Module: Phonetics

Level: L1- FILA

Time Allotted: 90 min

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Lecture 3: Vowels and Consonants

How do vowels differ from consonants?

 How do vowels differ from consonants? Vowels and consonants are very familiar to us, but scientifically they are not easy to define. The most common view is that vowels are sounds in which there is no obstruction to the flow of air from the larynx to the lips. But, for consonants it can be clearly felt that we are making it difficult (partial obstruction or impossible – complete or total obstruction-) for the air to pass through the mouth (as examples: d and s sounds).

 However, there are many cases where the decision is difficult to make. For instance, sounds at the beginning of the words ‘home’ and ‘wave’ do not really obstruct the flow of air. But, it is possible to distinguish (to make difference) vowels and consonants in another way. Let consider English words beginning with the sound ‘h’. The sound which normally comes after ‘h’ is a vowel like in ‘hospital’, ‘hotel’, ‘head’, ‘hear’, ‘hat’... and the same thing with the sound ‘w’ like ‘wave’, ‘well’, ‘wife’...Thus, we can differentiate between vowels and consonants by looking at the different contexts and positions in which particular sounds can occur. This is the study of the distribution of sounds. If we look at the vowel-consonant distribution in this way, we must say that the most important difference between vowels and consonants is not the way they are produced, but their different distributions. The distribution of vowels and consonants is different for each language.

 **How Do Vowels differ from Each Other?**

In what ways do vowels differ from each other? The first thing to consider is the *shape* and *position* of the tongue. There are many complex possibilities of the movement of the tongue, but they can be simplified by describing just two (2) things:

1-The vertical distance between the tongue and the palate *(tongue-height differentiation).*

1. The part of the tongue (front or back) which is raised highest *(frontness-backness).*

\***Tongue-height differentiation**

- [i:] in ‘see’ the tongue is raised close to the palate.

- [æ] in ‘cat’ the distance between the tongue and the palate is much greater.

The difference between [æ] and [i:] is a difference of tongue-height. When describing these vowels, we say that [i:] is a *close* vowel and [æ] is an *open* vowel. The tongue-height can be changed by moving the tongue up and down.

**\*Frontness vs. backness**

By changing the shape of the tongue, we can produce vowels in which a different part (front, back) of the tongue is raised highest. For example: it is the front part of the tongue that is raised in the case of [i:] and [æ]. We could, therefore, describe them as *front* vowels. But, in the production of [a:](like in dark, arm) and [u:] (like in too), it is the back part of the tongue which is raised highest. Thus, [a:] and [u:] are back vowels.

 close front back shape of the tongue

 **i: u:**

 **æ a:**

 open

 Position of the tongue

 **Figure 3. Extreme vowel positions**

**Cardinal Vowels:** They are standard reference system which helps us in learning about the range of vowels that the humans can produce. It is a useful way of describing, classifying and comparing vowels. This system is not typical of English or any other language.

 front central back

close  **i u**

half-close **e o**

 half-open **ε ͻ**

open  **a ɑ**

 **Figure 4.**  **Eight primary cardinal vowels**

**\*Lip position**

There is another important variable of vowel quality and that is lip-position. There are three (3) possibilities:

-rounded: the corners of the lips are brought towards each other and the lips are pushed forwards like in [u:]

-spread: the corners of the lips move away from each other like in [i:]

-neutral: the lips are neither rounded nor spread like in **a**bout [ǝ] schwa