

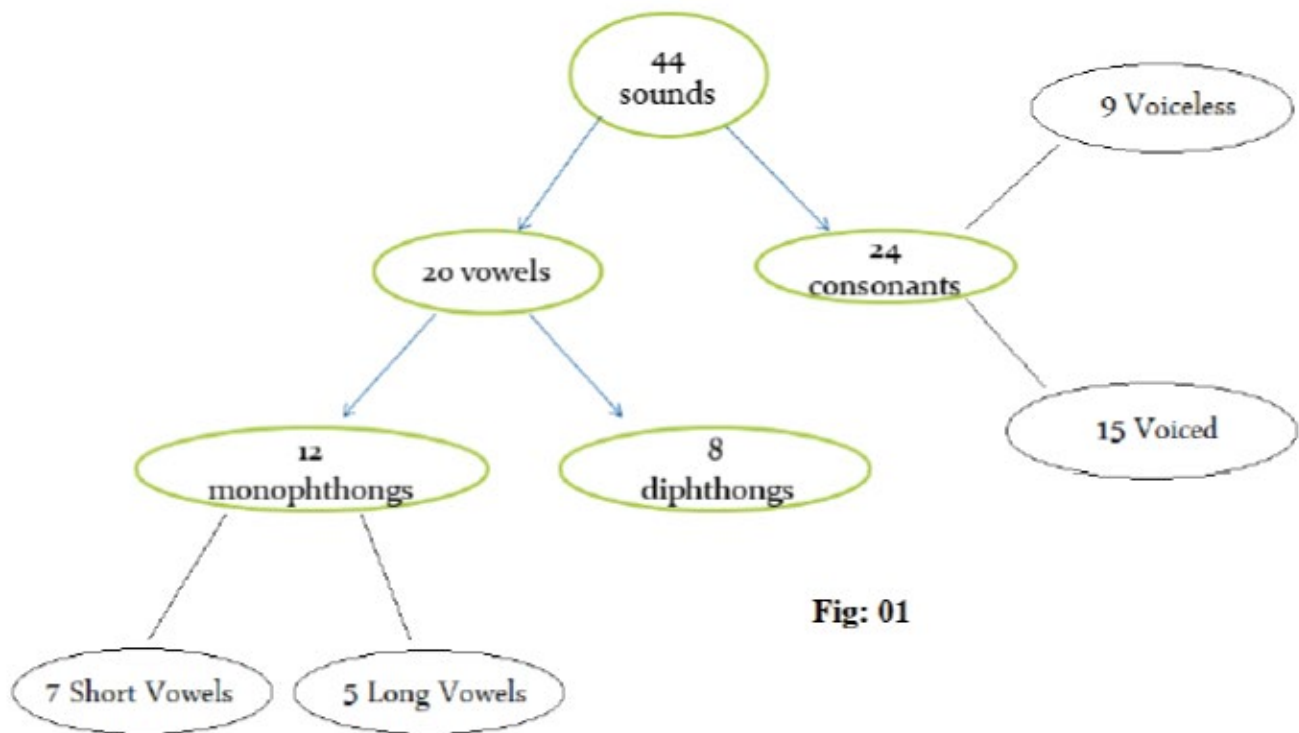
**Module:** English Phonetics and Phonology  
**Level/Groups:** First Year: 03, 04, 05, 06, 07 & 08  
**Teacher:** Ms. Lamani

## Lecture Two: Organs of speech and Production of Sounds

### 1. Introduction

It is necessary to put in words what is phonemes or speech sounds, then proceeding to the core of the lecture.

In English language we have **44 phonemes**, divided into **24 consonants** & **20 vowels**. The consonants are, already, divided into *9 voiceless consonants* & *15 voiced consonants*. While vowels are divided into *12 monophthongs* (divided into 7 short vowels & 5 long vowels) & *8 diphthongs*. Mark Fig: 01



**Fig: 01**

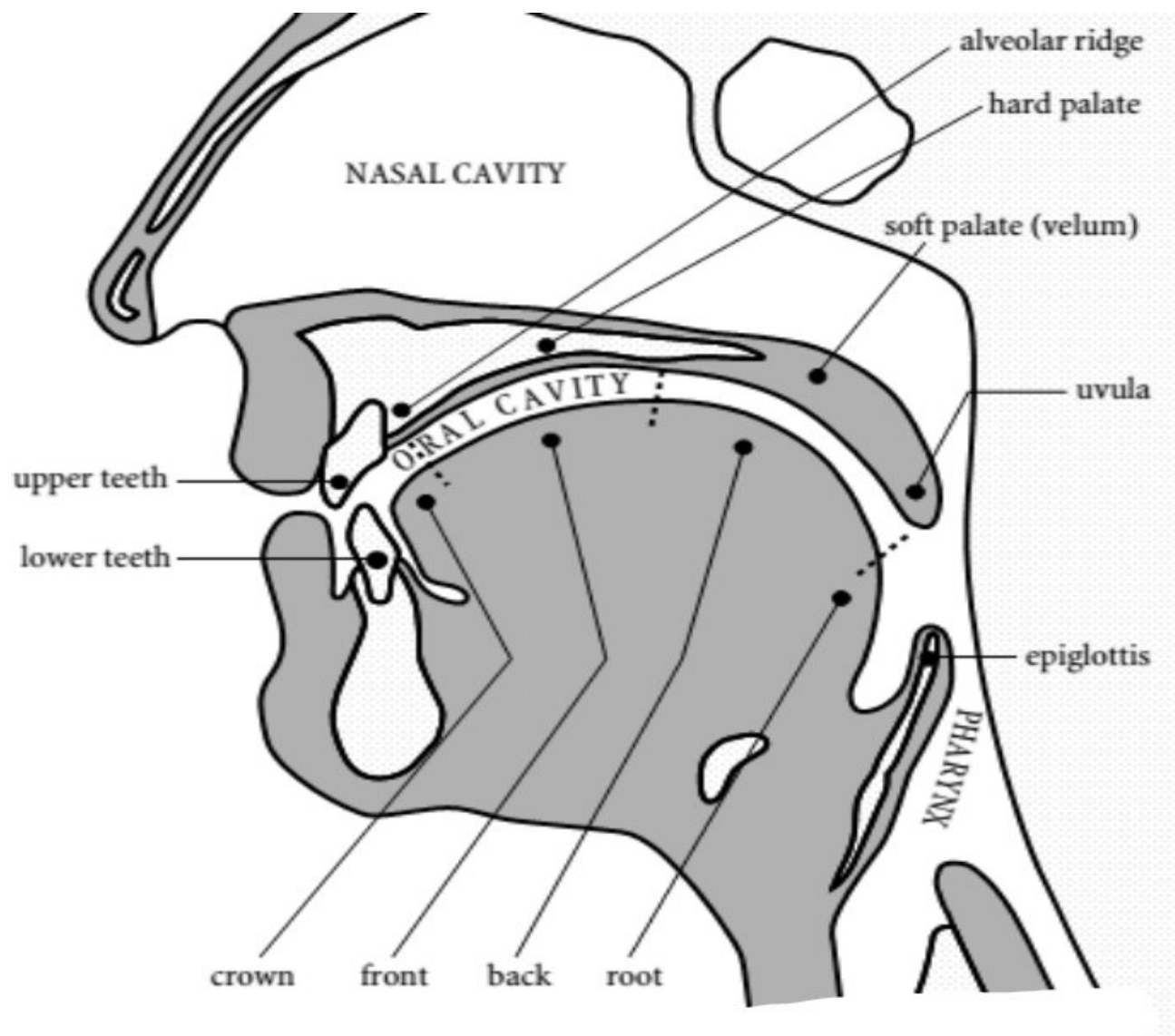
However, all the sounds humans make when they speak are the result of muscles contracting. The muscles in the chest that we use for breathing produce the flow of air that is needed for almost all speech sounds. Muscles in the larynx produce many different modifications in the flow of air from the chest to the mouth. After passing through the larynx, the air goes through what we call the **vocal tract**, which ends at the mouth and nostrils; we call the part comprising the mouth the oral cavity and the part that leads to the

nostrils the nasal cavity. Here the air from the lungs escapes into the atmosphere. We have a large and complex set of muscles that can produce changes in the shape of the vocal tract, and in order to learn how the sounds of speech are produced it is necessary to become familiar with the different parts of the vocal tract. These different parts are called **articulators**, and the study of them is called **articulatory phonetics**.

## 2. Vocal Organs/ Speech Organs/ Articulators:

These articulators are located above the Larynx.

Fig. 02 is a diagram that is used frequently in the study of phonetics. It represents the human head, seen from the side, displayed as though it had been cut in half. You will need to look at it carefully as the articulators are described,



and you will often find it useful to have a mirror and a good light placed so that you can look at the inside of your mouth

1- **The pharynx** is a tube which begins just above the larynx. At its top end it is divided into two, one part being the back of the oral cavity and the other being the beginning of the way through the nasal cavity.

2- **The soft palate or velum** is seen in the diagram in a position that allows air to pass through the nose and through the mouth. Yours is probably in that position now, but often in speech it is raised so that air cannot escape through the nose. The other important thing about the soft palate is that it is one of the articulators that can be touched by the tongue. When we make the sounds /k/, /g/ the tongue is in contact with the lower side of the soft palate, and we call these velar consonants

3- **The hard palate** is often called the "roof of the mouth". You can feel its smooth curved surface with your tongue. A consonant made with the tongue close to the hard palate is called palatal. The sound /j/ in 'yes' is palatal.

4- **The alveolar** ridge is between the top front teeth and the hard palate. You can feel its shape with your tongue. Its surface is really much rougher than it feels. You can only see these if you have a mirror small enough to go inside your mouth, such as those used by dentists. Sounds made with the tongue touching here (such as /t/, /d/, /n/) are called alveolar.

5- **The tongue** is a very important articulator and it can be moved into many different places and different shapes. It is usual to divide the tongue into different parts, though there are no clear dividing lines within its structure. Fig. 7 shows the tongue on a larger scale with these parts shown: tip, blade, front, back and root.

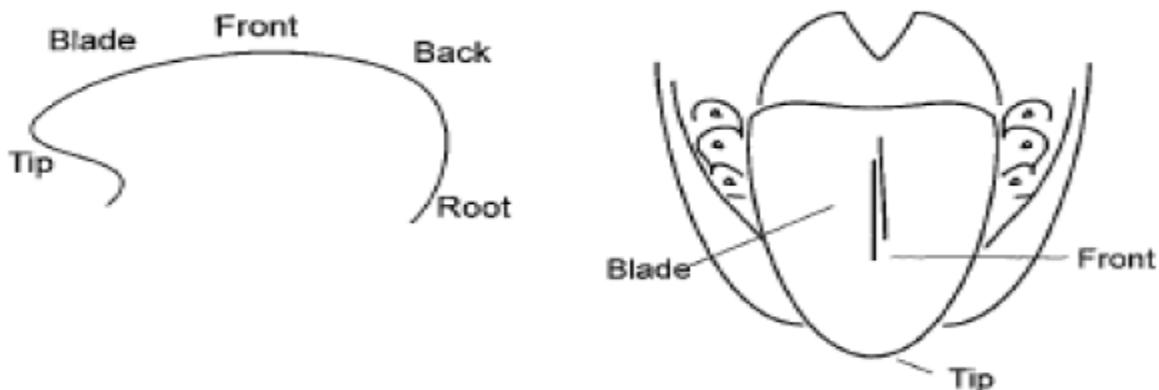


Figure 2.9. The parts of the tongue, side view (left) and top view (right). Right: Adapted from Clark, Yallop & Fletcher (2007: 191).

6- **The teeth** (upper and lower) are usually shown in diagrams like Fig. 9 only at the front of the mouth, immediately behind the lips. The tongue is in contact with the upper side teeth for most speech sounds. Sounds made with the tongue touching the front teeth are called dental.

7- **The lips** are important in speech. They can be pressed together (when we produce the sounds /p/, /b/), brought into contact with the teeth (as in /f/, /v/), or rounded to produce the lip-shape for vowels like /u:/ . Sounds in which the lips are in contact with each other are called bilabial, while those with lip- to-teeth contact are called labiodental.