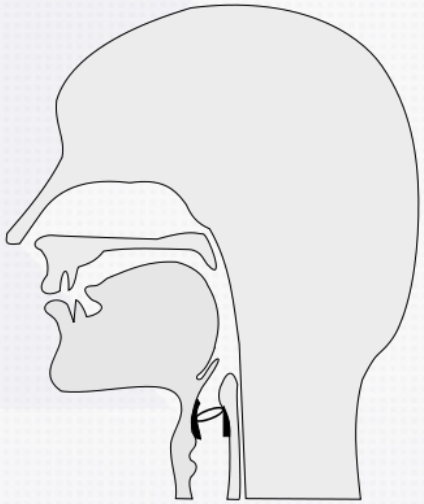
ESOL
in Higher Ed

Manner of Articulation



By: Jeffra Flaitz

Visual: Bing Online

ESOL in Higher Ed

Describes how the airstream is modified by the vocal tract to produce sounds:

- Stops
- Fricatives
- Affricates
- Nasals
- Liquids
- Glides

ESOL
in Higher Ed

Stops: sounds produced by obstructing the airstream in the oral cavity and then releasing it.

English sounds:

Bilabial stops: [p] [b] as in “pot” and “bee”

Alveolar stops: [t] [d] as in “two” and “do”

Velar stops: [k] [g] as in “car” and “go”

ESOL
in Higher Ed

Fricatives: sounds made by forming a nearly complete stoppage of the airstream.

English sounds:

Labio-dental: [f] and [v] as in “fun” and “vote”

Alveolar: [s] and [z] as in “so” and “zoo”

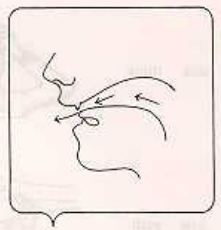
ESOL
in Higher Ed

A graphic way of looking at English fricatives.

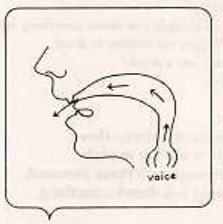
PLACE OF ARTICULATION:

a) inter-dental

θ thin

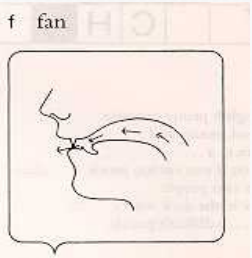


ð the feather

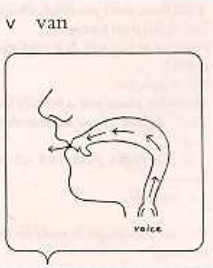


b) labiodental

f fan

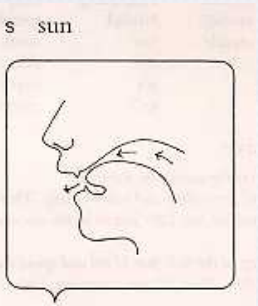


v van

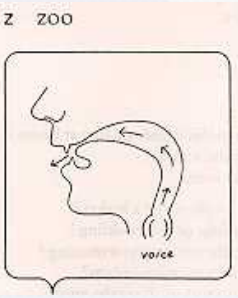


c) alveolar

s sun

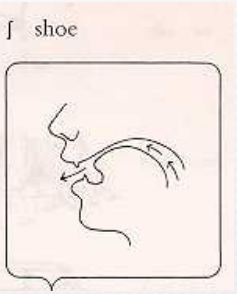


z zoo

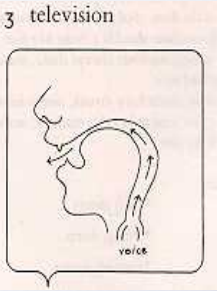


d) palatal

ʃ shoe



ʒ television



ESOL in Higher Ed

Affricates: sounds made by a combination of the stop and fricative. The airstream is briefly stopped, and then the articulators are released slightly.

This action causes a kind of friction, and produces the alveolar (or alveo-palatal) sounds.

English sounds:

[tʃ] as in “watch” and [dʒ] as in “joy”

ESOL in Higher Ed

Nasals: sounds produced in the nasal; the velum is lowered, and the air stream escapes out through the nasal cavity.

The 3 nasal sounds in English are:

[m] as in “me”
[n] as in “no”
[ŋ] as in “ri<u>ng</u>”

ESOL
in Higher Ed

Liquids: sounds produced in the oral cavity with some obstruction of air stream in the mouth, but there is no friction in the production of these sounds.

In English, the two liquids are:

[l] as in “love”

[r] as is “rot”

ESOL
in Higher Ed

Glides: sounds produced with little obstruction of the airstream.

Glides are also known as semivowels.

If the vocal tract were any more open these would be classified as vowels.

These sounds must be preceded or followed by a vowel.

In English the two glides are:

- o[y] as in ***yet***
- o[w] as in ***wet***

Even though they are vowel-like in their articulation, **the sounds are consonants** since they cannot function as the nucleus of a syllable.

ESOL
in Higher Ed

English Alphabet versus International Phonetic Alphabet (IPA)

- The English alphabet has 26 letters, but not a one-on-one correspondence.
  Example: [k] sound can be represented as *c* in “cow”, *k* in “kite”, ch in “chorus”.

- The **International Phonetic Alphabet:**
- the guiding principle is one sound = one symbol;
- the same symbol should be used for that sound in every language which uses it;
- simple symbols for major sounds.

Familiarize yourself with the phonetic alphabet at:
http://www.arts.gla.ac.uk/IPA/ipachart.html or
http://www.phon.ucl.ac.uk/home/wells/cassette.htm

Consonants:

ESOL in Higher Ed

Sounds that are produced by complete or partial closure of the airstream in the vocal tract

Features that define what consonants:

1. **Place** where they are articulated;
2. **Manner** in which they are articulated;
3. **Phonation of the consonant** – the amount of vibration of the vocal chords during the articulation of the sounds.

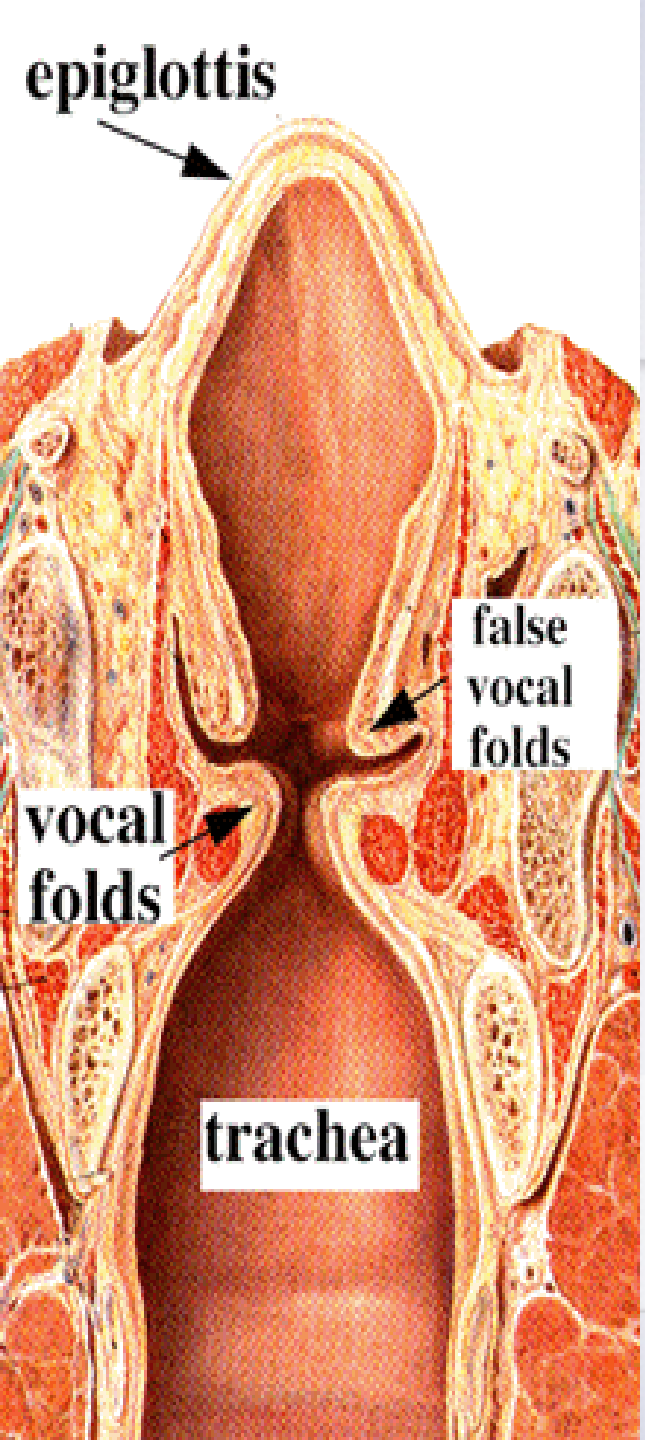
Sounds that **vibrate** the vocal chords during pronunciation are called **voiced**, and those that don't are called voiceless.

Voiced vs. Voiceless

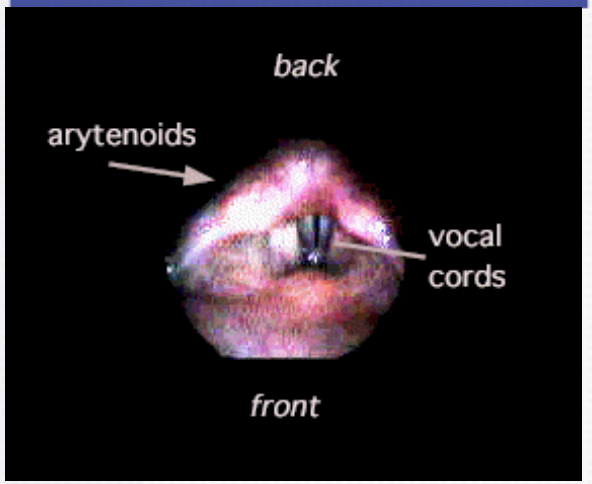
ESOL in Higher Ed

The space between the cords when they are open is known as the **glottis**.

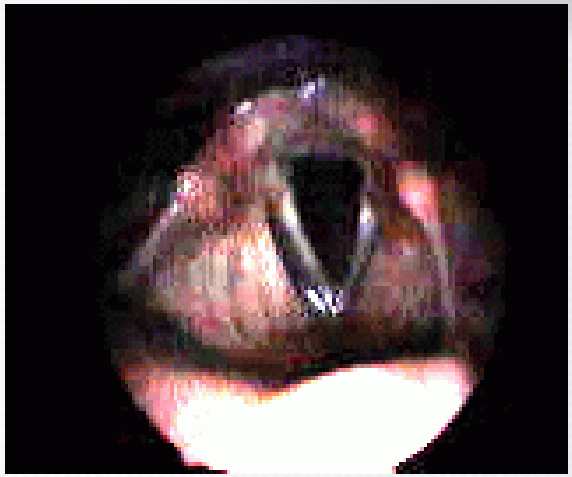
The vocal cords can be relaxed so that the flow of air coming up from the lungs passes through freely (**voiceles**s); or the vocal cords can be held close together so that they vibrate as air passes through (**voiced**).



ESOL in Higher Ed



Partially open cords



Opened cords

Completely closed cords

Practice voiced vs. voiceless sounds

ESOL in Higher Ed

Place on your throat (on the Adam's apple region) and enunciate the following pairs of words:

p/b, t/d, k/g, f/v, s/z, m/n

The enunciation of these sounds moves from the lips to the glottis.

Notice how the voicing occurs with those words that are produced in the glottis. The front sounds are voiceless.

ESOL
in Higher Ed

Chapter 5

Complete
Pause and Reflect Activity
pp. 69

ESOL
in Higher Ed

Read Chapter 5

pp. 70-76

Minimal Pairs

The Systematicity of Vowels

Suprasegmentals

Phonology and L2 Learning

ESOL in Higher Ed

Vowels: Sounds that are produced without any obstruction in the oral cavity.

Vowels are classified as being articulated through their tongue position:

- o High, mid, or low
- o Tense, lax
- o Front, central, or back

ESOL
in Higher Ed

How are vowels and consonants different?

Articulation (how we produce them);

Acoustics (perceived as louder and longer, i.e., you can sing vowels);

Function (vowels are the basis of syllable formation)

ESOL
in Higher Ed

Four Qualities that Describe Vowels:

1) **Tongue Height**: raising or lowering the body of the tongue
   a. high vowels: *leak/lick, Luke/look*
   b. low vowels: *sat/cat, cot*
   c. mid vowels: *set[e], bait[e], bet, bought, boat[o]*

2) **Tongue Advancement**: advancing or retracting the body of the tongue
   a. front: *seek/sick[i], sake[e], sec/sack*
   b. back: *ooze/look, road/paw, dot*
   c. central: *luck*

ESOL in Higher Ed

The two other qualities that describe vowels:

3) <u>Lip Rounding</u>: rounding or not rounding the lips
ex: *loop/foot, soap/fall*

4) <u>Tenseness:</u>
a. tense (long): produced with an extra degree of muscular effort
b. lax (short): less tense

ex: *beat/bit, bait/bet, boot/put, boat/bore*

The Vowel Chart

ESOL in Higher Ed

Classification of English Vowels

		Front	Central	Back
High	Tense	i (beat)		u (boot)
	Lax	ɪ (bit)		ʊ (book)
Mid	Tense	e (bait)	ʌ (but)	o (boat)
	Lax	ɛ (bet)	ə (about)	ɔ (paw)*
Low		æ (bat)		ɑ (pot)

*(not in all dialects)

Source: http://www.uoregon.edu/~l150web/vowel.html

ESOL
in Higher Ed

Other Features of Vowels

Nasalized Vowels

when the vowel sounds are emitted through the nasal track because of proximity to a nasal sound: *bean, bin, bane, Ben, ban. Boon, bun, bone, beam, bam, boom, bing.*

ESOL
in Higher Ed

Long(tense)/Short(lax) Vowels

Another way to describe vowels is by the amount of tension experienced by the tongue.

Long (tense)	**Short (lax)**
[i:] beat	[ɪ] bit
[ei] bait	[e] bet
[u:] boot	[u] put
[ou] boat	[ɔ:] ball, bore

ESOL
in Higher Ed

Dipthongs …

- a combination of two vowels or a vowel and a glide;
- tense vowel sounds;
- start at one vowel-position and move towards another;

There are many arguments among linguists about the quality of dipthongs.

ESOL
in Higher Ed

Our Phonological knowledge comprises of:

- knowing the **phonemes** of the language;
- knowing the difference between **phonemes** and **allophones;** and the
- **phonological rules** that govern the production of sounds in words.

ESOL
in Higher Ed

How do we describe sounds?

- Are the sounds oral or nasal?
- Are the sounds consonantal or vowel (a.k.a. syllabic)?
- Are the sounds voiced or voiceless?
- What phonological process describes the production of these sounds?

Phonemes

ESOL in Higher Ed

Allophones

Phoneme: how the sound is represented in a language in the mind of the speaker.

[b] – represented in one way
[p] - represented in two ways: /p/ or /p^h/ {aspirated sound}
[i] – represented in two ways: /i/ or / ĩ/ {nasalized vowel}

When different phones are derived (variants) from one phoneme (because of the rules that govern the pronunciation of the phones), these phones are called **allophones** of that phoneme.

[p] → /p/ and /p^h/ {aspiration rule}
[i] → /i/ and / ĩ/ {nasalization rule}
[l] → /l/, / l̥/ or /ɬ/ [voiceless rule and velarization rule}

Allophones are always in <u>complementary distribution</u> since one variation cannot occur in the same environment as the other variant.

ESOL
in Higher Ed

Knowing the **phonemes** of the language (English) is knowing the distinctive sounds of the language (English) and how they are pronounced.

▶Speakers of English along with knowledge of individual sounds, also know that each of the following words are different: *sip/zip; fine/vine; chunk/junk* - because in each case the words share the same sounds except the initial one.

▶The initial sounds in the minimal pairs that have distinctively different properties are called **phonemes**.

▶Substitution of the initial distinctive sound produces a new word. Thus the words are said to be in contrast.

ESOL
in Higher Ed

When two words are similar in every way, except that a substitution in a sound in the same place causes a new word to be born, we have what is known as a **Minimal Pair.**

- *sip/zip; fine/vine; chunk/junk* are minimal pairs.

Minimal Pairs are used to contrast or highlight the phonemes of a particular language.

bead [bid] and *deed* [did]]
bowl [bol] and *dole* [dol]

[b] and [d] can contrast in the same position in words where all other sounds are the same.

ESOL in Higher Ed

Why should you know about phonemes and minimal pairs?

To help detect which sound ELs are having trouble with;
To help ELs perceive the difference between sounds;
To use minimal pairs in exercises that ELs can use to practice sound differences

Two resources to browse:

http://www.tedpower.co.uk/phono.html
http://tesoros.macmillanmh.com/assets/extras/0001/3620/LangTransPOST.pdf

ESOL
in Higher Ed

Phonological Rules that Govern the Pronunciation of Sounds in English

Aspiration

Velarization

Nasalization

ESOL
in Higher Ed

Phonological Rule: Aspiration

Set A: pat /pæt/ tub /tʌb/ cope /kowp/
Set B: span /spæn/ upset / ʌpsɛt/ sap /sæp/

In Set A: [p] is aspirated, that is an extra puff of air accompanies the sound. The features of the [p] sound are characterized:

(1) they are all *stops*, (2)they are all *voiceless*, and (3) they all occur in initial position, and before a stressed vowel.

In Set B: [p] is unaspirated. The features of the unaspirated are characterized by (1) they are all stops, (2) they are all voiceless, (3) they are not in initial position (4) they occur after a /s/ and before a stressed vowel

- Aspiration Rule applies to Set A.
- Other aspirated sounds are /t/ and /k/ under the same conditions.
- Aspirate voiceless stops when they are syllable-initial and when they are before a stressed vowel.

ESOL
in Higher Ed

Phonological Rule: Velarization

Example phoneme is [l]:
It can be realized in our pronunciation in 3 different ways:

1st in words like: blue [blu] glue [glu] gleam [glim] as here
***/l/* is <u>voiced</u>** since it is preceded by a voiced stop [b],[d],[g]

2nd in words like: clip /klˑ p/ plow /plˑ aw/ as here ***/l/* is <u>voiceless</u>**
since it is preceded by voiceless stops.

3rd in words like: foal /foł/ peel /pił/ teal /tił/ as here **[l] is <u>velarized</u>**
since it is preceded by a stressed vowel and is at the end of the word.

ESOL
in Higher Ed

Phonological Rule: Nasalization

Nasalize vowels and dipthongs before nasals sounds:

Bob /bab/ nasal rule does not apply

bomb /b ã m/ - here /a/ is nasalized because the vowel occurs in a nasalized environment.

ESOL in Higher Ed

Phonological Rules: Past Tense Pronunciation Rule

Set A: grab - grabb**ed** ; hug - hugg**ed**; pray- pray**ed;** gun - gunn**ed**

Set B: reap - reaped; peak - peaked; kiss - kissed

Set C: state - stated; raid - raided

How do we pronounce the past tense endings?

Set A: /d/ Set B: /t/ Set C: /ɪd/

What governs the pronunciation of these phonemes?

Set A	Set B	Set C
grab + past	reap + past	state + past
/græb + d/	/riyp + t /	/steyt + ɪd /
/græbd/	/riypt /	/steytɪd /

/ɪ / before the /d/

ESOL
in Higher Ed

What rules govern the pronunciation of these past tense phonemes?

Set A: when the final phoneme is voiced, pronounce the past tense with /d/ when the final phoneme is a vowel, nasal, glide, liquid, pronounce the past tense with /d/;

Set B: when the final phoneme is voiceless, pronounce the past tense with /t/;

Set C: when the final phoneme is an alveolar stop, pronounce the past.

ESOL in Higher Ed

Phonological Rules: Pronouncing Plurals

Let's look at a few pluralized words

Set A: cat - cats; mat - mats

Set B: dog - dogs; bud - buds

Set C: bus - buses; church - churches

How do we pronounce these?

Set A: pronounce with /s/

Set B: pronounce with /z/

Set C: pronounce with /əz/

What are the rules?

Set A: when the final phoneme is voiceless, pronounce the plural with /s/

Set B: when the final phoneme is voiced, pronounce the plural with /z/

Set C: when the final phoneme is an alveolar sounds, pronounce the plural with an /ə/ before the /z/

ESOL
in Higher Ed

What do we see happening as a result of these phonological processes?

- **Feature-changing processes**
  - changes a sound's feature due to the influence of a nearby segment i.e., ***Nasalization rule***

- **Feature Adding/Deleting Processes**
  - addition: adds a new feature, i.e., **Aspiration rule**
  - deletion: occurs in fast speech or casual speech in English
    - **mystery ----mystry; general ---genral; I will --I'll**

- **Feature Movement Processes**
  - Children's speech: animal-aminal; sphagetti-pesketti
  - Dialect:s: ***ask*** is pronounced as [æ ks], but ***asking*** remains unchanged

ESOL in Higher Ed

Pronunciation Problems for ELs

- Lack of sound in native system;
- Allophone in native language is a phoneme in target language;
- Phonemes with different distribution in two languages, i.e., in English -ng [ŋ] is either words final (dancing) or internal (mango), but never in word initial, which may be true in ELs' L1;
- Phonemes occur in unfamiliar combinations;
- Native and target languages have similar phonemes in different points of articulation (factor contributing to accent).

ESOL in Higher Ed

Practice Transcriptions

While phonetic transcriptions are essential for phoneticians, all teachers should develop at least a basic skill in order to help ELs with pronunciation practice.

Review the following website to read an argument about how transcription helps language teachers:
http://www.phon.ucl.ac.uk/home/wells/whytranscription.htm

Now, go to the following URLs and complete the exercise:
http://www.ic.arizona.edu/~lsp/IPAExercises/Transcription1/Transcription1.html

http://www.ic.arizona.edu/~lsp/IPAExercises/Transcription2/Transcription2.html

ESOL
in Higher Ed

Resource Websites

American English Pronunciation Practice:

http://www.manythings.org/pp/