

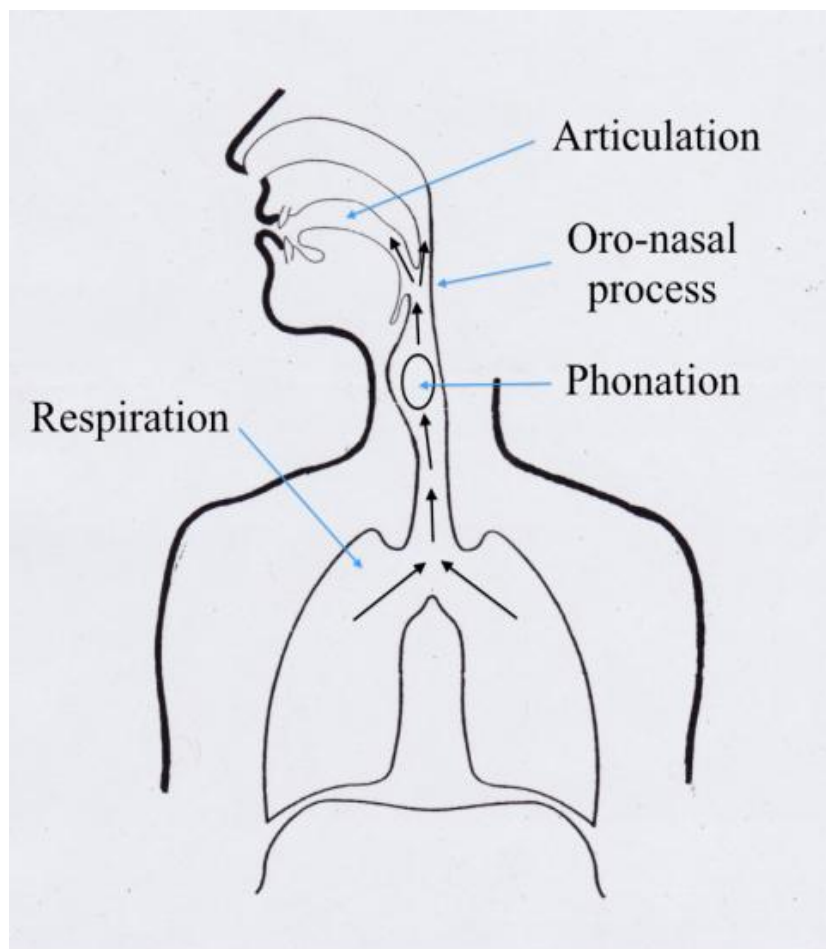
**University of Sétif-2**  
**Department of English Language**  
**Phonetics Course (1st Year Classes)**  
**Lecturer: Miss. Belhamef**

## **Lecture Four**

### **Speech Mechanism and Oro-nasal Process**

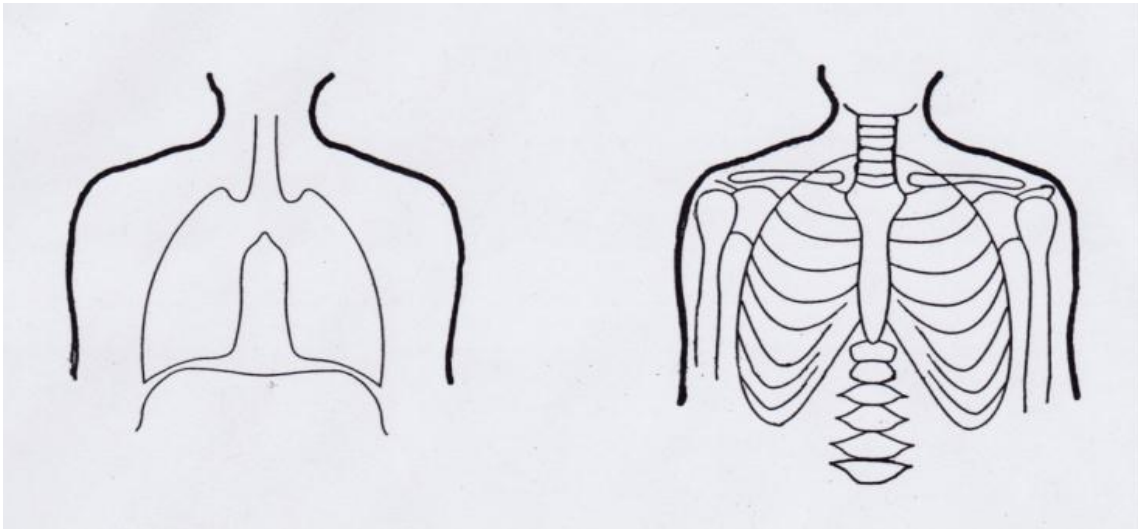
#### **1. Speech Mechanism**

The speech production mechanism as a whole involves the **active** or **passive functioning** of the **organs of speech**. The **stages in physical speech mechanism** are illustrated as follows:



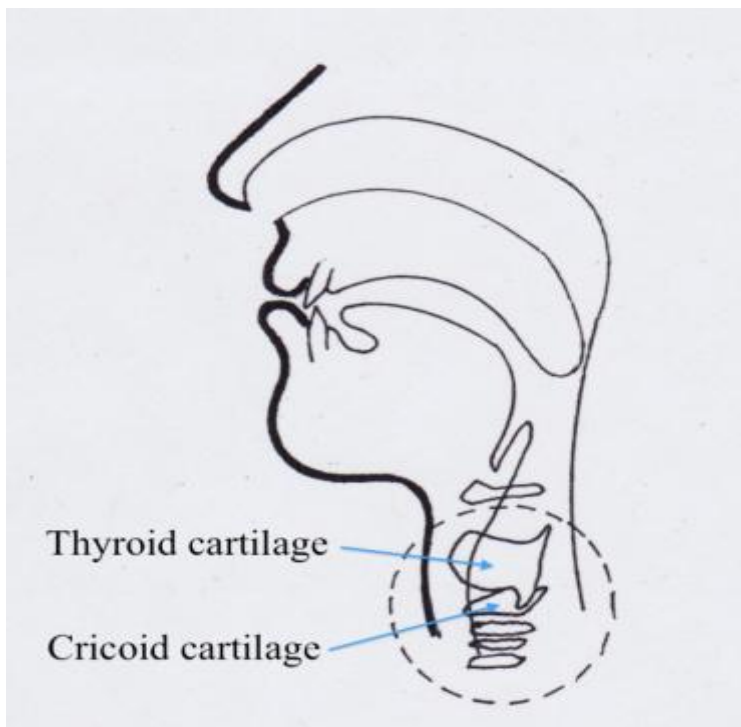
***Figure 1.*** Stages in Speech Mechanism

**1. Initiation or Respiration** (the lungs provide the energy source);



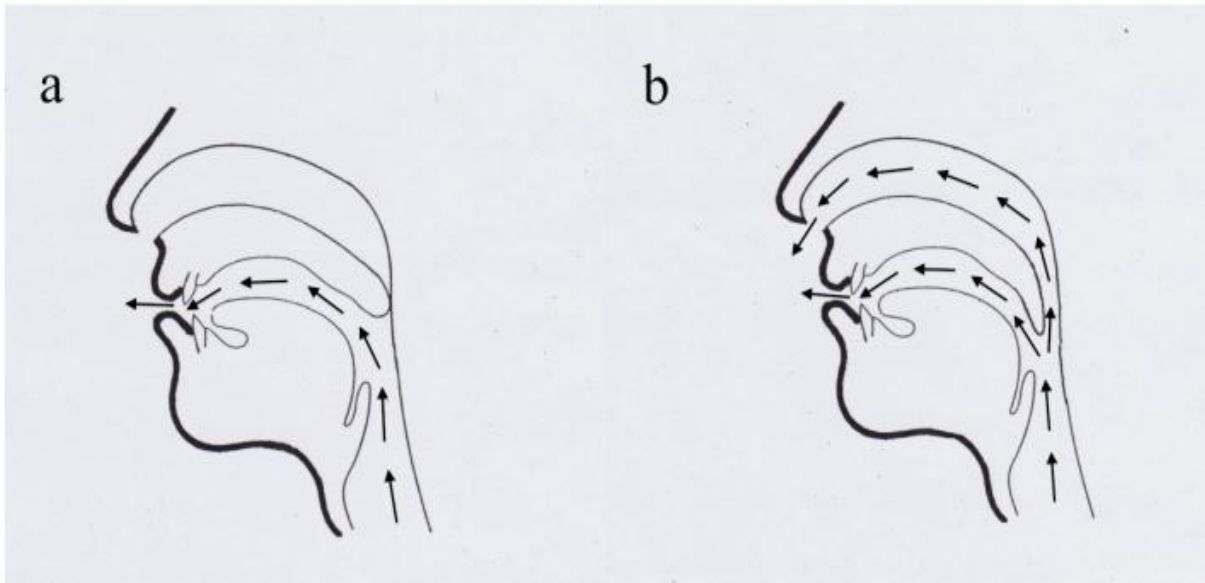
*Figure 2.* The Respiratory Mechanism

**2. Phonation Process** (the vocal folds convert the energy into an audible sound);



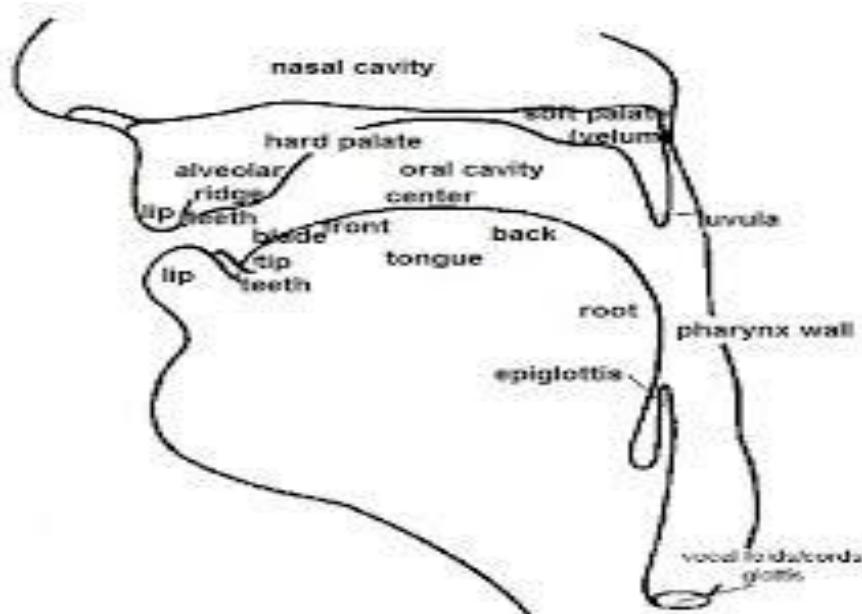
*Figure 3.* The Phonation System

**3. The Oro-nasal Mechanism** (the soft palate distributes the audible sound into the oral cavity or nasal cavity);



*Figure 4.* The Production of Oral and Nasal Sounds

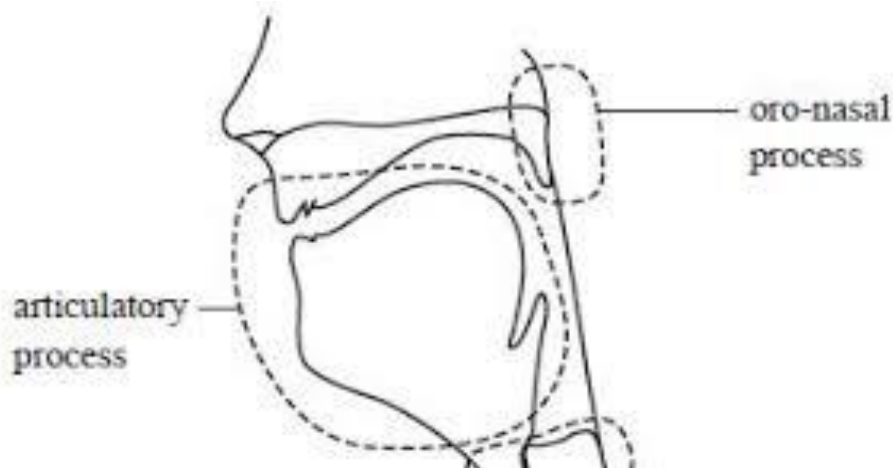
**4. Articulation/Articulatory Process** (the organs of speech transform the sound into an intelligible speech sound).



*Figure 5.* The Articulatory Process

## 2. Oro-nasal Process

The area above the trachea is called the vocal tract and the air passages that make up the vocal tract may be divided into the oral tract, within the mouth and pharynx, and the nasal tract, within the nose. When the flap at the back of the mouth is lowered (when you are breathing with your mouth shut), air goes in and out through the nose. The soft palate (velum) plays a significant role in the pharynx because it is the organ that directs the airflow into either of the two cavities. In most speech, the velum (soft palate) is raised, it closes the entrance between the nasal cavity and the rest of the vocal tract, and thus it directs the air through the oral cavity (mouth) to produce oral sounds. That is most sounds are made by air passing through the mouth. If the soft palate is lowered, the airflow is directed through both cavities, escaping through the nostrils and mouth at the same time. During this pattern of airflow, the sounds produced are defined as nasal sounds. The complex acoustic structure of the nasal cavity produces nasal sounds that sound relatively quiet as compared to oral sounds. Therefore, raising or lowering the velum controls the oro-nasal process, the possibility of the airstream going out through the mouth, as in [v] or [z], or the nose, as in [m] and [n], the distinguishing factor between oral and nasal sounds.



**Figure 6.** The Oro-nasal Process