

University of Tikrit

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Voicing and Consonants

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1 .Introduction

Consonants are produced by obstructing the airflow in the vocal tract. They differ from vowels in that they involve some closure, constriction, or friction. A key property of consonants is voicing, which refers to whether the vocal cords vibrate during sound production. Understanding consonants is essential for:

- Accurate pronunciation
- Distinguishing minimal pairs
- Correct transcription using the IPA
- Analysis of connected speech

This chapter covers:

- Voicing
- Place of articulation
- Manner of articulation
- English consonant classification

2 .Voicing

Voicing depends on the vibration of the vocal cords in the larynx.

2.1 Voiced Consonants

- Vocal cords vibrate
- Examples: /b, d, g, v, z, ʒ, m, n, ŋ, l, r, j/
- Test tip: Place fingers on throat → feel vibration

2.2 Voiceless Consonants

- Vocal cords do not vibrate
- Examples: /p, t, k, f, s, ʃ, θ, h/

- Air passes freely or with friction without vibration

2.3 Minimal Pair Examples

/ b/ vs /p/ – bat / pat

/ d/ vs /t/ – day / tie

/ g/ vs /k/ – go / coat

Tip: Students can feel difference by hand on throat + listening.

3 .Place of Articulation

The place of articulation refers to where the airflow is obstructed in the vocal tract.

3.1 Bilabial – both lips

/ p/ voiceless – pat

/ b/ voiced – bat

/ m/ voiced nasal – man

3.2 Labiodental – lower lip + upper teeth

-/ f/ voiceless – fat

/v/ voiced – vat

3.3 Dental – tongue tip + upper teeth

/ θ/ voiceless – think

/ ð/ voiced – this

3.4 Alveolar – tongue tip + alveolar ridge

/t/ voiceless – top

/ d/ voiced – dog

/s/ voiceless – sip

/ z/ voiced – zip

/ n/ voiced nasal – nap

/ l/ voiced lateral – lip

3.5 Postalveolar / Palato-Alveolar

/ ʃ/ voiceless – ship

/ ʒ/ voiced – measure

/ • tʃ/ voiceless affricate – chip

/ • dʒ/ voiced affricate – judge

3.6 Velar – back of tongue + soft palate

/ k/ voiceless – cat

/ g/ voiced – go

/ŋ/ voiced nasal – sing

3.7 Glottal – vocal cords / glottis

/h/ voiceless – hat

/ʔ/ glottal stop – some pronunciations of butter

4 .Manner of Articulation

The manner describes how the airflow is modified.

4.1 Plosives / Stops – complete closure + release

/ p, b, t, d, k, g/

4.2 Fricatives – narrow constriction → friction

/ f, v, θ, ð, s, z, ʃ, ʒ, h/

4.3 Affricates – stop + fricative

/tʃ/ voiceless – chip

/ dʒ/ voiced – judge

4.4 Nasals – airflow through nose

/ m, n, ŋ/

4.5 Approximants – slight constriction, no friction

/j/ – yes

/ r/ – red

4.6 Lateral Approximant – airflow along tongue sides

/ l/ – lip

5 .English Consonant Classification Table (Text Version)

Bilabial:

/p/ – voiceless stop – pat

/b/ – voiced stop – bat

/m/ – voiced nasal – man

Labiodental:

/f/ – voiceless fricative – fat

/v/ – voiced fricative – vat

Dental:

/θ/ – voiceless fricative – think

/ð/ – voiced fricative – this

Alveolar:

/t/ – voiceless stop – top

/d/ – voiced stop – dog

/s/ – voiceless fricative – sip

/z/ – voiced fricative – zip

/n/ – voiced nasal – nap

/l/ – voiced lateral – lip

Postalveolar / Palato-Alveolar:

/ʃ/ – voiceless fricative – ship

/ʒ/ – voiced fricative – measure

/tʃ/ – voiceless affricate – chip

/dʒ/ – voiced affricate – judge

Velar:

/k/ – voiceless stop – cat

/g/ – voiced stop – go

/ŋ/ – voiced nasal – sing

Glottal:

/h/ – voiceless fricative – hat

/ʔ/ – glottal stop – some pronunciations of butter

6 .Minimal Pairs for Voicing Practice

/ • p/ – /b/ → pat / bat

/ • t/ – /d/ → tie / die

/ • k/ – /g/ → cat / got

/ • f/ – /v/ → fan / van

/ • s/ – /z/ → sip / zip

/ • ʃ/ – /ʒ/ → she / measure

Exercise: Students place fingers on the throat to feel voicing.

7 .Coarticulation and Connected Speech

- Voicing may change in context
- Example: have to → /hæv tu/ → /hæf tə/
- Nasals may assimilate in place: input → /'ɪnpʊt/ → /'ɪmpʊt/

8 .Summary

- Voicing: vocal cords vibrate (voiced) or not (voiceless)
- Place of articulation: where the airflow is blocked
- Manner of articulation: how the airflow is modified • English consonants: stops, fricatives, affricates, nasals, approximants, lateral
- Key skills: pronunciation, minimal pair distinction, IPA transcription