Level: 1st year

English Phonetics and Phonology

Semester 1

Part 1

Lesson 1

Purpose of the course:

- The main purpose of the course (English Phonetics and Phonology) is to explain how English is pronounced in the accent normally chosen as the standard for people learning the English spoken in England.

- It is usual to present this information in the context of a general theory about speech sounds and how they are used in language. This theoretical context is called **phonetics and phonology.**

- This theoretical material is necessary for anyone who needs to understand the principles regulating the use of sounds in spoken English.

Definition of Basic Terms:

Linguistics: is the study of language as a system of human communication. Linguistics includes many different approaches to the study of language and many different areas of investigation, for example sound systems (PHONETICS, PHONOLOGY), sentence structure (SYNTAX), word structure (MORPHOLOGY), meaning systems (SEMANTICS, PRAGMATICS).

Phonetics: is the study of speech sounds.
There are three main areas of phonetics:
1- Articulatory phonetics: deals with the way in which speech sounds are produced. Sounds are usually classified according to the position of the lips and the tongue, how far open the mouth is, whether or not the vocal cords are vibrating, etc.
2- Acoustic phonetics: deals with the transmission of speech sounds through the air. When a speech sound is produced it causes minor air disturbances (sound

waves). Various instruments are used to measure the characteristics of these sound waves.

3- Auditory phonetics: deals with how speech sounds are perceived by the listener.

Phonology (or phonemics): is the study or description of the distinctive sound units (phonemes) of a language and their relationship to one another.

Lesson 2

Phonemes and pronunciation:

In any language we can identify a small number of regularly used sounds (vowels and consonants) that we call **phonemes**; for example, the vowels in the words 'pin' and 'pen' are different phonemes, and so are the consonants at the beginning of the words 'pet' and 'bet'.

The phoneme: is the smallest unit of sound in a language which can distinguish two words.

The number of phonemes varies from one language to another. English is often considered to have 44 phonemes: 24 consonants and 20 vowels.

Because of the confusing nature of English spelling, it is particularly important to learn to think of English pronunciation in terms of phonemes rather than letters of the alphabet; one must be aware, for example, that the word 'enough' begins with the same vowel phoneme as that at the beginning of 'in' and ends with the same consonant as 'stuff'.

We often use special symbols to represent speech sounds (transcription).

Accents and dialects

Languages have different accents: they are pronounced differently by people from different geographical places, from different social classes, of different ages and different educational backgrounds.

The word accent is often confused with dialect. We use the word dialect to refer to a variety of a language which is different from others not just in pronunciation but also in such matters as vocabulary and grammar. Differences of accent, on the other hand, are pronunciation differences only.

Lesson 3

The production of speech sounds:

All the sounds we make when we 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**.

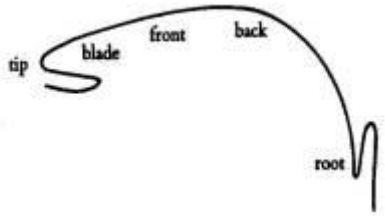
1- The pharynx is a tube which begins just above the larynx. At its top end it is divided into two, one part being the back of the oral cavity and the other being the beginning of the way through the nasal cavity.

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**.

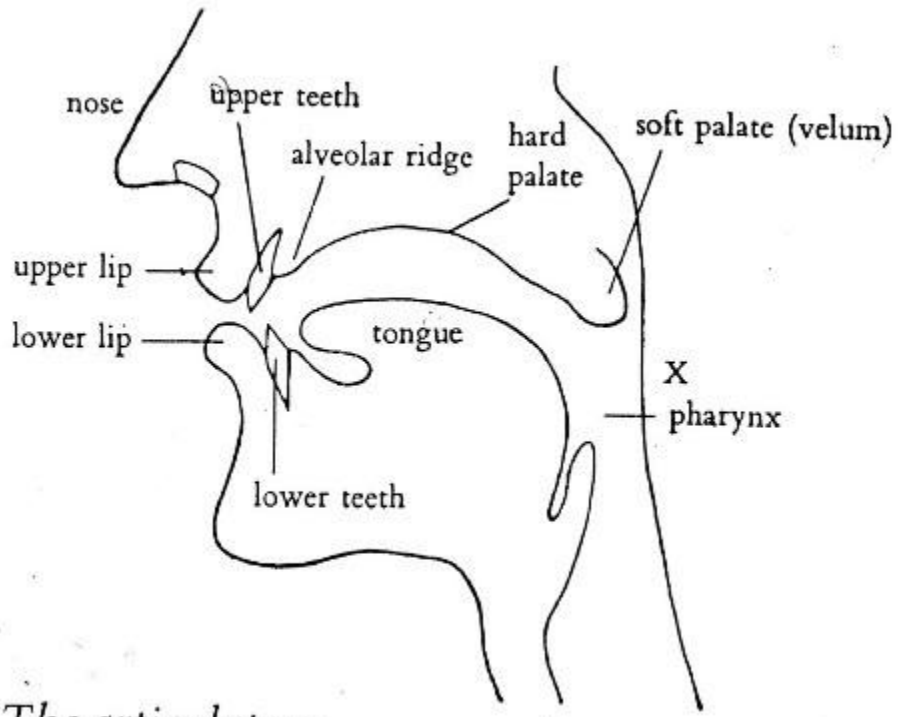
5- The tongue is a very important articulator and it can be moved into many different places and different shapes. It is usual to divide the tongue into different parts, though there are no clear dividing lines within its structure. Fig. 7 shows the tongue on a larger scale with these parts shown: tip,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



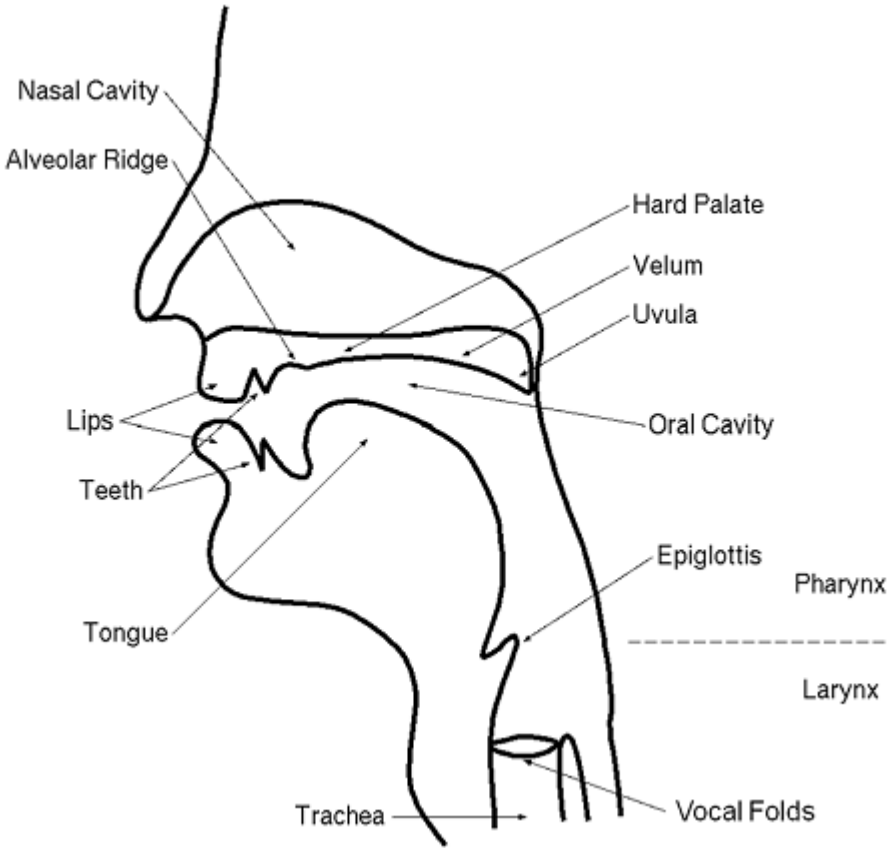
6- The teeth (upper and lower) are usually shown in diagrams like Fig. 9 only at the front of the mouth, immediately behind the lips. The tongue is in contact with the upper side teeth for most speech sounds. Sounds made with the tongue touching the front teeth are called **dental**.

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**.

The seven articulators described are the main ones used in speech, but there are a few other things to remember. Firstly, the **larynx** could also be described as an articulator - a very complex and independent one. Secondly, the **jaws** are sometimes called articulators; certainly we move the lower jaw a lot in speaking. But the jaws are not articulators in the same way as the others, because they cannot themselves make contact with other articulators. Finally, although there is practically nothing active that we can do with the **nose** and the **nasal cavity** when speaking, they are a very important part of our equipment for making sounds, particularly nasal consonants such as m, n.



The articulators

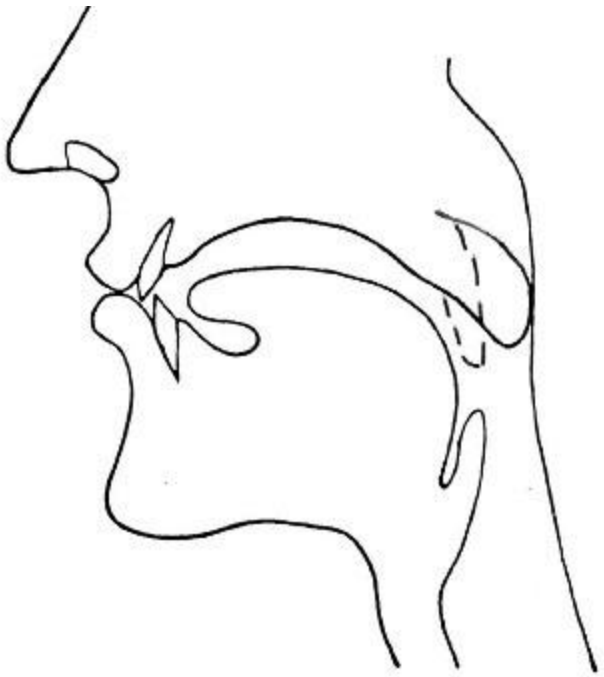

Nasal Cavity
Alveolar Ridge
Hard Palate
Velum
Uvula
Lips
Oral Cavity
Teeth
Epiglottis
Pharynx
Tongue
Larynx
Trachea
Vocal Folds

Lesson 4

Places of Articulation:

- Bilabial sounds are produced when the lips are brought together.

[p], [b], [m] are bilabial sounds.

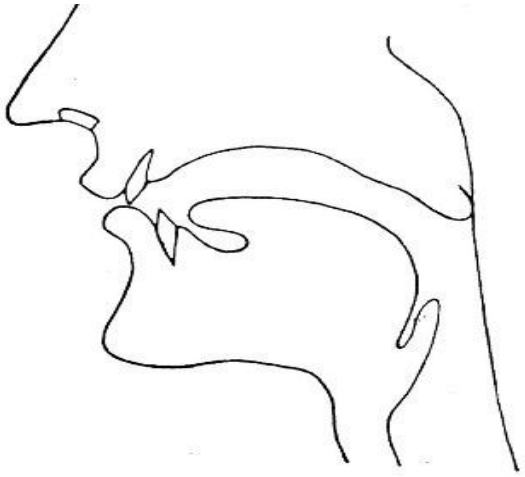


Bilabial articulation

[p, b] ([m])

- Labiodental sounds are made when the lower lip is raised towards the upper front teeth.

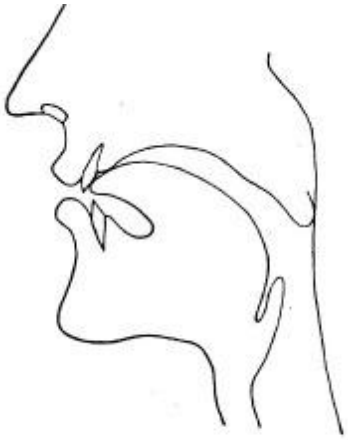
[f] and [v] are labiodental sounds.



Labiodental fricative

[f , v]

- Dental sounds are produced by touching the upper front teeth with the tip of the tongue.
Dental sounds in English are [θ] and [ð]/.



b Dental fricative

- Alveolar sounds are made by raising the tip of the tongue towards the alveolar ridge that is right behind the upper front teeth.
/t/, /d/, /s/, /z/, /n/ and /l/ are alveolar sounds.

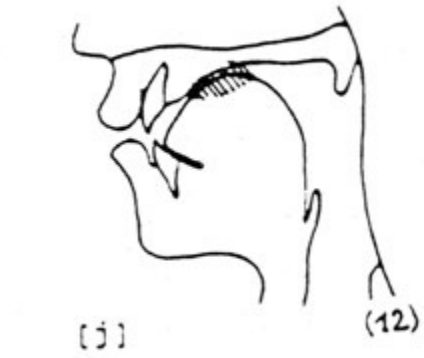
Alveolar articulation

- Palato alveolar (post alveolar) sounds are made by raising the blade of the tongue towards the part of the palate just behind the alveolar ridge.

[ʃ], [ʒ], [tʃ] , [dʒ] are post alveolar.

Palato-alveolar fricative

- Palatal sounds are very similar to palato alveolar ones. They are just produced further back towards the velum.
The only palatal sound in English is /j/.

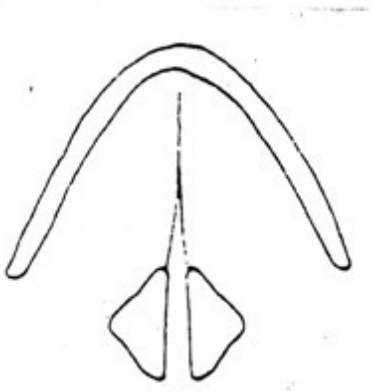


- Velar sounds are made by raising the back of the tongue towards the soft palate. /k/, /g/ and /ŋ/ are velar sounds.

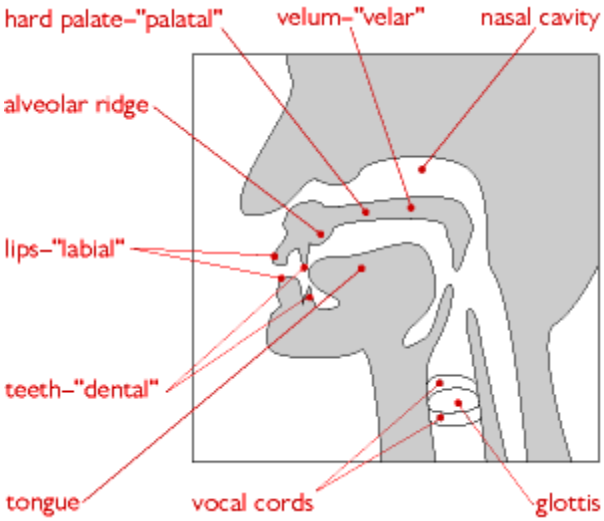
/w/ is a velar sound which is accompanied with lip rounding.

Velar articulation

- Glottal sounds are produced when the air passes through the glottis as it is narrowed.
The only glottal sound in English is **/h/** as in *high*.



The glottis is defined as the opening between the vocal folds


hard palate–"palatal"
velum–"velar"
nasal cavity
alveolar ridge
lips–"labial"
teeth–"dental"
tongue
vocal cords
glottis

The glottis