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    ويدئو آموزشى دارد! 

The Study of Language: Chapter 3-The Sounds of Language
- Speech sounds (also called phonemes) in each language can be divided into two categories: Consonants and Vowels.

Consonants: Consonants are speech sounds produced by restricting the airflow in some way. When a consonant is produced the airflow coming out of lungs is either completely restricted or stopped (like /p/, /b/, /g/) or roughly stopped creating a narrow passage (like /s/, /z/, /h/) or passing with some form of loose restriction (like /ג/, /j/, /w/, /l/). See Video-2
- We can categorize consonants based on THREE aspects:
1. Voicing: If the vocal folds vibrate while producing a consonant, we say the consonant is voiced; if not, we say it is voiceless. For example, /p/, /t/ and /k/ are voiceless but /b/, /d/ and /g/ are voiced. See Video-3
2. Place of articulation: Where is a consonant produced in the vocal tract? Which articulators (lips, teeth, tongue, alveolar ridge, hard palate, soft palate, glottis, nasal passage) are involved? For example, when we produce /b/, our upper lips and lower lips touch each
other to stop the airflow and release it to produce this phoneme (that is why it is called bilabial = two lips!). Or when we produce /s/, the blade of your tongue touches the upper alveolar ridge to make the friction necessary to produce this phoneme (that is why it is called an alveolar phoneme!). See Figure 1 for articulatory organs involved in the production of consonant phonemes. See Video-3

Figure 1. Articulatory organs (lips, teeth, tongue...) in vocal tract.

3. Manner of articulation: How consonant phonemes are produced?

What happens to the airflow when they are produced! Is the airflow completely stopped, is it stopped in the mouth but open in the nose, is it released with friction or very roughly restricted at all? These
questions are answered based on the manner of articulation. For example, when we produce \(/ \mathrm{z} /\), the air is pushed out with a friction creating a continuous sound (that is why it is called a fricative consonant). When we produce /d/, the airflow is completely stopped (so it is called a STOP consonant). See Video-3

Figure 2. English consonants IPA chart.
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline \multicolumn{8}{|c|}{Classification of NAE Consonant Phonemes} \\
\hline \multirow[t]{2}{*}{Manner of Articulation} & \multicolumn{7}{|c|}{Place of Articulation} \\
\hline & Bilabial & Labiodental & Dental & Alveolar & Palatal & Velar & Glottal \\
\hline \begin{tabular}{l}
Stop \\
Voiceless \\
Voiced
\end{tabular} & \[
\begin{aligned}
& \mathrm{p} \\
& \mathrm{~b}
\end{aligned}
\] & & & \[
\begin{gathered}
\mathrm{t} \\
\mathrm{~d}
\end{gathered}
\] & & \[
\begin{aligned}
& \mathrm{k} \\
& \mathrm{~g}
\end{aligned}
\] & \\
\hline Fricative Voiceless Voiced & & \[
\mathrm{f}
\] & \[
\begin{aligned}
& \theta \\
& \text { б }
\end{aligned}
\] & s & \[
\begin{aligned}
& 5 \\
& 3
\end{aligned}
\] & & h \\
\hline Affricate Voiceless Voiced & & & & & \[
\begin{aligned}
& \mathrm{t} \int \\
& \mathrm{~d} 3
\end{aligned}
\] & & \\
\hline Nasal Voiced & m & & & n & & \(\eta\) & \\
\hline Liquid Voiced & & & & I & r & & \\
\hline Glide Voiced & w & & & & y & & \\
\hline
\end{tabular}

Questions:

1. What are consonants? How are they produced?
2. What are three aspects by which we can categorize consonants?
3. Name FOUR articulatory organs involved in the production of English consonants!
4. Can you find out how many consonants there are in English language? What about in Persian? GOLDEN QUESTION!

We check the answers in our ordinary classes later! But I can't wait to hear your answers for \(\mathrm{Q}-4\) and give you some bonus scores © So, send your answers!!!```

