, words, and pauses between them might be. Long, tense vowels are spoken with greater tongue tension than short, lax vowels. In addition to the vowel sound's length, the length of a spoken syllable is also affected by the consonant that comes after the vowel. Voiced consonants are longer in length than voiceless consonants. For example, the long vowel [i] ("ea") in the word *bead* ([bid]) is longer in duration than the vowel [I] in the word *beat* ([bit]) because the [d] in *bead* is a voiced consonant, and the [t] in *beat* is voiceless. The same tense vowel [i] is represented in both words. However, the [i] in *bead* is longer because of the effect of the voiced consonant following it ([d]).

Gemination

Sometimes it is necessary for a consonant sound to be pronounced with slightly longer duration than the standard consonant would be. Examples of this in English include syllable and word boundaries that end and begin with the same consonant sound. In the examples below, we only pronounce the lengthened consonant sound one time. For example, in the word "bookkeeper", two words combine into one: "book", "keeper". But for the sake of fast and efficient speech, we usually pronounce only one of the /k/ consonant sounds in the middle of the word. It would take greater articulatory effort to say "book-keeper" with two distinct /k/ sounds than to lengthen one /k/ sound.

Gemination can be different across languages. In English, gemination only occurs at grammatical or word boundaries, and does not signify any differences in meaning (or lexical units). However, in some languages, the lengthening of a spoken consonant sound may reflect a changed meaning. This too happens when a consonant sound is articulated with greater length (gemination) as compared to the consonant's normal length.

The changes in pronunciation related to gemination may not always be represented in writing. In other words, the change in length of the consonant pronunciation usually does not result in changes to the way the sound or word are spelled. This is also true of lengthening vowel sounds in the world's languages. As with any type of lengthening pattern that may alter the meaning of a syllable or word, children who are learning to listen to, speak, read, and write a language must learn the gemination patterns that exist in the language.

A few examples of gemination in Amharic words are provided here with the Amharic pronunciation. When a consonant sound is longer in its duration due to gemination, it is listed as a double consonant sound in the following examples. *alä* = "he said", *allä* = "there is"; *yəmätall* = "he hits", *yəmmättall* = "he is hit". In Amharic, gemination helps contrast derivation and inflection patterns in the verb system (Ayalew, 2013).

Vowel and syllable duration are important factors in reading and writing. When children learn to read and spell words with many syllables, they are using their awareness of the sound changes in words. This is especially true when words are changed by adding additional morphemes (derivational morphology). Chapter 4 of this module provides additional information about derivational morphology. However, it is important here to know that these derivational changes sometimes cause phonetic changes related to vowel and syllable length and stress. The table below summarizes some of the phonetic changes that may occur in English words.

<<<During adaptation, think about the MT and provide examples of how words change when morphemes are affixed. This table should be only MT words and should discuss how two similar words are different in regard to pronunciation.>>>

Words	Changes	Type of phonetic change
Differ – different		Syllable regrouping
Sane – sanity	Mid front tense vowel [e] in "sane" becomes low front lax vowel [æ] in "'sanity".	Vowel alternation
Precise – precision	Tense diphthong vowel [aɪ] in "precise" becomes lax high front vowel [ɪ] in a stressed syllable in "pre'cision".	Vowel alternation
Electric – electricity	The first and second letter "c" in "electric" both represent the sound [k]. When the word changes to "electricity", the second letter "c" actually represents the [s] sound.	Consonant alternation
Perceive – perception	The [v] in the second syllable of "perceive" becomes [p] in the second syllable of "perception". There is also a vowel alternation in this word change: [i] to [ɛ].	Consonant alternation & Vowel alternation

|		
Present – presentation	In the word "present", the second syllable is stressed ("preSENT") whereas the third syllable in "presentation" is stressed ("presenTAtion") because of the new front tense vowel [e].	Stress alternation

*Modified from Moats, 2000.

Activity 10: Individual Work

Working individually, write an explanation for the terms below in your own words and provide an example for each.

- Tone/Intonation
- Stress (word and sentence)
- Length
- Gemination

Chapter 2: Summary
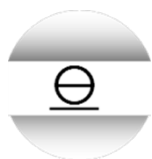
In this chapter you have learned about phonetics, the branch of linguistics that studies speech sounds. Phonetics has three different main branches; auditory phonetics, acoustic phonetics and articulatory phonetics. This chapter focuses on articulatory phonetics; which deals with the articulation of speech sounds. Speech sounds are divided into consonant and vowel sounds. Consonant sounds are differentiated by place of articulation, manner of articulation and voice. Vowels are differentiated by height and advancement of the tongue and position of the lips.

Phonetic transcription was introduced in the chapter. Standard alphabetic and fidel writing varies by the language, and therefore cannot represent speech sounds across all languages. To solve this problem, the International Phonetic Association created and published the International Phonetic Alphabet (IPA) to describe sounds of all languages in the world. A writing system is considered phonetic when one sound corresponds to one symbol. The IPA is such a system. Words from any language in the world can be written using the symbols of the IPA.

The syllable is the unit of language that has at least a vowel or a vowel and consonant/s combination. The vowel sound is always the center or nucleus of the syllables.

Suprasegmentals such as stress, tone, intonation and length/gemination, are features beyond segments. Superasegmental features affect syllables, words, and the whole sentence through changes in the pitch, emphasis, and tone to represent changes in meaning. Tone refers to the use of pitch to convey meaning at the word level; intonation refers to the use of pitch to convey meaning in a sentence or at the discourse level.

An understanding of phonetics is important for multilingual education, and for teaching reading across languages. You can explain how the consonant and vowel sounds are made by coordinating the speech organs. Speakers control the movement of their tongue, lips, and other speech organs, as well as the direction and force of the speech airflow, and vibration of the vocal cords. Stress is using more articulatory force on syllables. Length and gemination refer how long a given segment takes to be articulated.

Chapter 2: Review Questions

Individually write the answers to the following questions.

1. Determine what these groups of speech sounds have in common:
    (a). [t], [d], [n], [s], [z]
    (b). [m], [n], [ŋ]
    (c). [k], [g], [ŋ]
    (d). [t], [g], [d], [k], [p], [b]
2. What is the difference between an open and a closed syllable?
3. Describe the place, manner of articulation and voice for the first and last sounds of the following words.
    >   cheese
    >   laugh
    >   collage
    >   wealth

4. Fill in the blanks to describe the vowel symbols.

vowels	Tongue Height	Tongue Advancement	Lip Position
I	high	front	Unrounded
ɪ			
ɛ			
ɔ			
æ			
O			
U			

5. Fill in the blanks to describe the voice, manner, and place of articulation for each of these consonant sounds.

Consonants	Place of articulation	Manner of articulations	Voicing	Nasality
m	Bilabial	stop	Voiced	nasal
s				
g				
ʃ				
n				

d				
f				
Đ				

6. Match the questions raised under "A" with the terms under "B" which one related with the questions raised.

A	B
1. Which active articulator should I use?	a. stop, fricative, affricate
2. What kind of constriction should I make?	b. nasal/ oral
3. Where should I make the constriction?	c. bilabial, labiodental, dental, alveolar, palatal, velar, uvular
4. Should the velum be open or closed?	d. lips, tongue tip, tongue body, tongue root, larynx
5. What should I do with larynx?	e. voiced, voiceless

7. Define phonetics.
8. Define syllable.
9. What is the difference between tone and intonation? Provide an example of each.
10. Transcribe the following words using the IPA symbols to complete the chart.

Mother tongue transcription	Phonetic transcription

<<adaptors: choose 7 MT words and write them in the column on the left in the chart above>>

Project work 1

Observe primary text books; look how syllables are treated in grades 1-4 & 5-8 and write at least one page report based on your observation and discuss how this will impact the way you teach.

Chapter 2: Self-Assessment

Below are self-assessment statements. Copy them into your exercise book and put a "√" checkmark on the spaces provided in the table if you agree or if you disagree with the statements on the left. Make sure that you read again those sections that you marked as "disagree."

Statements	Agree	Disagree
1. I can define phonetics and its branches.		
2. I can identify speech organs.		
3. I can identify the place and manner of articulation of consonant sounds.		
4. I can organize consonant sounds according to their place and manner of articulation, and voice.		
5. I can organize vowels according to tongue height and advancement, and lip position.		
6. I can describe speech sounds.		
7. I can apply my knowledge of the IPA symbols to phonetically transcribe words in my mother tongue.		
8. I can categorize syllable types of my mother tongue.		
9. I can describe the sound structure in syllables of different syllable types.		
10. I can explain suprasegmental features.		
11. I can use my phonetic knowledge to help students who have pronunciation problems in the MT or are learning the MT as a second language		

Chapter 3: Phonology

Outline of Contents

3.1. Definition of phonology

3.2. Phoneme, Phone and Allophone

3.3. Phonotactics

3.4. Phonological processes

Introduction

This chapter deals with phonology, which focuses on the sound system of a language. It also discusses the concepts of phoneme, phone, and allophone; and helps student teachers learn to clearly distinguish among these concepts. Additionally, the role of phonotactics and phonological processes that support children in learning to read are addressed.

Learning Outcomes

At the end of this chapter, student teachers will be able to:

- Define phonology.
- Differentiate between phonemes, phones, and allophones.
- Explain the role of phonotactics in learning to read and write.
- Summarize phonological processes.

Teaching and Learning Techniques

- Interactive lecture
- Independent study
- Cooperative learning and peer learning
- Group discussion

Assessment Techniques

- Oral questions and answers

- Pair and group work

- Reading assignment

- Peer reflection and learning

Instructional Materials

- Pictures

- Charts

3.1 Definition of Phonology

Phonology is a branch of linguistics that describes the rules, systems, and patterns of speech sounds (phonemes) that occur in syllables and words. Phonology is the study of how phonemes are organized and how they work together to create words. This chapter includes a description of the sounds a language uses (a phonemic inventory) and the rules for how these sounds are organized. "Phonology is concerned with which speech sounds a language uses and how they are arranged and function within that language." (Bauman-Waengler, 2009, p. 7).

In phonology, we focus on the linguistic function of speech sounds. This is different than phonetics, which focuses on how the speech sounds are produced. For example, we are capable of producing many different sounds with our vocal tract. However, we only use a small number of all of the possible sounds to make the words in one language. Phonetics considers all of the possible speech sounds, across all languages. In contrast, phonology focuses on the way the speakers of a specific language use some of the many possible speech sounds to express meaning. Saba script languages follow a syllabic writing system, meaning one symbol represents one syllable. However, this chapter addresses the individual sounds within the fidels. For example, the word 'sint' has three fidels, but has four sounds (/s/ /ɨ/ /n/ /t/).

Activity 1 : **Pair Work**

In pairs, discuss the following question: What is the difference between phonology and phonetics? Then, reflect your understandings to the class.

3.2 Relation among Phoneme, Phone and Allophone

In chapter 2, you learned about phonetics, the study of speech sounds. Individual speech sounds are called **phonemes.** Phonemes are the smallest unit of sound that can signal a difference in

meaning. A series of phonemes (vowel and consonant sounds) are strung together to make syllables and words. You will recall from chapter 2 that each syllable must have at least one vowel phoneme.

Some words have very different sound structures. The English words map and potato have very different sound arrangements and number of syllables. Other words may differ only by one unit. The words *bee* and *beet* differ only by the last consonant phoneme /t/ in *beet*. The /t/ tells us that the words *beet* and *bee* are two different words with two different meanings.

If we look at a written word, the individual phonemes can be difficult to identify. A group of words that use the same phoneme can be compared. But be careful, it can be tricky if you only look at the letters.

Activity 2: Pair Work

Working in pairs, look at each line of words in the table below. Say each word in a line out loud and listen to the individual phonemes in the word. Determine which phoneme all of the words in the row have in common. Then, write the common phoneme in the first box. The first two lines have been completed as examples.

Phoneme	Word choices					
/z/	zinc	tans	Susan	raise	close	zip
/s/	box	sounds	pace	sun	mercy	bicycle
	grow	pig	begin	again	ghost	legs
	whose	hang	behind	behave	ahead	hole
	rough	funny	phoneme	off	graph	afar

How many phonemes does a language have? This depends on the language. For example, English has about 43 unique speech sounds, including 14 vowels, 3 diphthongs, and 26 consonants. In English orthography, we use 26 letters and letter combinations to represent the speech sounds in writing. Amharic has 27 consonant phonemes and 7 vowels. By comparison
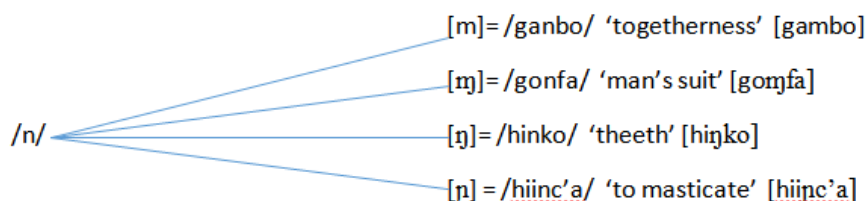
as a language with significantly fewer sounds, Spanish only has about 18 consonant phonemes, 5 vowel phonemes, and a few diphthongs that vary with Spanish dialects.

Phonemes are also abstract. Phones are the forms or physical representations of the phonemes. Together, the multiple phones of a single phoneme are called allophones. Phonemes are put in slashes / /, but phones are put in square brackets [ ]. In the example /**abəba/** and [**aβəβa**], we say that /b/ is a phoneme and [β] is a phone. The first one is abstract, and the second one is physical.

As stated above, **allophones** are the multiple subtle variations in how phonemes are pronounced, i.e., they are the different realizations of a phoneme. These changes in a phoneme are the result of the phonetic context of the word and can be influenced by other phonemes in the word. Allophones are members of the same phoneme family (Small, 2015). For example, in English, the two /p/ consonant phonemes in the word *pop* are produced differently because of their position in the word. The first /p/ is aspirated by the speaker, who pronounces the first /p/ with a small puff of air. In contrast, the last /p/ is usually not spoken in this way with the puff of air. In both cases, it is still the /p/ consonant phoneme, but with a slight variation is how the sound is produced. The meaning of the word has not changed. The two /p/ consonant phonemes in the word *pop* are allophones, variations of a single phoneme /p/. Another example is the /l/ sound in *lake* and *ball*. The position of the /l/ phoneme at the front of the word *lake* is a light /l/ sound whereas the /l/ at the end of *ball* is a dark /l/ phoneme. These are both the same phoneme /l/, but with a slight variation based on the position of the phoneme in the word.

<<When adapting, use a mother tongue example below>>

Allophones are found across words representing almost identical sounds. Note that in Sidaamu Afoo phoneme /n/ has the [m], [ɱ], [ŋ], [ɲ] sound allophones. Let's see this example of phoneme and its allophones in Sidaamu Afoo in the following diagram:


```
                    [m]= /ganbo/  'togetherness'  [gambo]

                    [ɱ]= /gonfa/  'man's suit'  [goɱfa]

/n/ <                [ŋ]= /hinko/  'theeth'  [hiŋko]

                    [ɲ] = /hiinc'a/  'to masticate'  [hiɲc'a]
```

These four sounds are allophones of phoneme /n/. in other word, /n/ will be realize as [m] [ɲ], [ɱ], [ŋ]

Activity 3: Group work and Reflection

In groups, do the following:

Explain the distinction between phoneme, phone and allophone. Then, provide an appropriate example from your mother tongue for phone, phoneme and allophone like the diagram above.

3.3 Phonotactics

Each language has rules for allowable combinations of phonemes in syllables and words. **Phonotactics** is a branch of phonology that explains how sounds are organized in syllables and words (Turnbull & Justice, 2012). **Phonotactic rules** refer to the ways the phonemes can and cannot be combined in the language. In English the phonotactic rules apply to syllable structure, consonant clusters, and vowel sequences.

Listeners use **phonotactic cues** to analyze and make sense of the speech stream. The phonotactic cues help the learner become sensitive to the likelihood that certain phonemes will occur in general and specific places in syllables and words (Jusczyk, Luce, & Charles-Luce, 1994; Turnbull & Justice, 2012). Some phoneme combinations do not occur in English words that may occur in other languages. **Phonotactic constraints** occur where the use of a phoneme is restricted and cannot be used in all word positions (beginning, middle, end of a word).

Early in language development, children learn to recognize the allowable phoneme patterns in their native language. Their ability to detect these regular patterns of sound helps them segment words from continuous speech. Most children are able to distinguish the difference between phoneme combinations that are permissible in their native language by the time they are 1 year old (Jusczyk, Luce, & Charles-Luce, 1994). When children are learning words in school, the regular patterns of phonotactics help children learn words with common phonotactic sequences more quickly than they can learn words with rare phonotactic sequences (Storkel, 2003). A few examples from the English language are provided in the table below.

<<During adaptation, compose a chart of phonotactic rules for the MT>>

Phonemes	Phonotactic rule	Phonotactic cue
/h/	Words can begin with /h/, *happy*, but words cannot end in /h/.	Child hears /h/ and knows this sound is at the beginning or middle of a word.

/gz/	The sound combination /gz/ cannot begin a syllable or word in English (phonological constraint). This combination can occur at the end of a syllable or word: *dogs* and *eggs* have the /gz/ phoneme combination at the end of the word.	Child hears the /gz/ and knows this sound combination probably marks the end of a syllable or word, not the beginning.
/ps/	Words cannot begin with the /ps/ sound combination, but words can end with /ps/, maps.	Child hears the /ps/ sound combination and knows it must be the end of a syllable or word.
/sk/ /ks/	In English the consonant clusters sk and ks cannot occur in the same places. Words or syllables can start or end with sk, such as *skate*, and *risk*, but ks can only occur at the end of a syllable or word: *kicks*.	Child hears the /sk/ and knows this sound combination probably marks the beginning or the end of a syllable or word. Child hears /ks/ and knows the sound combination is probably the end of a word, not the beginning.
/ʃ/ + other consonants	You will not find any English words with /ʃ/ and /v/ combined. However, this combination does exist in German phonotactics: *schwester* /ʃvɛstəʀ/. English does include other /ʃ/ combinations, such as /ʃ/ + /r/ in *shrink*, and /ʃ/ + /t/ in *wished*.	Child will not hear words with the phoneme combination /ʃ/ and /v/ unless they are words from another language that allow this pattern of phonemes. Child will hear words with /ʃ/ and other consonants combined. The phoneme /ʃ/ is challenging for children learning to spell words in English because there are many ways to spell /ʃ/.

When children learn to read English words, they will encounter some letter combinations that are allowable for the letters p and s to be together. For example, the word *psychology* begins with the p and s letters. At first glance it might seem as though this spelling pattern violates the phonotactics of the language. However, the word *psychology* does not begin with the phonemes /ps/. Rather, the word *psychology* begins with the phoneme /s/ followed by a diphthong vowel /aɪ/. It is important to remember that phonotactics is about the phoneme patterns in the syllable or word, not the letters or fidels (spelling).

<<adapters, provide an explanation of some of the phonotactic patterns children see when they begin reading and writing>>

3.4. Phonological Processes

Phonological processes are changes to the way individual sounds are pronounced. There are several types of phonological processes, and they can be classified according to the type of change they carry out. These processes are: assimilation, dissimilation, epenthesis, elision, metathesis, and reduplication.

Assimilations: where two different sounds become more alike. When we take voicing assimilation in English, the plural suffix agrees in voicing with a previous stop.

Let's say: 'two cats [kæ**ts**]'. Note that the /t/ is voiceless, so the /s/ is also voiceless. For 'two dogs [da**gz**]', the /g/ is voiced, therefore the /z/ is voiced. In both cases, the first sound influences the second sound to be voiceless and voiced, respectively. In Sidaamu Afoo /ʔanga/ 'hand' [ʔaŋga].This implies that /n/ is the nasal. [ŋ] is also nasal. Therefore, /n/ is changed into [ŋ] to be assimilated with /g/, /g/ and [ŋ] are similar in manner and place of articulation. In Tigirigna /gɨnbar/ 'forehead' [gɨmbar]. /b/ is bilabial and also [m] is bilabial. This becomes the same place of articulation in the influence of the second sound /b/.

<<adapters, include examples from your mother tongue>>

Dissimilation: when two sounds that are similar become different. A dissimilation is hearer-oriented: it makes easier for a hearer to distinguish sounds. The sounds are dissimilating themselves over long period of time. This change does not occur in some Ethiopian languages, and occurs very infrequently in a few languages. Below are some examples of dissimilation:

The English word *pilgrim* from Latin *peregrinus*, with first '**r**' dissimilating to '**l**'.   In ancient Greek, the word for school was [sxolio], with two adjacent voiceless affricatives. In Modern Greek, this has become [skolio], with a fricative-stop sequence instead. Dissimilation may also help hearers to realize two segments are present, not just one.

<<adapters, include examples from your mother tongue>>

Epentheses: are processes where additional segments are inserted into a domain. For example, in German: [p]   Amt   [am**p**t]   Hemd   [hem**p**t]

      [t]   Gans   [gan**t**s]   rennst   [rɛn**t**st]

In English, when we want to add plural suffix [z] to a word that already ends in [s] or [z], we insert a vowel [ɨ] to break up the two high-pitched fricatives: one dress [drɛss], two dresses [drɛsɨz]. For instance, in Sidaamu Afoo three consonant clusters are impermissible. Thus, in the stem of /abb-/ 'bring' when the suffix /-tu/ 'female causative' added it becomes /abbtu/. In order to solve such kind of unwanted three consonant clusters /i/ sound is inserted between the last sound /b/ and /t/ and it becomes *abbitu*.

<<adapters, include examples from your mother tongue>>

Elisions: are the opposite of epentheses, because they delete segments. For example, the Australian language deletes final vowel (s) from words of three or more syllables:

[yalulu] 'flame' deletes the last vowel sound /u/ and becomes [yalul].

In Sidaamu Afoo, /diʔageemmo/ 'I will not drink' becomes [dageemmo] when people speak fast. In this case, the sound /i/deleted in the influence of the nearest oral vowel /a/.

<<adapters, include examples from your mother tongue>>

Metathesis: is a process that switching the order of sounds. For example:

- In Amharic: [ki**br**it] becomes [kir**b**it].
- In Afaan Oromoo: [ʔa**fr**an] 'four of them' becomes [ʔa**rf**an], and [du**br**a] 'girl' becomes [du**rb**a].
- In Wolaytta [ga**war**a] 'cat' becomes [ga**raw**a].

Reduplication: is the process of copying word stem. For example in SidaamuAfoo:

/gana/ 'hit' /gangana/ 'hitting again and again' becomes /gan-gan-/. This is an example of full reduplication.

In Amharic, /tǝlǝk'/ 'big' becomes /tǝlalǝk'/ means 'very big (plural)'.

Partial reduplication processes also exist. It means that only some phonemes or syllables of the word are duplicated. An example of partial reduplication is *crisscross* (English).

<<adapters, include examples from your mother tongue>>

Activity 4: Group Discussion

Working in groups, complete the following actions.

1. Consider the Phonotactic rule chart on page 58. Why is it important for students to understand the phonotactic rules of their language when learning to read and write?

2. Summarize each of the above phonological processes. Then, identify those processes found in your MT and provide appropriate examples for each.

Chapter 3: Summary
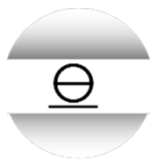
Phonology is a branch of linguistics that focuses on the sound system of a language. This helps teachers to better understand the ways children use the sound structure of the language in order to learn new words they hear and read. A phoneme is an individual sound, and a phonemic inventory can reveal all the phonemes used in a specific language. A phone is the phonetic realization of phoneme, and allophones are all the phones in the phoneme family. Phonotactics is the set of rules used for joining sounds to create words within a language. Children master phonotactic rules by learning the phonotocatic cues they hear as the language is spoken to them. Phonological processes can change the way individual phonemes are pronounced. A strong understanding on phonology and phonotactics can help teachers support diverse students in language and literacy development.

Chapter 3: Review Questions
Individually write the answers to the following questions.

1. Write definition of phonology using your own words.

2. How are the following terms related: phoneme, phone, and allophone? Provide an example.

3. Describe phonotactic rules in relation to your mother tongue.

4. Explain phonological processes briefly and identify the processes used in your mother tongue.

Chapter 3: Self-Assessment

Below are self-assessment statements. Copy them into your exercise book and put a "√" mark on the spaces provided in the table if you agree or disagree with the statements. Make sure that you read again those sections that you marked as "disagree."

Statements	Agree	Disagree
1. I can define phonology.		
2. I can differentiate between phonemes, phones, and allophones.		
3. I can explain the role of phonotactics in learning to read and write.		
4. I can summarize phonological processes.		

Chapter Four: Morphology

Outline of Contents

Introduction

This chapter introduces morphology, which is the study of the internal structure of words. Students will learn how to tell the difference among morphs, allomorphs, morphemes and words. Types of morphemes described are: free (lexical and functional) versus bound (inflectional and derivational) morphemes. Word formation processes and parts of speech (noun, verb, adjective, adverb, pronoun, preposition, conjunction, and interjection) are also discussed in detail.

Learning Outcomes

At the end of this chapter, student teachers will be able to:

- Define morphology.
- Compare and contrast morphemes and words.
- Identify the types of morphemes (free/bound, lexical/functional, and derivational/inflectional).

- Produce words with different inflections using inflectional morphemes.

- Produce words in different categories using derivational morphemes.

- Differentiate between morphemes, morphs, allomorphs.

- Explain the word formation processes.

- Identify parts of speech in their MT.

- Create a list of sample words for each part of speech.

Teaching and Learning Techniques

- Interactive lecture

- Task based approach

- Independent study

- Cooperative learning and peer learning

- Group production

Assessment Techniques

- Brainstorming questions

- Individual work

- Pair and group works

- Peer reflection

- Project work

Instructional Materials

- MT Grade 1-8 text books

- MT teacher's guide for Grades 1-8

Activity 1: Brainstorming

Answer the following question in pairs:

1. What are the differences between the following sets of words:

   cat/cats, able/unable, appoint/disappoint, will/unwillingly?

4.1 Definition of Morphology

Morphology is the branch of linguistics that is concerned with the relation between meaning and form, within words and between words. The term morphology originated from the Greek language as a combination of morph (meaning form) and logy (meaning to study). Therefore,

morphology is the study of the internal structure of words and their meaningful parts (Fasold, 2006). Morphological processes serve two main purposes in language variation: to create new words and to modify existing words. By changing word parts, speakers and/or writers can modify the meaning of a word to be more specific, more intense, or change its grammatical role in the sentence. People who read, write, and spell well are able to use their knowledge of morphology to help them determine the meanings of unfamiliar words and remember how words are spelled. The ability to use words well depends on a person's exposure to words and their sound structures, grammatical categories, meanings, and spellings.

4.2 Morphemes and Words

A **morpheme** is the smallest meaningful unit of grammatical form. The word morpheme is made up of two Greek morphemes, **morphos** means "form or structure" and **eme** means "an element or little piece of something" (Moats, 2010). Thus, it is the smallest unit of language that has meaning, and can be a whole word, a part of a word, or even a single syllable or phoneme. A morpheme is the smallest unit of meaning because it cannot be further broken down into smaller meaningful units. A single word may be composed of one or more morphemes. For example, think about these two words: tea and teas. The two words are very close in spelling and meaning, but they are two different words with different meanings. Although tea and teas are both words, the -s at the end of teas provides additional meaning and implies that there is more than one tea (tea + s). On the other hand, the word freeze can be divided in a similar way (free + ze), but this division does not produce two meaningful units because -ze does not mean anything on its own. Therefore, freeze is a single morpheme whereas teas is two morphemes.

A **word** is the fundamental building block of language and represents a concept, action, or feeling. It is the smallest independent unit of language, does not depend on other words for meaning, and can change position in a sentence (which may change the meaning of the sentence, but not the meaning of the word itself). All languages have words, and those words can carry a little or a lot of meaning.

Based on the number and types of morpheme(s) that words have, there are three different word categories: simple, complex, and compound words.

   A. **Simple words:** consist of a single free morpheme like tea, flower, elephant, or spirit.
   B. **Complex words:** consist of more than one bound morpheme like televise or exclude, or a bound morpheme and one or more free morphemes like lioness, telephone, eraser, pyromania, earthquakes.

C. **Compound words:** consist of two free morphemes. Compound words often imply concepts that can be expressed by grammatical constructions:

1. Subject + verb *earthquake* (when the earth quakes)

2. Verb + object *jumprope* (a rope used to play jumping games)

3. Verb + adverb *downpour* (when something pours down)

4. Subject + adjective *highchair* (a chair that is high)

Every word consists of at least one morpheme. Sometimes a word only has one morpheme. Every word in every language is composed of one or more morphemes.

4.3 Types of Morphemes

Morphemes are able to change the meaning or grammatical function of the root word when they are attached. In English, the suffix -s is added to a stem to produce a plural form of the word (i.e., *sock* becomes *socks*; *pea* becomes *peas*). Two main types of morphemes are free and bound morphemes. Free morphemes can be lexical or functional.

4.3.1 Free Morphemes

These are morphemes which can occur as separate words. We said that words are independent forms, and a simple word only consisting of one single morpheme is a free morpheme, it is a word by itself. There are two types of free morphemes: lexical and functional.

4.3.1.1 Lexical Morpheme

As to Yule (2006), the lexical morphemes are nouns, verbs, adjectives, and adverbs. For example, *house*, *work*, *tall*, *slow,* etc. These are used for the construction of new words in a language. This type of morpheme is easy to add new lexical morphemes to the language. They are treated as an 'open' class of words.

4.3.1.2 Functional Morpheme

Yule (2006) discusses, the functional morphemes are prepositions, conjunctions and interjections used to fulfill the grammatical aspects. Some examples in English are *to*, *and*, and *wow*. Unlike lexical, the functional morphemes do not allow adding new morphemes to the word, they are described as a 'closed' class of words.

Activity 2: Look at the following list of words in the table and tick (✓) either lexical or functional.

list of words	Lexical	Functional
Ethiopia		
Under		
Long		
Man		
Never		
School		
Between		
Moreover		
Attract		
And		
Learn		
Play		
Mere		

4.3.2 Bound Morphemes

Morphemes that must be attached to another morpheme to convey meaning are **bound morphemes**. If we break the word teas into its morphemes *tea + s*, we get one free morpheme (*tea*) and one bound morpheme (-*s*) because it requires a free morpheme (a **root word**, such as tea) to make a word. Bound morpheme can occur at the beginning and at the end of a word. They are called **prefixes** when they appear at the beginning of a word, for example *unhappy*, *dishonest*, *pretest*, and *impossible*, and they are called **suffixes** when they appear at the end of the word, for example *teas*, *working*, *tested*, and *slowly*. Based on their function, bound morphemes fall into two categories: inflectional and derivational morphemes.

4.3.2.1 Inflectional Morphemes

Inflectional morphemes inflect for person, gender, number, tense, and degree. Thus boy and boys, for example, are two different forms of the same word. In English, the basic form of a word (root) with no affix is the singular form, and an affix must be added to create the plural form. Some words in English are irregular and a new word is used for the plural. For example, *child/children*; *goose/geese*; etc.

Inflectional morphemes usually:

1. Do not change the word's class. The words *big*, *bigger*, and *biggest* are all adjectives. The words *write*, *writes*, and *writing* are all verbs.
2. Indicate relations between different words in the sentence. In the sentence 'Lee loves Kim,' -s is necessary because 'Lee love Kim,' is not the grammatically correct form of the verb love when using a single subject.

3. Occur outside any derivational morphemes. Thus in approv-al-s the final -s is inflectional, and appears at the very end of the word, outside the derivational morpheme -al.

English inflectional morphemes inflect for person, number, tense, comparison, etc. as shown in the table below:

	Inflects for:	Morphemes	Examples
Noun	Person/Number/Tense	-s	She love**s** me. Girl**s**
	Possessives	- **'s**	Student**'s** book.
		-s'	Students**'** books.
Verb	Tense	-s	He work**s.**
		-ed	He work**ed.**
		-ing	He is work**ing.**
		-en	He has tak**en** money.
Adjective	Comparative	-er	She is young**er** than me.
	Superlatives	-est	He is the young**est** of all.

4.3.2.2 Derivational Morphemes

Derivational morphemes make new words from former words, which changes the words' grammatical class (part of speech) and meaning. For example, the word *creation* is formed from the word create by adding a morpheme (-tion) the word *create* is a verb and the word *creation* is a noun.

Derivational morphemes usually:

1. Change the part of speech or the basic meaning of a word. Thus -ment added to a verb forms a noun (judge/ment).
2. Are selective in the types of words they can combine with, and may also have varying effects on meaning. Thus the suffix -hood occurs with just a few nouns such as brother(hood), neighbor(hood), and knight(hood), but not with most others. e.g.,

*friendhood, *daughterhood, or *candlehood. Some derivational affixes are quite regular in form and meaning.

3. Typically occur "inside" any inflectional affixes. Thus in governments, -ment, a derivational suffix, occurs before -s, an inflectional suffix.

The morphological process of modifying a word by adding either prefixes or suffixes to a root is called affixation (Parker and Riley 2010). Most of the world's languages use affixing to indicate grammatical information about a word or its relation to other words (Fasold, 2006). The most common affixes are prefixes and suffixes. In English, words can be formed by derivational processes, creating new words from bound and free morphemes that have prefixes, suffixes, or both. Thus, *mislead* has a prefix, *disrespectful* has both a prefix and a suffix, and *foolishness* has two suffixes. Prefixes are affixes added to the beginning of the word. For example, un- (uncover, undo, unhappy), dis- (displeased, disconnect), pre- (predetermine, prejudge, preview), re- (rewrite, rearrange), mis- (misbehave, misleading),il- (illegal, illogical), etc. The other affixes are suffixes, which are added to the end of the word. For example, -er (singer, performer), -ist (typist, pianist), -ly (mainly, friendly, quickly), -hood (neighborhood, childhood), -ful (helpful, powerful), -less (careless, restless), -ish (childish, foolish), -ism (criticism, nationalism),-ness (alertness, maleness), -dom (kingdom, freedom), etc. An **infix** is a third type of affix which is not normally used in English, but found in some other languages. As the term suggests, it is an affix that is incorporated inside another word. A **circumfix** is a set of affixes that work together and are attached to a root word in the beginning and the end of a word to create a new word with a slightly different meaning (Yule, 2006). Some other examples of derivational morphemes include:

Noun	Adjective	Derivational Morphemes
Atom	Atom**ic**	-ic
Parasite	Parasit**ic**	
Boss	Boss**y**	-y
Greed	Greed**y**	
Religion	Religi**ous**	-ous
Poison	Poison**ous**	
Nation	Nation**al**	-al
Virus	Vir**al**	
Noun	Verb	Morphemes

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Capital	Capital**ize**	-ize
Final	Final**ize**	
Verb	Noun	Morphemes
Confirm	Confirm**ation**	-ation
Inform	Inform**ation**	
Move	Move**ment**	-ment
Govern	Govern**ment**	
Adjective	Verb	Morphemes
Local	Local**ize**	-ize
Formal	Formal**ize**	

Derivational Morphology and Reading

It is important for student teachers to understand how children use derivational morphemes as they learn to read and write. Derivational morphology is the study of the structure of derived word forms. A child's knowledge of derivational morphemes develops gradually through the school years. They won't learn all of the derivational morphemes of a language in one or two years of school. Learning derivational morphemes is a complex process that takes time.

As children learn to read and write, they must learn to notice changes in words and word meanings. Many changes are the result of derivational morphemes. You learned above that derivational morphemes can change the part of speech of a word as well as change the word's meaning. Derivational morphemes also may change the phonetic sound structure of the original root word.
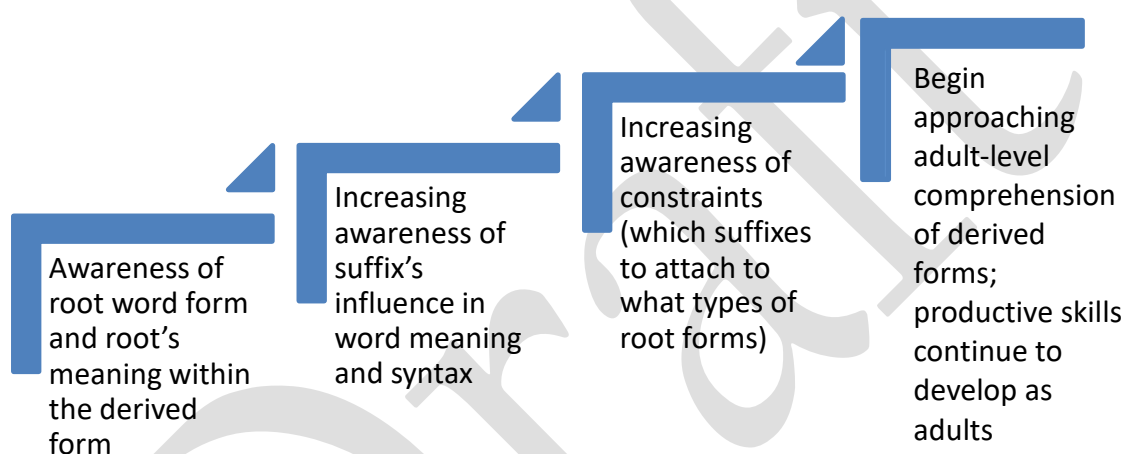
As children learn to spell, it helps them to be aware of any sound changes that happened. There are different amounts of sound change that can take place when we add morphemes to a word.

- When the root word does not have any phonetic sound changes, and the root word maintains its original pronunciation, then we say it had a <u>neutral phonetic change</u>. Neutral phonetic changes in derived words are easier to pronounce and understand. An example of this would be taking the root word *sharp*, add the suffix –ly (a derivational morpheme in English), creating a new word *sharply*. The sounds we hear in the original root word *sharp* are all still there in the new word, *sharply*, with two new sounds in the final morpheme
  –ly at the end of the word.
- When there is a phonetic sound change in the root word after adding new morphemes to it, we say the root word had a <u>non-neutral phonetic change</u>. Non-neutral phonetic changes in words are more difficult for children to pronounce correctly and to understand. For example, the sounds we hear in the root word *wide* are different than the sounds we hear in the word *width*. The vowel sound has changed, and the "th" replaces the "d" consonant at the end of the word.

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Derivational morphology helps children learn and create new words and word relationships in their language. The types of knowledge children gain by using derivational morphology are summarized below:

- Relational knowledge: Awareness that certain words are semantically related (e.g., *farm*, *farmer*) where as other words are not (e.g., *doll*, *dollar*).
- Syntactic knowledge: Knowledge of grammatical properties of derived forms (e.g., -ize makes *realize* a verb, -tion makes *realization* a noun).
- Distributional knowledge: Awareness of rules governing attachment of suffixes to roots to produce acceptable English words (e.g., we can attach *–ness* to *adverse* (adverseness) but not to *against* (againstness is not a word).

A summary of the development of derivational morphology is shown in the figure below.

Awareness of root word form and root's meaning within the derived form

Increasing awareness of suffix's influence in word meaning and syntax

Increasing awareness of constraints (which suffixes to attach to what types of root forms)

Begin approaching adult-level comprehension of derived forms; productive skills continue to develop as adults

The following points show the many ways derivational morphology is related to reading:

- A child's ability to define morphologically complex words is related to their word structure awareness (morphological awareness).

- By 3rd grade, morphological abilities relate to word-level reading ability.

- For students in the 5th grade and up, knowing the meaning of morphologically complex words is associated with their ability to read those words, and their scores on morphological tasks relate to their word and passage-level reading comprehension.

- Correct pronunciation of words depends on their awareness of morphemes and rules for the morphological changes (e.g., suffixes, phonetic changes)

- Older students and adults better comprehend verb and adjective suffixes than noun suffixes.

The following points show the many ways derivational morphology is related to spelling:

- Students in the 3rd & 4th grades use simple derived forms in their narrative writing.

- ⊙ Accurately using derived morphemes significantly relates to spelling, reading vocabulary, and reading comprehension.

- ⊙ In middle school and beyond, performance on morphological and spelling tasks continues to increase with age/grade level.

- ⊙ Students have better spelling on base than derived forms, and on neutral than non-neutral derived forms of words.

(Larson & Nipold, 2007)

? Activity 3: Pair Work

Working together in pairs, discuss the following list of words in the table. For each word, consider whether the word has an inflectional or derivational morpheme added. Then place an 'X' mark under either inflectional or derivational. Then identify the individual morphemes in each word. The first one has been completed for you.

| list of words	Inflectional	Derivational	Morphemes
Lived	**X**		**live/ed**
Decentralize			
Teacher			
Dislike			
Foreshadow			
Students			
Semicolon			
Going			
Tested			
wife's			
Biggest			
arrangement			

4.4 Relation among Morpheme, Morph and Allomorph

You have already learned about morphemes and how they can be classified. **Morphs** are different ways that morphemes can be pronounced. For example, the sound of the -s is different in socks and peas. The -s morpheme can have the /z/ sound or the /s/ sound. These alternative morphs are called allomorphs (Lardiere, 2014).

An **allomorph** is the variation in form or sound when attaching a morpheme to different words. The chart below shows examples of the allomorphs of the -s suffix, in which the variants of –s (the plural marker) is shown (Lardiere, 2014).

/s/	/z/	/iz/
puffs	peas	peaches
charts	charms	charges
myths	mills	misses
cakes	caves	cases
flaps	flags	flashes
plates	plays	phrases

Generally, what the above table shows is that the morpheme **–s** in words like puffs /s/, peas /z/, and peaches /iz/ is pronounced as different morphs, and the entire family of the morpheme **–s** is considered as allomorphs. See the diagram below.
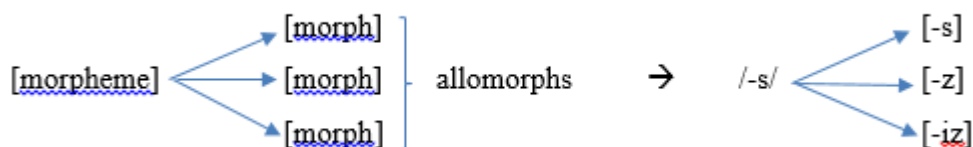
4.5 Word Formation Processes

There are different ways new words are added to a language. One can quickly understand a new word in a language and accept the use of different forms of that new word. This ability must come from the fact that there is a lot of regularity in the word-formation processes. Some of the basic ways new words can be created are discussed below.

Coinage: one of the processes of word formation in English is the invention of totally new words. The most typical sources are invented trade names for commercial products that become general words (usually without capital letters) for any version of that product. Older examples are aspirin, nylon, vaseline and zipper; more recent examples are kleenex, teflon, tylenol and xerox. Some new words come from the sciences (e.g. te(tra)-fl(uor)-on) but, after their first coinage, they tend to become everyday words in the language.

Borrowing: this is using words from other languages. Throughout its history, the English language has adopted a large number of words from other languages, including croissant (French), dope (Dutch), lilac (Persian), piano (Italian), pretzel (German), sofa (Arabic), tattoo (Tahitian), tycoon (Japanese), yogurt (Turkish) and zebra (Bantu) (Yule, 2010). If the word

was not coined by the language, then it was borrowed. For example, the English word 'nylon' was coined in another language but entered the Ethiopian languages through borrowing.

Acronyms: acronyms are new words formed from the initial letters of a set of other words. These can be forms such as CD 'compact disk' or VCR 'video cassette recorder' where the pronunciation consists of saying each separate letter. More typically, acronyms are pronounced as new single words, as in NATO, NASA, USAID or UNESCO.

<<Adapters: Provide examples from MT for each process>>

4.6 The Parts of Speech

The technical terms used to describe each part of speech are illustrated and definitions for each term are listed below. Shappeck and Welch (2012) as well as Yule (2006) describe the parts of speech:

Nouns are words used to refer to people (*boy*), objects (*backpack*), animals (*dog*), places (*school*), qualities (*roughness*), phenomena (*earthquake*) and abstract ideas (*love*).

Verbs show either action (transitive or intransitive) or state of being (linking verbs). For example, action verbs like: *go*, *talk* and states of being involving people and things in events (Jessica *is* ill and *has* a sore throat so she *can't talk* or *go* anywhere).

Adjectives are words used typically used to describe or to modify nouns and pronouns by providing more information. For example, in the phrases like '*happy* people', '*large* objects', and 'a *strange* experience' (the italicized words show adjectives).

Adverbs are words used, typically to modify or qualify verbs, adjectives or other adverbs by providing more information. Some adverbs (*really*, *very*) are used with adjectives to modify information about things ('*Really* large objects move *slowly*.' 'I had a *very* strange experience yesterday').

Prepositions are words which relate a noun or pronoun to the rest of the clause in the sentence by providing information about time (*at* five o'clock, *in* the morning), place (*on* the table, *near* the window) and other connections (*with* a knife, *without* a thought) involving actions and things.

Pronouns are words used in place of a noun, like *she*, *herself*, *they*, *it*, *you*, etc. Pronouns typically refer to people and things already known or previously discussed in the sentence or paragraph. (*She* talks to *herself*. *They* said it belonged to *you*.).

Conjunctions are words like *and*, *but*, *because*, and *when* that are used to make connections and indicate relationships between events. For example, the italicized words are conjunctions: 'Her husband was so sweet *and* he helped her a lot *because* she couldn't do much *when* she was pregnant'.

Interjections are words used to express emotions, feelings, etc. Some examples include: *Boo*! *Oops*! *Ouch*! *Wow*! and *Oh*!

Activity 4: Group work

Read the following paragraph carefully and list up to 3 words for each part of speech discussed above. The first word has been added for you.

Once upon a time, a clever monkey lived in a tree that bore juicy, red rose apples. One day, a crocodile swam up to that tree and told the monkey that he was in search of food as he was very hungry. The monkey offered him a few rose apples. "Yum!" The crocodile enjoyed them very much. The crocodile returned the next day. Soon the two became very good friends. The crocodile told the monkey that he had a wife and that they lived on the other side of the river. So the kind monkey offered him some extra rose apples to take home to his wife. The crocodile's wife loved the rose apples and said "Wow! How beautiful is this!" Then, she made her husband promise to get her some every day…

Nouns	monkey		
Verbs			
Adjectives			
Adverbs			
Prepositions			
Pronouns			
Conjunctions			
Interjections			

Project Work 2: Analysis of Primary School MT Curriculum on Morphological Issues or Contents

Find grade 5-8 MT materials. The instructor will assign one of the following topics to each group: (a) morphemes, (b) word formation processes, or (c) parts of speech. Each group will observe how their topic is addressed in the curriculum, and then present two pages report to the class. Notice: In the report, include the following points:

- The objective that addresses the selected topic,
- Examples and activities in which the topic is exercised, and
- Lessons topic, day, week, and semester in which the topic is practiced.

Chapter 4: Summary

Morphology is the study of the internal structure of words. It examines the way word parts are combined to make words. All languages have words that are made of morphemes. Every word is made up of at least one morpheme, and can include several morphemes. Some morphemes can be words by themselves - these are called free morphemes. Other morphemes cannot be words by themselves, but are added to other morphemes to make words. These include prefixes, suffixes, or infixes, and are called bound morphemes. Words can be simple, compound, or complex, based on how many morphemes are used to make the word, and the type of the morphemes used to make the word. Free morphemes can be lexical or functional. Lexical morphemes can have other morphemes attached to make compound or complex words, whereas functional morphemes cannot have other morphemes added to them. Bound morphemes can be inflectional or derivational. Inflectional morphemes inflect a word to change its tense, number, gender, comparability, etc. Derivational morphemes change a word's part of speech. For example, a noun can be turned into an adjective, an adjective can be turned into a noun, etc. Morphs are the specific ways that morphemes are pronounced based on the other morphemes and phonemes in the word. Allomorphs make up the family of different ways the same morpheme is written and is pronounced when added to various words. Although they may sound or appear slightly different, allomorphs carry the same meaning. Words can be added to a language different ways, called word formation processes. Some of the basic word formation processes are: coinage, borrowing, and acronyms. English has eight parts of speech: noun, verb, adjective, adverb, pronoun, preposition, conjunction, and interjection.

Chapter 4: Review Questions
Individually write the answers to the following questions.

1. What is morphology?

2. Compare and contrast the terms: *word* and *morpheme.*

3. Compare and contrast free/bound, lexical/functional, and derivational/inflectional morphemes.

4. Describe how inflectional morphemes are used and provide 5 examples of words using inflectional morphemes.

5. Describe how derivational morphemes are used and provide 5 examples of words using derivational morphemes.

6. Discuss the ways in which new words in a language are created and added to the language.

7. List the parts of speech and give 3 examples for each.

Chapter 4: Self-Assessment

Below are self-assessment statements. Copy them into your exercise book and put a "√" checkmark on the spaces provided in the table if you agree or if you disagree with the statements. Make sure that you read again those sections that you marked as "disagree."

Statement	Agree	Disagree
1. I can define morphology.		
2. I can compare and contrast morphemes and words.		
3. I can identify types of morphemes (free/bound, lexical/functional, and derivational/inflectional).		

4. I can produce words with different inflections using inflectional morphemes.		
5. I can produce words in different categories using derivational morphemes.		
6. I can differentiate between morphemes, morphs, allomorphs.		
7. I can explain the word formation processes.		
8. I can identify parts of speech in my mother tongue.		
9. I can create a list of sample words for each part of speech.		

Chapter 5: Syntax

Outline of Contents

INTRODUCTION

This last chapter addresses syntax. Previous chapters have discussed linguistics at the sound and individual word levels. Syntax focuses on sentence structure and order of sentence parts. These sentence parts include phrases (such as noun phrases, verb phrases, etc.) and clauses (such as independent and dependent clauses). Overall syntax patterns can be observed using tree diagrams. In considering discourse, a sentence's tense provides more information about when actions take place (in the past, present, or future), and voice sets the emotional tone of the conversation or written text.

At the end of this chapter, student teacher will be able to:

- Define syntax.

- Explain the word order of their MT for different sentence types.

- Describe the types of phrases used in their MT.

- Illustrate the structure of phrases in sentences using tree diagrams.

- Describe the types of clauses used in their MT.

- Explain the difference between dependent and independent clauses.

- Construct sentences with different tenses.

- Construct sentences in both active and passive voices.

TEACHING AND LEARNING TECHNIQUES

- Interactive lecture

- Independent study

- Group discussion

- Cooperative and peer learning

ASSESSMENT TECHNIQUES

- Question and answer

- Individual work, pair and group work

- Reflection

Instructional Materials

- Primary MT materials

5.1. SYNTAX

Syntax is the study of the structure of language, particularly the way in which words can be put together to create meaningful phrases, clauses, or sentences. Syntax is different from morphology because it deals with how words are combined to make phrases and sentences. Remember that morphology deals with how word parts are combined to make words. Teachers need to understand how words can be combined to create phrases and sentences that make sense to the person reading or listening. In order to do this, they must understand how words and phrases are classified into categories or **parts of speech**.

5.2 SENTENCES

A sentence is a group of words that communicate a complete idea. There are two basic and necessary parts for a sentence to be complete: the **subject** and the **predicate**. The **subject** identifies the topic of the sentence. The **predicate** provides information about the topic of the sentence. The subject must include a noun, a noun phrase (NP) or a clause that acts like a noun. The predicate must include a verb.

<<consider how to adapt this if a single word can include multiple parts of speech>>

In the example sentence, 'The young boy happily eats some shiro with his family', 'The young boy' is the subject and 'happily eats some shiro with his family' is the predicate.

Subject   Predicate

The young boy | happily eats some shiro with his family.

Compound Subjects

Sentences can have compound subjects. A **compound subject** is when there is more than one noun in the subject. For example, the sentence below has a compound subject:

Subject   Predicate

The young boy and his sister | happily eat some shiro with their family.

Notice that the verb *eats* must be changed to *eat* for English subject-verb agreement and the word *his* must be changed to *their* in the predicate to reflect more than one person in the subject (*boy* and *sister*).

Compound Predicates

Sentences can also have compound predicates. A **compound predicate** is when there is more than one action taking place in the predicate. For example, the sentence below has a compound predicate:

Subject   Predicate

The young boy | happily makes and eats some shiro with his family.

Notice that there are now two verbs in the predicate: *makes* and *eats*, reflecting more than one action taking place in the predicate. A sentence can also have both a compound subject and a compound predicate.

The sentence can be sub-divided into different categories based on grammatical structure or function. Since the focus of this unit is syntax, we will focus on the structure and parts of sentences, particularly the simple sentence.

5.2.1 WORD ORDER OF A SENTENCE

Word order refers to how the words are organized and sequenced in a sentence. Basic word order of English is Subject + Verb + Object (S+V+O). The object is the item which receives the action from the verb. In English, this look like: She kicks the ball (S – She, V – kicks - Object –ball. In Amharic, the basic word order is Subject + Object + Verb (S + O + V). For example: Macchiato ifeligalhu (S – implied, O – macchiato, V – ifeligalhu). Beyond the basic structure of the sentence, modifying words (adjectives and adverbs) usually follow a certain order.

1.   Order of adjectives

In a sentence we may have more than one adjective at a time. At this time they should follow the following order.

Adjective of quantity, quality, size, age, shape, color, proper adjectives, purpose.

E.g., 'Two (quantity) beautiful (quality) big (size) old (age) round-faced (shape) black (color) Ethiopian (proper) women were training to drive a car.'

2.   Order of adverbs

In a descriptive sentence, there may be more than one adverb, although we rarely see sentences with more than two adverbs modifying a verb. At this time they should follow the following order;

Adverb of manner, place, frequency, time, purpose.

E.g., 'He was working quickly (manner) all day (time).' or 'She quietly (manner) walked away (place) this morning (time).'

5.2.2 STRUCTURE OF A SENTENCE

There are five basic sentence structures in English. These are:

A. Subject + verb.

  E.g. She reads; She sings.

B. Subject + verb + noun (object).

  E.g. She cooks a meal; She wrote a letter.

In the above sentences the nouns meal and letter are used as an object because the verbs are transitive.

C. Subject + verb + adjective.

  E.g. She is beautiful; They are tall.

D. Subject + verb + adverb.

  E.g. They speak clearly; She writes quickly.

E. Subject + verb + noun (compliment).

  E.g. They are teachers; He is a teacher.

In the above sentence the nouns teachers and teacher are used as a compliment since the verbs are not verbs of action.

? **Activity 1: Group Work**

In small groups, read the following sentences. The words in each sentence, which have been taken from primary MT text books, are not in the correct order. Rearrange the words in each sentence to reflect appropriate word order.

1. **Xx**
2. **Xx**
3. **Xx**
4. **Xx**
5. **Xx**

<<Adaptors: Choose 5 example sentences from your respective primary MT text books, grades 5-8. Present the sentences with the words out of order.>>

5.3 PHRASES

In the English language, the main parts of speech are: nouns, verbs, adjectives, adverbs, and prepositions. Understanding these main word categories help us to see the types of phrases possible in the language. A phrase is one or more words that substitute for a part of speech. For example, noun phrases act as nouns, verb phrases act as verbs, and adjective phrases act as adjectives.

5.3.1 Noun Phrase

A noun phrase is a phrase made up of a noun or a noun plus other words, such as a determiner (a, this, those, etc) and an adjective or adjective phrase. Noun phrases can be the subject or the object of a sentence. All noun phrases must include at least one noun.

Examples of noun phrases are underlined in these sentences:

1. She came at 8:00 p.m.
2. The dog is mine.
3. She went with the small boy.

The underlined parts of the above sentences are noun phrases. The structure of the noun phrases can be shown in tree diagrams in the following ways.

1. NP
└ N
  └ She

2. NP
├ Det — the
└ N — Dog

3. NP
├ Det — the
├ Adj — small
└ N — boy
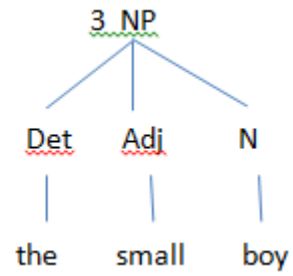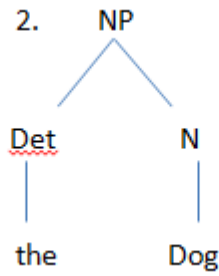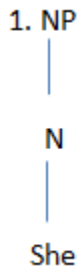
5.3.2 VERB PHRASE

A verb phrase is a phrase which can be constructed using a verb or using a verb plus other words or phrases. The entire predicate of a sentence is considered a full verb phrase.

Examples of verb phrases are underlined in the sentences below:

1. They <u>ran</u>.
2. I <u>saw the man with the telescope.</u>
3. The ball <u>is on the table.</u>

The underlined parts of the above sentences are verb phrases. The structure of the verb phrases can be shown in a tree diagrams in the following ways.
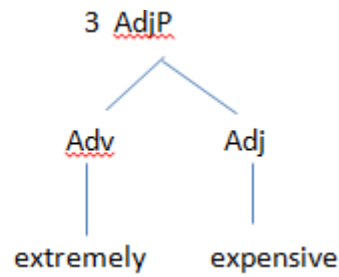

VP
└ V — ran

VP
├ V — saw
└ NP — the man with the telescope

VP
├ V — is
└ PP — on the table
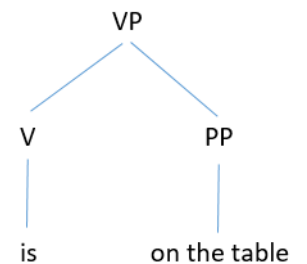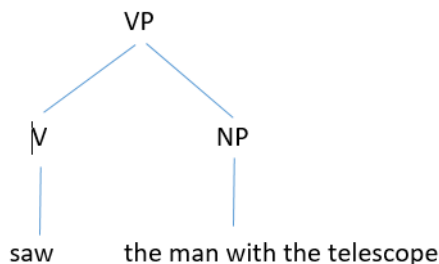
5.3.3 ADJECTIVE PHRASE

An adjective phrase is a phrase which is created using an adjective or using an adjective plus another adjective or an adjective plus an adverb.

Examples of adjective phrases are underlined in the sentences below:

1. The <u>big</u> man hit me.
2. The <u>big brown</u> fox was dead.
3. The bag is <u>extremely expensive</u>.

The underlined parts of the above sentences are adjective phrases. The structure of the adjective phrase can be shown in tree diagrams in the following ways.
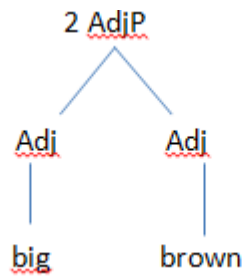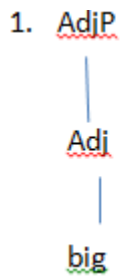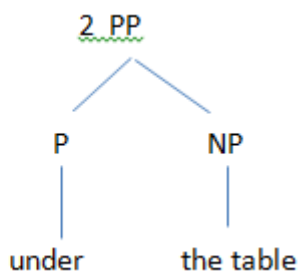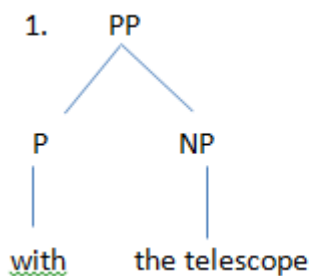
```
1.  AdjP          2 AdjP               3 AdjP
     |              /    \               /    \
    Adj          Adj     Adj          Adv      Adj
     |            |        |            |         |
    big          big     brown      extremely  expensive
```

5.3.4 PREPOSITIONAL PHRASE

A prepositional phrase is a phrase which can be constructed using a preposition plus a noun phrase.

Examples of prepositional phrases are underlined in the sentences below:

1. I saw the man with the telescope.
2. I found the ball under the table.

The underlined parts of the above sentences are prepositional phrases. The structure of the prepositional phrases can be shown in a tree diagrams in the following ways.

```
1.     PP                    2  PP
      /    \                   /    \
     P      NP               P       NP
     |       |               |        |
   with  the telescope     under   the table
```

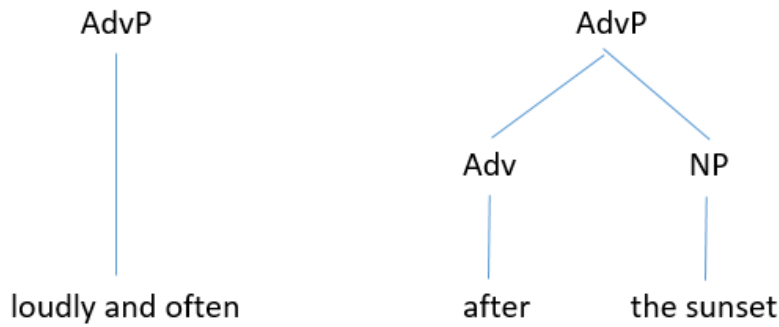## 5.3.5 ADVERB PHRASE

An adverb phrase is a phrase which can be constructed using an adverb or using an adverb plus other words such as another adverb or a noun phrase.

Example:

1. The large dog barked loudly and often.
2. He came after the sunset.
   The phrase ''after the sunset'' is taken as an adverbial clause because it explained when the action took place.

Tree diagram of a sentence

All sentences in English are required to have at least one noun phrase and one verb phrase. For example, the sentence (S), 'The boy eats,' is made up of one noun phrase (NP) 'The boy' and one verb phrase (VP) 'eats'. The following diagrams illustrate how various phrases fit together to create sentences.
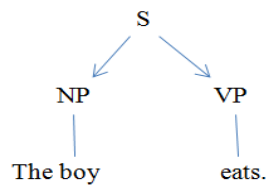
In the sentence 'The boy eats,' the verb phrase is made up of only one word - the verb *eats*. We can add more information to the sentence by adding a noun phrase to say what the boy is eating, which becomes part of the verb phrase.
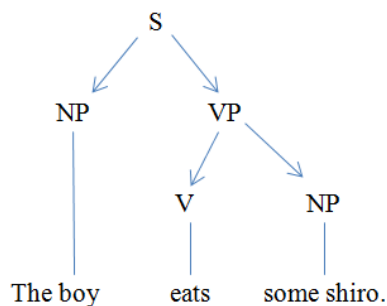
Next, we can add more information to the sentence if we want to explain more about where or how the eating is happening by adding a prepositional phrase (PP), which also becomes part of the main verb phrase (VP).
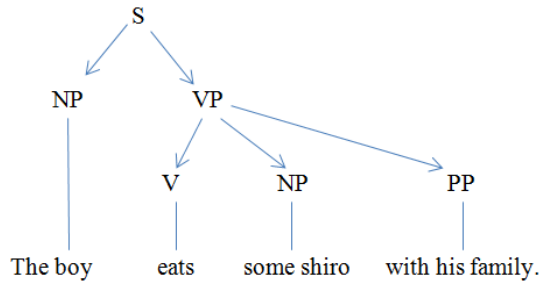
We can further expand the sentence to include an adverb phrase (AdvP) and an adjective phrase (AP).
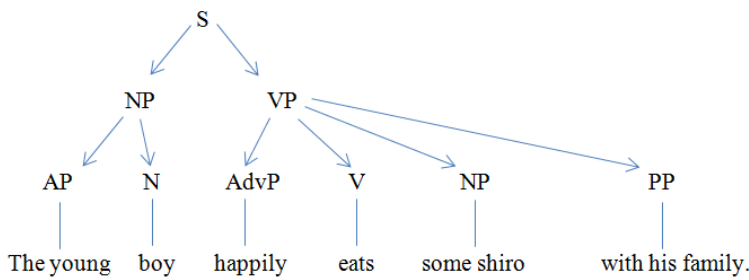
These are tree diagrams of the phrase and sentence structure of the English language. These diagrams (above) are of a simple sentence that has been expanded with phrases. Each type of phrase has a specific function in the sentence and is dependent upon other phrases to create a meaningful sentence.

? Activity 2: Pair Work

Work with a partner to identify the type of each phrase underlined in the following sentences. Then, use a tree diagram to show the structure of each sentence.

1. The young lady terminated her contract.
2. His mother bought a very expensive car.
3. This bag is very heavy.
4. The fox jumped over the lazy dogs.
5. The house is extremely expensive.
6. xx
7. xx
8. xx
9. xx
10. xx

<<adaptors: add five more sentences relevant to your region.>>

5.4 CLAUSES

A **clause** is a group of words or phrases that contains both a subject and a predicate. Phrases can contain nouns and verbs, but unlike clauses, phrases do not contain both a subject and a predicate. A sentence conveys a complete idea, but like phrases, clauses are smaller parts of a sentence.

5.4.1 INDEPENDENT CLAUSES

Some clauses express a complete idea and are complete sentences by themselves. These are called **independent clauses.** The sentence above, 'The young boy happily eats some shiro with his family,' is an independent clause because it expresses a complete idea and can be a sentence by itself.

Other examples of independent clauses include:

life happens

I am happy to be a teacher

you'll surely pass the exam

I have no regrets in my life

<<Add or change these to culturally appropriate examples if necessary>>

All of the clauses above are complete thoughts, and are therefore independent clauses and can be written as sentences (with a capitalized first word and a punctuation mark).

5.4.2 DEPENDENT CLAUSES

Another type of clause has a subject and a predicate, but it does not express a complete idea and cannot be a sentence by itself. This is called a **dependent clause**, and it begins with a coordinating conjunction (see the list of conjunctions in section 5.3). The clause 'because the boy happily eats some shiro with his family,' is not a complete thought since the word because implies that the boy happily eating shiro with his family is the effect of some other action.

Other examples of dependent clauses include:

when the teacher arrives

because I can't wait any longer

if you can work on Sunday

that I sold yesterday

if it is on sale

where my family lives

<<add or change these to culturally appropriate examples if necessary>>

The clauses above leave the reader without some information. These clauses do not express complete thoughts and cannot be sentences by themselves. This is why they are called dependent clauses – because they depend on another part of the sentence.

Activity 3: Individual Work

Identify the type of the following clauses as dependent or independent. The first one has been completed for you.

1. if you can reach on time   ___dependent_____
2. I am interested to be your friend   _____
3. since he started working nights   _____
4. he doesn't see much of his kids   _____
5. while Amare sat inside watching television_____
6. when I was in Addis   _____
7. the team had fallen behind by ten points   _____
8. what I told you yesterday   _____

5.5 TENSE AND VOICE

Activity 4: Brainstorming

Look at the following sentences. What is the same across all sentences, and what is different between them?

1. She went to the market last Saturday.
2. She will go to the market on Saturday.
3. She goes to the market every Saturday.

5.5.1 TENSE

Tense expresses the time at which an event take place (e.g., past, present, future). Klein (1994) describes tense as the relation between reference time (the time that is relevant in the conversation) and speech time (the time when the utterance takes place). Relative to the speech time, the reference time may precede it (past tense: I worked), coincide with it (present tense: I am working), or follow it (future tense: I will work). Tense is determined by when the action took place in relation to the speech time. The three main tenses are: the present, past and future. Each of the three main types of tenses can be further categorized in to four sub sections depending on whether the action is in progress or completed.

I. THE PRESENT TENSE

We use the present tense when the reference time coincides with the speech time. There are four types of the present tense. These are

A. The simple present tense: It is used to express things that are always true, things that we do regularly and to talk about our likes and dislikes.

Examples: [infinitive /3rd person + verb s]

1. I live in Addis Ababa.
2. She loves her mother.
3. He watches TV every day.

B. Present continuous tense: is used to talk about things you are doing now.

Examples: [is/am/are + present participle]

1. I am writing.
2. She is speaking.
3. They are studying English.

C. Present perfect tense: is used to talk about finished actions or past events which are connected to the present time.

Examples: [has/have + past participle]

1. I have gotten back from London.
2. Sara has lost her ticket.
3. We have eaten our lunch.

D. Present perfect continuous tense: it is used to describe a state or action which began in the past and is still continuing or is about to finish.

Examples: form [have/has + been + present participle]

1. I have been travelling all night.
2. He has been living in Bristol for two years.

  II. THE PAST TENSE

The past tense describes a past event or a state of being. We use the past tense when the reference time proceeds the speech time. The past tense is categorized further depending on whether the action was in progress or has been completed. The four past tenses are:

A. Simple past tense: it is used to describe a completed activity that started in the past and ended in the past.

Examples: [verb + -ed] or irregular verbs (I ate)

1. He played with his friend yesterday.
2. She watched a movie last night.
3. They ate their lunch.

B. Past continuous tense: it is used to describe an on-going activity in the past.

Examples: [was/ were + present participle]

1. It was raining when she came home.
2. He was painting the door when a bird struck the window.
3. They were eating dinner when she arrived.

C. Past perfect tense: it is used to emphasize that an action was completed before another took place.

Example: [had + past participle]

1. Sara had taken the pill before we reached her.
2. George had repaired many cars before he received his mechanic's license.
3. We had done our home works before we slept.

D. Past perfect continuous: it is used to show that an on-going action in the past has ended.

Examples: [had been + present participle]

1. She had been cleaning the room when we arrived home.
2. He had been painting the door before the dog scratched it.

III.   THE FUTURE TENSE

The future tense expresses a future event or a future state of being. We use the future tense when the reference time follows the speech time. The future tense is categorized further depending on whether the action will be in progress or will be completed. The four future tenses are:

A. Simple future tense: it is used to express an action that will occur in the future.

Examples: [will + verb]

1. I will go.

2. We will celebrate our anniversary by visiting the lake.

B. Future continuous tense: it is used to talk about an on-going action that will occur in the future.

Examples: [will be + present participle]

1. I will be visiting Axum for the next three weeks.
2. The singers will be performing at the National theatre for the next four hours.

C. Future perfect tense: it is used to describe an action that will have been completed at some point in the future.

Examples: [will have + past participle]

1. We will have finished the meal by the time you arrive.
2. They will have done it by the end of the month.

D. Future perfect continuous: it is used for an on-going action that will be completed at some specified time in the future.

Example: [will have been + present participle]

1. In July next year, you will have been studying for 3 years.
2. I will have been playing for 2 hours by breakfast.

Activity 5: Individual Work

Identify the tense of the following sentences:

1. I went home with my son. _____
2. I am eating my lunch. _____
3. It was raining the whole night. _____
4. We will have finished by tomorrow. _____
5. My mother usually goes to church. _____

5.5.2 VOICE

Activity 6: Brainstorming

Look at the following sentences. What is the difference between the following two sentences?

1. Abebe killed a Lion.
2. A lion was killed by Abebe.

There are two special forms for verbs called **voice**: These are the **active voice** and the **passive voice.**

I. THE ACTIVE VOICE

This is the voice that we use most of the time. You are probably already familiar with the active voice. In the active voice, the **object** receives the action of the verb. We sometimes call it the "normal" voice.

Active	subject	verb	object
	1. Cats	eat	fish.
	2. Almaz	bought	a car.
	3. Amare	wrote	a letter.

In the above table, the action of eating, buying and writing are laid on the objects fish, car and letter respectively.

II.   PASSIVE VOICE

The passive voice is less usual than the active voice. The active voice is the "normal" voice. But sometimes we use the passive voice.

Use of the Passive Voice

We use the passive voice when we want to make the **object** more important or when we do not know the **subject.**

Let's elaborate these using the following examples

1. Abebe killed a lion.(A)
➢ The lion was killed by Abebe.(P) the object (lion) is more important
2. Someone has stolen my wallet.(A)
➢ My wallet has been stolen. (P)   We do not know the subject
3. Someone broke the window.(A)
➢ The window has been broken.(P) We do not know the subject
4. They pay me in dollars. (A)
➢ I am paid in dollars.(P) the object (dollars) is more important

The structure of the **passive voice** is very simple: Subject + auxiliary verb (be) + main verb (past participle). The main verb is always in its past participle form. In the above examples the verbs killed, stolen, broken and paid are in their past participle forms. Here are some more examples passive with most of the possible tenses:

Infinitive		**to be** washed
simple	present	It **is** washed.
	Past	It **was** washed.
	future	It **will be** washed.
continuous	present	It **is being** washed.

	Past	It **was being** washed.
	future	It **will be being** washed.
perfect simple	present	It **has been** washed.
	Past	It **had been** washed.
	future	It **will have been** washed.
perfect continuous	present	It **has been being** washed.
	Past	It **had been being** washed.
	future	It **will have been being** washed.

? **Activity 7: Pair Work**

Work together to identify the voice of the following sentences as active or passive. The

first one has been done for you.

1. We bought some clothes.   ___active_____
2. The window was broken.   _____
3. It will have been eaten.   _____
4.   He drinks some water.   _____
5. I will give him the documents.   _____
6. He is taken to jail.   _____

⊖ **Chapter 5: Summary**

The term *syntax* refers to the way sentences are built from words, phrases, and clauses. Every
sentence in the English language must have at least one noun phrase (NP) and one verb phrase
(VP). They can also include adjective phrases (AP), adverb phrases (AdvP), and prepositional

phrases (PP). Tree diagrams illustrate how the phrases fit together to form sentences. The structure of a sentence contains at list two phrases that are NP and VP. And in English, sentence structure typically follows the order S+ V+ O. A noun phrase and a verb phrase can be joined to create a clause. The two types of clauses are independent and dependent clauses. An independent clause can stand alone to be a sentence because it expresses a complete idea, whereas a dependent clause lacks some information, it does not express complete idea, and cannot stand by itself to be a sentences.

Tense expresses the time at which an event take place. Tense is determined by when the action took place in relation to the speech time. The three main tenses are: the present, past and future. Each of the types of tenses can be further classified in to four sub categories based on whether they are completed or in progress. Sentences can change their meanings based on the structural change made on them. When the position of the subject of an active sentence takes the position of object (to stress on the action done rather than the doer of the action), the voice of the sentence changes from active to passive.

Chapter 5: Review Questions
Individually write the answers to the following questions.

1. Define syntax in your own words.
2. List the types of phrases and provide examples for each.
3. Explain the difference between dependent and independent clauses and provide appropriate examples from your MT.
4. Write a simple sentence in your mother tongue and indicate its subject and predicate separately.
5. Construct three sentences with adjective and adverb phrases. Then, diagram the sentences and separate the words into their parts of speech.
6. Construct a noun phrase, verb phrase, adjectival phrase, adverb phrase, and prepositional phrase.
7. Construct 3 sentences in active voice. Then, change those sentences to passive voice. Discuss what makes the active and passive sentences different.
8. Construct 3 sentences to demonstrate the present, past and future tenses.

Chapter 5: Self-Assessment

Below are self-assessment statements. Copy them into your exercise book and put a "√" checkmark on the spaces provided in the table if you agree or if you disagree with the statements on the left. Make sure that you read again those sections that you marked as "disagree."

Statements	Agree	Disagree
1. I can define syntax.		
2. I can explain word order of my MT for different sentence types.		
3. I can describe the types of phrases used in my MT.		
4. I can illustrate the structure of phrases in sentences using tree diagrams.		
5. I can describe the types of clauses used in my MT.		
6. I can explain the difference between dependent and independent of clauses.		
7. I can construct sentences with different tenses.		
8. I can construct sentences in both active and passive voices.		

Module Summary

This module, Introduction to Language and Linguistics, is designed to strengthen teacher educators' ability to teach reading skills in Ethiopian primary grade classrooms. Basically, this module helps both CTE instructors and student teachers to understand the theoretical background of language and linguistics. Having these concepts in mind, the teacher educators can associate this knowledge to content from other courses related to literary skills.

In social contexts, language is used as a major tool serving many functions. Language varies across locations and the social identities of its speakers, and language plays a great role in academic institutions. Language families in Ethiopia fall under the Afro-Asiatic and Nilo-Saharan families. In academic situations, the elements of phonetics, phonology, morphology, and syntax are the main properties of human languages which help for teaching reading and writing in primary school.

Phonetics is the science of speech sounds, and it plays a major role in language learning. Understanding phonetics is important for multilingual learners and for teaching reading and writing across languages and to diverse students. Speech sounds of languages can be classified into consonants and vowels. These sounds are made by coordinating the active and passive articulatory organs.

Another science which deals with sounds is phonology. Understanding phonological properties in languages helps teachers to better understand how to use the sound structure of the language when helping students build literacy skills.

Morphology is the study of the internal structure of words and examines the meaningful parts of words. An understanding of morphology will help teachers know how to instruct the new primary MT material, such as analyzing word parts. Furthermore, morphology knowledge helps the learner to understand distinct parts those can be found in a word. These parts are morphemes: free (inflectional and derivational) and bound (prefix, suffix, infix, and circumfix). The morphology concepts help the leaners to conceptualize word formation processes.

Syntax refers to how sentences are structured from words, phrases, and clauses. The structure of a sentence contains at least one noun phrase and one verb phrase. English typically follows a S+ V+O sentence structure. Sentences can be categorized depending on the number and types of clauses they contain. Independent clauses can stand alone to be sentences because they

express complete ideas, whereas dependent clauses lack some information, do not express complete ideas, and cannot stand alone to be sentences.

Module Review Questions

Answer the following questions on your exercise book individually.

1. List Ethiopian language families and give at least three example languages for each family.
2. Explain the terms code-switching, code-shifting and code- mixing.
3. Describe at least three universal characteristics of language.
4. Describe five consonant sounds in your MT. Include Manner and place of articulation, as well as voicing.
5. Describe three vowel sounds in your MT. Include tongue height, tongue advancement, and lip position.
6. Discuss the difference between tone and intonation.
7. Take three words that have more than two syllables and show their syllabic structure.
8. Differentiate between phoneme, phone and allophone with two examples.
9. Explain the phonological processes of epenthesis, metathesis and assimilations then give examples for each.
10. Compare and contrast the two concepts of: morpheme and word.
11. Explain the difference between free and bound morphemes. Provide examples of each.
12. Describe a difference between a phrase, a clause and a sentence.
13. Show the structure of noun and verb phrases in your MT using tree diagram.
14. Show the structure of the simple sentences below using a tree diagram.
    a. The big man kicked the small boy.
    b. My older sister studies ICT in Wellega University.
15. Identify the voice of the given sentences below (active or passive). Then, rewrite each sentence to change the voice.
    a. Kassa drives a car.
    b. The students are advised by their instructors.
    c. The mother cares for her babies.
    d. The rat is eaten by the cat.
    e. The child was bitten by his big brother.

Module Self-Assessment

Below are self-assessment statements. Copy them into your exercise book and put a "√" checkmark on the spaces provided in the table if you agree or if you disagree with the statements on the left. Make sure that you read again those sections that you marked as "disagree."

Statements	Agree	Disagree
1. I can describe the origin and characteristics of language.		
2. I appreciate variation and diversity in students' language skills.		
3. I can define language and linguistics.		
4. I can discuss phonetics and its branches.		
5. I can classify consonant and vowel speech sounds depending on how they are produced.		
6. I can apply my knowledge of IPA symbols to transcribe MT words.		
7. I can differentiate between phoneme, phone and allophone.		
8. I can discuss phonological processes.		
9. I can differentiate between morpheme, morph and allomorph.		
10. I can identify types of morphemes.		
11. I understand how morphological knowledge helps students when learning to read and write.		
12. I can demonstrate an understanding of sentence structure of my MT using tree diagrams.		
13. I can describe the types of phrases and clauses of my MT.		

GLOSSARY

Articulatory Phonetics	Study of how the vocal track produces speech sounds.
Accent	A distinctive way of pronouncing a language which identify where a person is from, regionally or socially.
Acoustic Phonetics	Study of the physical characteristics of sound waves.
Acronyms	New words formed from the initial letters of a set of other words.
Adjective	A word that modifies a noun
Adjective Phrase	A phrase which composes an adjective and its modifiers
Adverb Phrase	A phrase which is made up of an adverb and its modifiers
Adverb	A word used to modify a verb, an adjective or another adverb by providing more information.
Affix	A morpheme that is attached to a root word to form a new word.
Affricates	Consonant phonemes articulated as a stop before a fricative, such as [Č'] or [j]
Air spaces	Cavities which resonate speech sounds: oral cavity, pharyngeal cavity, nasal cavity.
Allomorph	A variant form of a morpheme.
Allophones	A variant pronunciation of a phoneme.
Alveolar	Consonants spoken with the tip of the tongue on the ridge behind the upper teeth, such as [t].
Alveolar ridge	The bony rise just behind the teeth.
Apex	A term used in phonetics or the end-point of the tongue used in the articulation of a few speech sounds, such as the trilled [r].

Approximant	A speech sound in which the articulators narrow the vocal track, but not so much so that fricative noise is created.
Articulator	Any specific part of the mouth or throat involved in the production of a speech sound.
Assimilation	A phonological process by which one sound becomes more like a nearby sound.
Auditory Phonetics	Branch of phonetics which studies the perceptual response to speak sounds, as mediated by ear, auditory nerve and brain.
Bilabials	Consonant sounds formed with lips together, such as [b] and [p].
Borrowing	The borrowing or taking of a word from another language in order to add the word to one's own language.
Bound morpheme	A morpheme or meaningful word element that exists only as a part of a larger construction, cannot be used as a word by itself.
Circumfix	An affix which has two parts, one placed at the start of the word , and the other at the end of the word.
Closed Syllable	A syllable with a coda.
Coda/Termination	The part of a syllable that comes after the nucleus or peak (vowel).
Code-shifting	It occurs when an individual or community changes the primary language used into another language.
Code-switching	It is the intentional use of two different languages or dialects in a conversation or interaction.
Code-mixing	The unconscious use of two different languages or dialects in the same conversation or interaction.
Cognates	Pairs of sounds that have the same place and manner of articulation but differ by voicing. See **Minimal pairs**.
Coined word	The act of creating a new word that other people begin to use and integrate into the language.

Complex word	A word that made up of two or more morphemes.
Compound subject	When a sentence has more than one subject connected by a conjunction.
Compound word	A word that is made up of two free morphemes.
Conjunction	A word which is make connections and indicate relationships between two words, phrases or clauses.
Dependent clause	A clause that doesn't provide a complete message
Derivational morpheme	An affix that is added to a word to create a new word with a different part of speech.
Determiner	A word that specifies a noun (a, an, the, that, this, etc.).
Diacritic marks	In phonetics, a mark added to a symbol to alter the way it is pronounced.
Dialect	A regionally or socially distinct variety of language, identified by a particular set words and grammatical structure.
Diphthongs	Vowels that have a glide and may feel as though they have two parts, especially the vowels [æ] as in house.
Dissimilation	A phonological process by which two sounds become less alike.
Elision	The omission of sound or syllable when speaking.
Epenthesis	A phonological process that involves the insertion of one or more sounds in the middle of a word.
Free morpheme	A morpheme or meaningful word element that can occur alone.
Fricative	A speech sound articulated with a hiss or with friction.
Glide	A consonant phoneme that glides immediately into a vowel; also called a semi vowel.
Glottal	A consonant sound made in the larynx, due to the closure or narrowing of the glottis, the space between the vocal folds.

Hard palate	The roof of the mouth.
Independent clause	A clause that give a complete message and can stand alone as a sentence.
Inflectional morpheme	A suffix that is added to a word to assign a particular grammatical information like tense, gender, number, possession etc.
Interdental	A consonant sound spoken with the tongue between the teeth.
Interjection	Words used to express strong emotions, feelings, or ideas.
International Phonetic Alphabet (IPA)	Provides a universal alphabet to show all speech sounds in the world's languages.
Intonation	The use of pitch to convey meaning at the sentence level.
Labiodental	A consonant sound articulated with the lower lip and upper teeth.
Language	The method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way.
Language component	A word, phrase, or conversation.
Language variation	Features of a language that differs systematically as we compare different group of speakers or the same speaker in different situations.
Length	Refers how long a given sound ro speech segment takes to be articulated.
Liquid	A speech sound in which air is obstructed but not enough to cause friction.
Manner of articulation	How a sound is made, or the production of airflow through the mouth. Is the way the air is affected as it flows from the lungs and out of the mouth and nose.

Minimal pairs	Pairs of sounds that have the same place and manner of articulation but differ by voicing. See **Cognates**.
Morpheme	The smallest meaningful unit in the grammar of a language.
Morphology	A branch of linguistics which studies the internal structure of words and their meaningful parts.
Nasal	A sound spoken with the air stream directed through the nasal cavity.
Noun	A name for a person, place, or object.
Noun phrase	A phrase which is made up of a noun and its modifiers
Noun	A word used to refer to people, objects, creatures, places, qualities, phenomena, and abstract ideas.
Nucleus	The peak of a syllable, usually the vowel.
Onset	The part of the syllable before the vowel; some syllables do not have onset.
Open syllable	A syllable with no coda.
Palatal	A sound spoken with the tongue against the roof of the mouth behind alveolar ridge.
Pharyngeal	A sound made with constriction of the tongue body towards the back wall of the pharynx.
Phone	Physical realization of phonemes.
Phoneme	The smallest unit of sound in a word.
Phonetics	The study of speech sounds and how they are produced and perceived.
Phonology	A branch of linguistics which studies the sound systems of languages.
Phonotactics	Rules for how sounds can be put together to makes words for a particular language.

Phrase	A group of words which is missing either a subject or a verb.
Place of articulation	Where sound is made, or the position of the lips, teeth, and tongue in the front, middle or back of the mouth when producing a sound.
Prefix	An affix which is added before the stem of a word.
Preposition	A word which indicates where an action takes place.
Prepositional phrase	A phrase which is made up of a preposition and its modifiers.
Pronoun	Words used in place of noun like she, herself, they, it, you, etc. typically referring to people and things already mentioned in the conversation or text..
Root word	The part of the word that has no prefix and no suffix.
Simple word	A word that is made up of one morpheme.
Sociolinguistics	A branch of linguistics which studies all aspects of the relationship between language and society.
Stop	A consonant speech sound articulated with a stop the air stream.
Stress	A relation between syllables or words. Stressed syllables or words may be longer, louder, higher-pitched, or pronounced more clearly.
Subject	The doer of an action in a sentence.
Suffix	An affix which is added to the end of the root word.
Suprasegmental	A term used in phonetics and phonology to refer to a vocal effect which extends over more than one sound in an utterance, such as a pitch, stress, or juncture pattern.
Syllable	A unit of sound that has a vowel at its core. Syllables are typically larger than a single sound and smaller than a word. However, a syllable can sometimes be a word.
Syntax	A branch of linguistics which studies sentence structure.

Tone	The use of pitch to distinguish lexical items.
Tongue advancement	Refers to how far forward or back the tongue is in the oral cavity when producing a vowel sound.
Tongue height	Refers to how high or low the tongue is in the oral cavity when producing a vowel sound.
Uvula	Fleshy structure at the back end of the velum.
Velar	A speech sound articulated at the back of the mouth, using the velum.
Velum	Soft palate of the mouth.
Verb	A word that indicates an action or a state of being.
Verb phrase	A phrase which is made up of a verb and its modifiers.
Voiced	A speech sound articulated with vibrating vocal cords.
Voiceless	A speech sound articulated with no vocal resonance.
Voicing	For any articulation corresponding to the consonant sounds, the vocal cords are either vibrating or not.
Word	The smallest independent unit of language that represents a concept, action, or feeling.

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THE INTERNATIONAL PHONETIC ALPHABET (revised to 2015)

CONSONANTS (PULMONIC)

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	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			r					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

CONSONANTS (NON-PULMONIC)

Clicks	Voiced implosives	Ejectives
ʘ Bilabial	ɓ Bilabial	' Examples:
ǀ Dental	ɗ Dental/alveolar	p' Bilabial
ǃ (Post)alveolar	ʄ Palatal	t' Dental/alveolar
ǂ Palatoalveolar	ɠ Velar	k' Velar
ǁ Alveolar lateral	ʛ Uvular	s' Alveolar fricative

OTHER SYMBOLS

ʍ Voiceless labial-velar fricative

w Voiced labial-velar approximant

ɥ Voiced labial-palatal approximant

ʜ Voiceless epiglottal fricative

ʢ Voiced epiglottal fricative

ʡ Epiglottal plosive

ɕ ʑ Alveolo-palatal fricatives

ɺ Voiced alveolar lateral flap

ɧ Simultaneous ʃ and x

Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary. t͡s k͡p
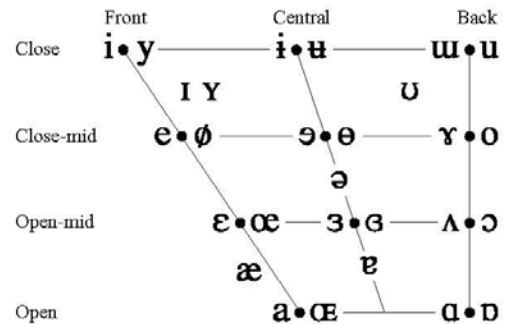
VOWELS

Where symbols appear in pairs, the one to the right represents a rounded vowel.

SUPRASEGMENTALS

ˈ Primary stress

ˌ Secondary stress   ˌfoʊnəˈtɪʃən

ː Long   eː

ˑ Half-long   eˑ

˘ Extra-short   ĕ

| Minor (foot) group

‖ Major (intonation) group

. Syllable break   ɹi.ækt

‿ Linking (absence of a break)

TONES AND WORD ACCENTS

LEVEL		CONTOUR	
e̋ or ˥ Extra high		ě or ˩˥ Rising	
é ˦ High		ê ˥˩ Falling	
ē ˧ Mid		e᷄ ˦˥ High rising	
è ˨ Low		e᷅ ˩˨ Low rising	
ȅ ˩ Extra low		e᷈ ˧˦˨ Rising-falling	
ꜜ Downstep		↗ Global rise	
ꜛ Upstep		↘ Global fall	

DIACRITICS Some diacritics may be placed above a symbol with a descender, e.g. ŋ̊

̥ Voiceless	n̥ d̥	̤ Breathy voiced	b̤ a̤	̪ Dental	t̪ d̪		
̬ Voiced	s̬ t̬	̰ Creaky voiced	b̰ a̰	̺ Apical	t̺ d̺		
ʰ Aspirated	tʰ dʰ	̼ Linguolabial	t̼ d̼	̻ Laminal	t̻ d̻		
̹ More rounded	ɔ̹	ʷ Labialized	tʷ dʷ	̃ Nasalized	ẽ		
̜ Less rounded	ɔ̜	ʲ Palatalized	tʲ dʲ	ⁿ Nasal release	dⁿ		
̟ Advanced	u̟	ˠ Velarized	tˠ dˠ	ˡ Lateral release	dˡ		
̠ Retracted	e̠	ˤ Pharyngealized	tˤ dˤ	̚ No audible release	d̚		
̈ Centralized	ë	̴ Velarized or pharyngealized	ɫ				
̽ Mid-centralized	e̽	̝ Raised	e̝ (ɹ̝ = voiced alveolar fricative)				
̩ Syllabic	n̩	̞ Lowered	e̞ (β̞ = voiced bilabial approximant)				
̯ Non-syllabic	e̯	̘ Advanced Tongue Root	e̘				
˞ Rhoticity	ɚ a˞	̙ Retracted Tongue Root	e̙				

Typefaces: Doulos SIL (metatext); Doulos SIL, IPA Kiel, IPA LS Uni (symbols)