

articulators, and the study of them is called articulatory phonetics

**The pharynx** is a tube which begins just above the larynx. It is about **7cm long in women** and about **8 cm in men**, and at its top end it is divided into two, **one part** being the back of the mouth and the **other** being the beginning of the way through the **nasal cavity**.

**The velum or soft palate** is seen in any diagram in a position that allows air to pass through the nose and through the mouth. In speech it is raised so that air **cannot** escape through the nose

**The hard palate** is often called 'the roof of the mouth'. You can feel its smooth curved surface with your tongue

**The alveolar ridge** is between the top front teeth and the hard palate. You can feel its shape with your tongue. Sounds made with the tongue touching here (such as **t and d**) are called **alveolar**

**The tongue** is, of course, 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: **tip, blade, front, back** and **root**

**The teeth (upper and lower)**. Sounds made with the tongue touching the front teeth are called **dental**

**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 contact with each other are called **bilabial**, while those with lip-to –teeth contact are called **labiodentals**

The vocal folds may lie open, in which case the airstream passes through them unimpeded. Sounds which are made when the focal folds are open are called **voiceless sounds**. Thus, /s/ is a voiceless sound

**voiced sounds** whereas sounds produced **without such vibration** are said to be **voiceless**

**Bilabial sounds**. Sounds in which the airflow is modified by forming a constriction between the **lower lip and the upper lip** are referred to as bilabial sounds. An example is the first sound in **pit** and **bite**

**Labio-dental sounds**. Sounds in which there is a constriction between the **lower lip and upper teeth** are referred to as labio-dental sounds. An example is the first sound in **fit** and **very**

**Dental sounds**. Sounds in which there is a constriction between **the tip of the tongue and the upper teeth** are referred to as **dental sounds**. An example is the first sound in **thin**

▲ **Alveolar ridge** : وهي الزاويه الصلبه خلف اللأسنان

**The hard palate** : وهو الجزء الصلب من سقف الفم

**The palate-alveolar or post-alveolar** : ( **the alveolar ridge** ) الزاويه الصلبه خلف الاسنان والحنك

Sounds which are made when the focal folds are open are called voiceless sounds

**vocal folds vibration** this vibration is felt when you put your fingers to your **larynx** and produce a sound like /z

Sounds which are produced with this vocal folds vibration are said to be voiced sounds

whereas sounds produced without such vibration are said to be voiceless

the space between the vocal cords is referred to as the glottis

refer to sounds produced at this place of articulation as **glottal sounds**

Sounds in which there is a constriction between the **blade of the tongue and the palate-alveolar (or post-alveolar)** region are called **palate-alveolar sounds**.

Sounds in which there is a constriction between the **front of the tongue and the hard palate** are called **palatal sounds**

Sounds in which there is a constriction between the **back of the tongue and the velum** are called **velar sounds**

**Stop sounds:** such as: /t/, /d/, /k/, /g/, /b/, /p/

In pronouncing these sounds the articulators involved in pronouncing them make a complete closure. For example, when we pronounce the /p/ sound, the lower and upper lips completely block the flow of air from the lungs; that closure may then be released, as it is in **pit** and **then** produce a sudden outflow of air. Sounds which are produced with complete closure are referred to as **stops (or plosives)**

**Fricatives:**

such as: /s/, /z/, /f/, /v/, /θ/, /ð/, /ʃ/, /ʒ/

Let us now distinguish between complete closure and another, less extreme, degree of constriction:

**Close approximation.** Sounds which are produced with this kind of constriction entail a bringing together of the two articulators to the point where the airflow is not quite fully blocked: enough of a gap remains for air to escape, but the articulators are so close together that friction is created as the air escapes. Sounds of this sort are referred to as **fricatives**

**Approximants:** the **least degree** of constriction occurs when articulators come fairly close together, but not sufficiently close together to create friction. This kind of stricture is called **open approximation**. Consonants produced in this way are called **approximants or approximations**. The first sound in **yes** is an **approximant**. It is described like /j/ and it is a **voiced palatal approximant**. /w/, /r/, and /l/ are also considered **approximants**

So, the least radical degree of constriction occurs when the articulators come fairly close together, but not sufficiently close together to create friction. This kind of stricture is called open approximation

### **Affricates :**

We have distinguished three classes of consonant according to degree of Constriction: **stops**, **fricatives** and **approximants**. Consider the first sound in **chip**: it is like a stop in that there is complete closure between the blade of the tongue and the palate-alveolar region. However, it is like a fricative in that it clearly involves friction.

### **Aspiration:**

-The first stop in **pit**, we said, is a **voiceless bilabial stop**. So too is the first stop in **spit**. But the **bilabial stop** in **pit** differs phonetically from the **bilabial stop** in **spit**: if you hold the palm of your hand up close to your mouth when uttering **pit**, you will feel a stronger puff of air on releasing the bilabial stop than you will when you utter **spit**. That stronger puff of air phenomenon is called **aspiration**: we say that the bilabial **stop** in **pit** is an **aspirated voiceless stop**, whereas the **stop** in **spit** is **unaspirated**

### **Nasal stops:**

We have been making an assumption in our discussion thus far, concerning the position of the velum in the production of the speech sounds we have described. We have assumed that, in all of these sounds, the air from the lungs is escaping only through the mouth (**the oral cavity**). This is true if the velum is in the raised position, such that it prevents the flow of air out through the nasal cavity

### **Assimilation:**

## تعريفات الصوتيات من المحاضره 1 الى 7

When two sound segments occur in sequence and some aspect of one segment is taken or copied by the other, the process is known as **assimilation**.

An example is the word **dean**. The **ea** became nasalized as it is followed by a nasal sound, which is in this case the **/n/**.

**Wells** uses three key words for the [ɔ:]. These are: **thought**, **force** and **north**.

He also uses three key words for /ɑ:/. **Start**, and **Balm**

لو نأسيه شي أضيفوهه لأنني سويته ع السريع

.. نققاء