

PHONETICS

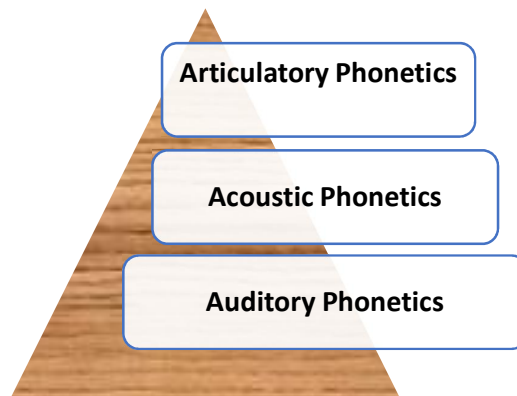
DEFINITION :

“Phonetics , a level of linguistics , scientifically and studies the physical , physiological aspect of speech sounds.”

Q: Why we need to know phonetics?

- How sounds are produced and which articulators or speech organs take part in producing particular speech sounds.
- How they are transmitted through the air.
- How they are received and perceived.

Branches of PHONETICS:



Articulatory Phonetics:

DEFINITION:

“Articulatory Phonetics refers to the aspects of phonetics which looks at how the sounds of speech made with the organs of the vocal tract. Articulatory phonetics can be seen as divided up into three areas to describe consonant. These are voice , place and manner respectively. All three areas combine together in the productin of speech.

Acoustic Phonetics:

Acoustic Phonetics is the study of the physical properties of space and aims to analyze sound wave signals that occure within speech trough varying frequencies,amplitudes and durations.

Auditory phonetics:

- Auditory phonetics is a branch of phonetics dealing with the physiological processes involved in the reception of speech .
- In short,this branch of phonetics analyzes and examines how we receive and realize speech sound.

PHONOLOGY:

“Phonology is a branch of linguistics which deals with systems of sounds. It may be within a language or between different languages.”

In fact , it is the study of how sounds are organized and used in natural languages.

EXAMPLES OF PHONOLOGY:

An example of phonology is about how to different sounds come together to form speech and words – such as the comparison of the two “p” sounds in “pop-up”.

AIM OF PHONOLOGY:

The aim of phonology is to demonstrate the patterns of the distinctive sounds found in a language and to make as general statements as possible about the nature of sound systems in the languages of the world.

BRANCHES OF PHONOLOGY:

There are two types of Phonology.

Segmental: It analyzes speech into discrete segments, such as phones, segments, usually phonological units of the languages such as vowels and consonants one of very short duration.

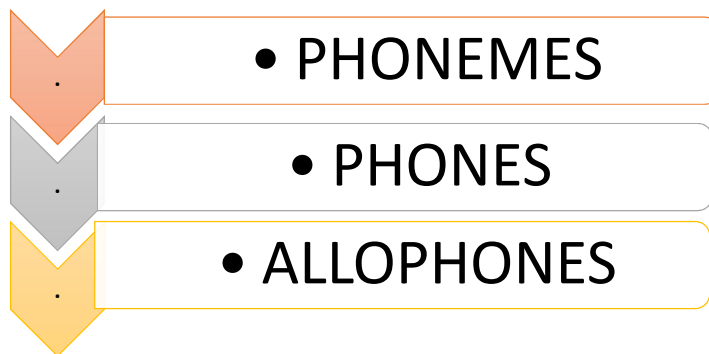
Non-Segmental: Supra-segmental or prosodic features are often used in the context of speech to make it more meaningful and effective.

DIFFERENCES BETWEEN PHONETICS & PHONOLOGY:

Phonetics	Phonology
1.Studies the production and the perception of sounds.	1.About establishing what are the phonemes in a given language.
2.Independent of any language	2.Dependent on a particular language.
Phonetics	Phonology
3.Phonetics deals with actual encoding, transmitting and decoding of speech sounds.	3.Phonology deals with the unobservable phenomenon how speech sounds combine to produce meaning.
4.Represents the inventory and description of the occurring phonetic segments.	4.Refuses to the inventory phonetic segments of the languages.

5.A phonetic unit is "Phone"	5.A phonological unit is "Phoneme"
6.A phonetic unit is incapable of exhibiting any meaning contrast.	6.A phonological unit can produce a meaning difference.

Some terms those are used in PHONETICS



PHONEMES: "Phonemes are the smallest phonetic units in a language that are capable of conveying a distinction in meaning."

In a simple way.....

"Phonemes are the actual

symbols of sounds which we see at the

PHONETIC CHART."

ɪ READ	ɪ SIT	ʊ BOOK	u: TOO	ɪə HERE	eɪ DAY	John & Sarah Free Materials 1996	
e MEN	ə AMERICA	ɜ: WORD	ɔ: SORT	ʊə TOUR	ɔɪ BOY	əʊ GO	
æ CAT	ʌ BUT	ɑ: PART	ɒ NOT	eə WEAR	aɪ MY	aʊ HOW	
p PIG	b BED	t TIME	d DO	tʃ CHURCH	dʒ JUDGE	k KILO	g GO
f FIVE	v VERY	θ THINK	ð THE	s SIX	z ZOO	ʃ SHORT	ʒ CASUAL
m MILK	n NO	ŋ SING	h HELLO	l LIVE	r READ	w WINDOW	j YES

Characteristics of PHONEMES:

- ❖ These are abstract mental representation
- ❖ Phonemes are represented with slashes “ / / ”

Examples:

/a/ = Bard

/e/ = Men

/i:/ = Bean

and so on

Examples of PHONEMES :

In the word ‘KEEP’ = / ki:p /

(It means to have to have or continue to have in your possession.)

/ ki:p / >> / di:p /

/ k / >> / d /

The word ‘DEEP’ = / di:p /

(It means going or being a long way down from top or surface.)

So, if we change a phoneme in a word to another phoneme, it will change the meaning of the word.

PHONES: “Phones are the realization sounds of PHONEME .”

These are very specific sounds and they are hundreds

When we pronounce a phoneme it becomes a phone.

Phones are represented with brackets.

Examples: [o]=Dog

[u]=Book

[e]=Pen

ALLOPHONES: “Allophones are audibly distinct variations of PHONEMES.”

These are the groups of phones those are all represented by the same phoneme .

One Phoneme could have several Allophones.

Allophones are represented with brackets.

[o],[p],[k],[d]

Examples of ALLOPHONES

/t/ is a phoneme

But.....

The word 'TOP' ≠ The word 'STOP'

'TOP'=[t^h]

{[t^h] is pronounced with a puff of air and in the strong way. It is called ASPIRATED}

'STOP'=/stɑ:p />>[t]

{[t] is pronounced with no puff of air and in a weaker way. It is called unaspirated.}

[t^h] and [t] are the Allophones of Phoneme /t/.

Vowel:

Q:What is vowel ?

- The speech sound that are produced without any obstacles in the vocal tract are called vowel.

However vowel can be defined in terms of **both phonetics and phonology**.

Phonetically they are sounds articulated without a complete closure in the mouth, the air escaped evenly over the center of the tongue.

Classification of Vowels:

In basis of from where air escape for articulation vowels are two types,

1.Oral

2.Nasal

Oral : If lungs air escape solely through the mouth, the vowels are said

to be oral.

Nasal : If some air is simultaneously released through the nose the vowels are nasal.

In a phonetic classification of vowels , reference is generally made to two variables,

- a. The position of the lips- whether rounded spread or neutral
- b. Which part of the tongue is raised and the height to which it moves

On the other hand ,

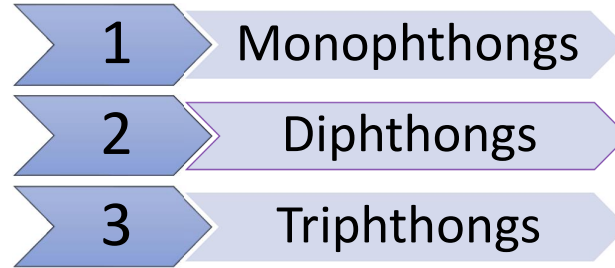
from the phonological point of view to form a syllable at least one vowel is indispensable.

More Base Of Classification of Vowel:

In establishing the vowel system of a language several further dimensions of classification are used.

- a. duration of vowel whether long or short

b. whether during an articulation, there is any detectable change in quality where vowels are classified under 3 headings.



DESCRIPTIONS

Monophthongs:

A simple or pure vowel articulated without any obstacles in the vocal tract is a monophthong. For example

/i:/ as in the words bean, leap, sheep etc .

Diphthongs :

Diphthongs involve two pure vowels or monophthongs with one vowel gliding into the other.

For example,

The diphthong /ai/ in the English word my /maɪ/ consists of the vowel /a:/ gliding into the vowel /ɪ/

Triphthongs:

A triphthong can be defined as a combination of 3 pure vowels or monophthongs, in which the first one glides into the second one and then the second one proceeds by the first one and glides into the third one. For example /a:/ glides into /u/ and then /u/ preceded by /a:/ glides into /ð/ and thus the triphthong /aʊð/ is constituted, as in the word hour.

MONOPHTHONGS IN DETAIL:

“ Monophthong is a term used in phonetic classification of vowel sounds on the basis of their manner of articulation .”

To put it simply, a monophthong is where there is one vowel sound in a syllable.

SYLLABLE:

Vowels can be MONOPHTHONGS, diphthongs or triphthongs. To understand these terms you must

first understand what a syllable is.

Say each of these words to yourself,

- ❖ Mouse – one syllable
- ❖ Rabbit – two syllable
- ❖ Kangaroo- three syllable

As you can hear, a syllable is a unit of pronunciation. Any word must have one syllable.

A monophthong is a single vowel of one syllable.

Kinds of Monophthongs:

English language has twelve monophthongs. They are,

1. /i:/ 2. /ɪ/ 3. /e/ 4. /æ/ 5. /ʌ/ 6. /ɑ:/ 7. /ʊ/ 8. /ə:/ 9. /e/ 10. /ɜ:/ 11. /u/ 12. /u:/

The monophthongs can be shown in a diagram as follows.

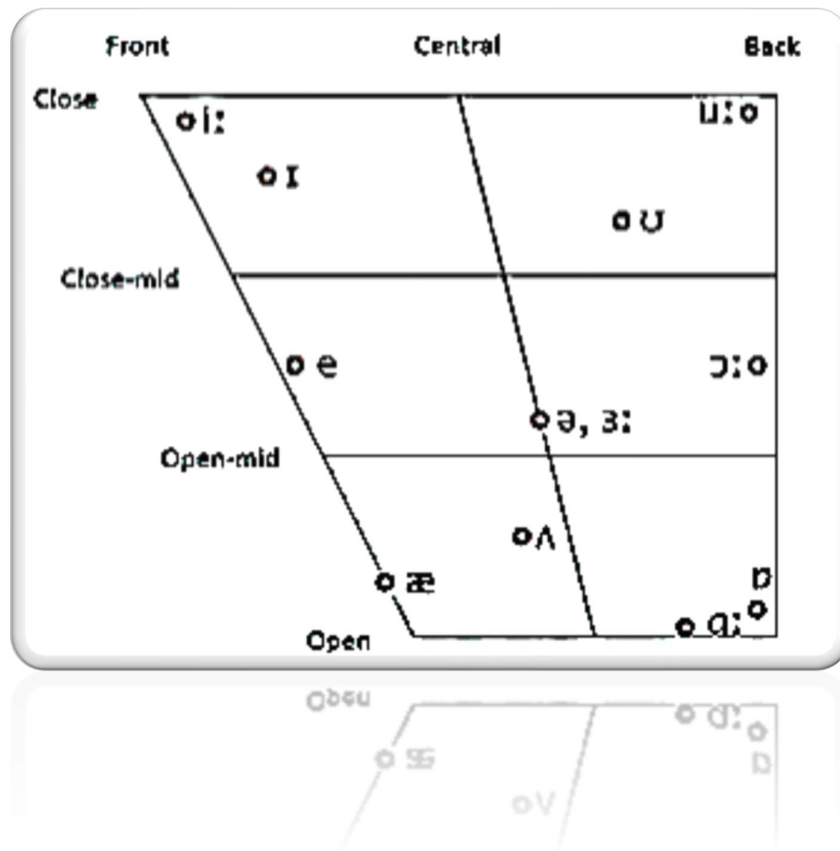


Chart of Monophthongs:

	Symbols	Examples	Pronunciation place	Kind of vowel
ke	/i:/	Bean, Leap, Sheep etc	Front part of the vocal tract with the lips in a relatively close & spread position.	Long

বি	/i/	Bin,Lip,Ship etc	Front centralized part of the vocal tract with the lips in a halfclose and spread position.	Short
এ	/e/	Men,Pen,Ten etc	Front part of the vocal tract with the lips in their mid and spread position.	Short
এয়	/æ/	Man,Pan,Tan etc	Front part of the vocal tract with the lips in a half open and spread position.	Short
আ	/ʌ/	Cut,Nut,Shut etc	The central part of the vocal tract with the lips in a half open position.	Short
আ	/ɑ:/	Bard,Card,Farm etc	Back part of the vocal tract with the lips with their completely open and spread position.	Long
অ	/ʊ/	Dog,Pot,Fog etc	Back part of the vocal tract with the lips in a half open and rounded position.	Short
ও	/ə:/	Lord,Cord,Short etc	Back part of the vocal tract with the lips in their mid and rounded position.	Shortest
আ	/ɜ:/	Bird,Girl,Shirt etc	Central part of the vocal tract with lips in their mid position.	Long
আ	/ə/	Ago,Today, etc	Central part of the vocal tract with lips in their mid position.	Shortest

ʊ	/u /	Book,Look,Cook etc	Back centralized part of the vocal tract with the lips in their half close and rounded position.	Short
uː	/u: /	Fool,Cool,Tool etc	Back part of the vocal tract with the lips in their close and rounded position.	Long

ENGLISH CONSONANT:

Consonant can be defined in two ways.

- Phonetically
- Phonologically



DEFINITIONS

PHONETICALLY CONSONANT :

Phonetically consonants are speech sounds made by a closure or narrowing in the vocal tract so that , the air flow is either completely blocked or so restricted that audible friction is produced.

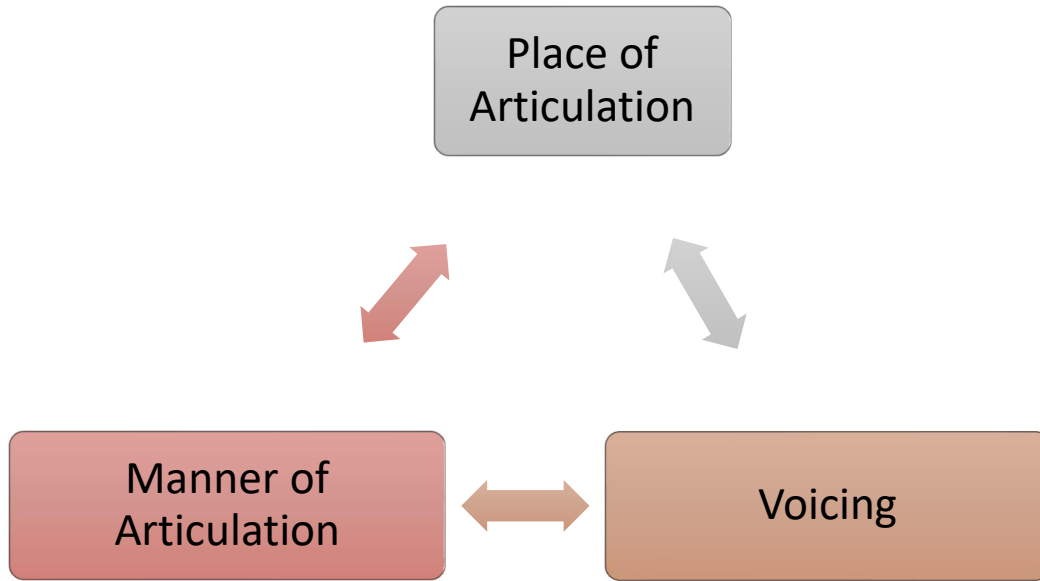
PHONOLOGICALLY CONSONANT:

From the phonological point of view consonants are those units that function at the margins of syllables either singly or in cluster.

PHONETIC PROPERTIES OF CONSONANT:

Consonant sounds can be characterized according to three main properties:

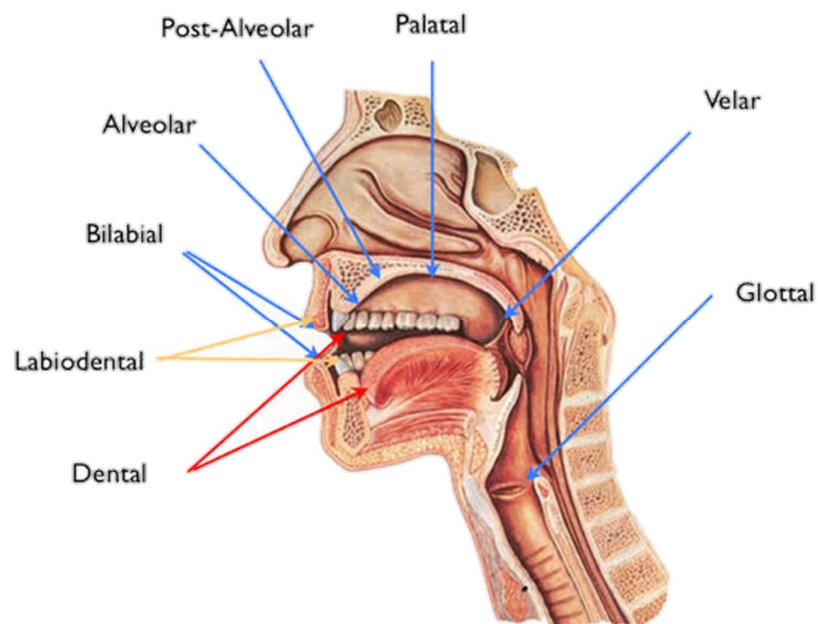
- Place of Articulation
- Manner of Articulation
- Voicing



PLACE OF ARTICULATION:

Place of articulation refers to where in the mouth the sound is produced.

- a. Bilabial(ওষ্ঠবর্ণ)
- b. Labio-dental (দন্তোষ্ঠ)
- c. Interdental(দন্তীয়)
- d. Alveolar(দন্তমূলীয়)



- e. Post alveolar(পশ্চাৎদন্তমূলীয়)

- f. Palato alveolar()
- g. Palatal(তালব্য)
- h. Velar (জীহবামূলীয়)
- i. Glottal(শ্বাসনালীয়)

ARTICULATION OF CONSONANT by place:

1. Bilabial Consonant:

-Here lips function as a primary articulator bilabial consonant include /p/-পা /b/-বা /m/-মা /w/-ওয়া

EXAMPLE		
p	Creepy	kri:pi
b	Bee	bi:

2. Labio Dental Consonant

-To make these kind of sounds the lower lip makes contact with the upper front teeth including /f/-ফা /v/-ভা

EXAMPLE		
f	Fun	fʌn
v	Movie	Mu:vi

3. Inter-dental Consonant:

-Here the tongue tip is slightly pushed between lower and upper front teeth including /θ/-থ /ð/-দ

EXAMPLE		
θ	health	helθ
ð	Then	ðen

4. Alveolar Consonant:

-Here the blade, or tip and blade of the tongue articulate with the upper alveolar ridge including

/t/-টা /d/-দা /l/-লা /n/-না /s/-সা /z/-যা

EXAMPLE		
---------	--	--

t	Return	ritθ:n
z	Lousy	Laʊzi

5. Post-alveolar Consonant:

-Here the tip of the tongue articulates with the back part of the upper alveolar ridge. for example : /r/-র

EXAMPLE		
r	airy	e i

6. Palato-Alveolar Consonant:

-Here the blade or tip and blade of tongue articulates with alveolar ridge.

For example: /ʃ/-শ /tʃ/-চ /dʒ/-জ

	EXAMPLE	
ʃ	ship	ʃɪp
tʃ	chip	tʃɪp

7. Palatal Consonant:

-Here the front of the tongue articulates with the hard palate to produce the palatal consonant. For example: /j/-ই

EXAMPLE		
j	onion	ʌnjən

8. Velar Consonant:

-Here tongue makes contact with soft palate. For example: /k/-ক /g/-গ /ŋ/-ং

EXAMPLE		
g	gun	gʌn

9. Glottal Consonant:

Plosives (স্পর্শবর্গীয়)

A complete closure of the air passage , which is after words released suddenly.

/p/-পা /b/-বা /t/-টা /d/-ডা /k/-কা /g/-গা

Pen bet ten dress kind good

Aspiration(শ্বাসঘাত)

Aspiration is a period during which air escapes through vocal cords, making a sound like “h”. They are symbolized as :

/p^h/ -ফা /k^h/ -খা /t^h/ -ঠা

pet/ p^het cool/k^hu:l Tailor/t^heilə

Fricatives (ঘর্ষীয়)

Air cannot be stopped completely and it makes hissing sound .

/f/ -ফা /v/-ভা /s/-সা /z/-জা /θ/ -থ /ð/ -দ

/ʃ/ -শ /ʒ/-স /h/ -হা

Fine very song zeal through three sheet treasure hay

Nasal : (নাসারন্ধ্রীয়) These sounds are pronounced or uttered by escaping the air (partially or completely) through nasal cavity.

/m/-মা /n/-না /ŋ/-অং

Miss nine sing

Affricates ()

Affricates are consonants articulated with a stricture of firm closure of mouth followed by a slow release.

/tʃ/ -চ /dʒ/-জ

chair germ

Lateral (পার্শ্বীয়)

There is only one sound in English. While uttering this sound air escapes along the both sides of the tongue.

/l/-লা

Like , life , silly

Semi Vowels:**Definition:**

“They are phonetically vowels and phonologically consonants phonetically means there mechanism of producing sounds is same as vowels.”

Examples: /w/-ওয়া, /r/-রা , /j/-ইয়ো

Voicing**Voiced Consonants : (স্বরিত)**

are produced when the vocal cords are vibrating.

Examples: b ,d ,g ,j ,l ,m ,n ,v

Voiceless Consonants(অস্বরিত)

are produced when the vocal cords are not vibrating.

Examples: f,k,p,s,t

VOICED SOUNDS	VOICELESS SOUNDS
[b] – back, baptism, rubber	[p] – pitch, depose, sport
[m] – made, compliment, remember	[t] – tine, might, pretty
[n] – wound, none, Sunday	[s] – sit, lace, assistance
[d] – dark, doubt, modern	[h] – heat, hero, hot
[z] – zeal, pleasure, zero	[f] – first, rough, family
[l] – late, lonely, sling	[ʃ] – shop, she, shelter
[v] – very, proven, nerve	[tʃ] – cheat, lecture, check
[w] – wound, power, war	[θ] – thick, method, breath
[ŋ] – sing, nothing, ring	
[ʒ] – usual, massage, dangerous	
[r] – round, forever, zero	
[g] – glued, together, go	
[ð] – them, breathe	
[dʒ] – judge, imagine, visual	

STRESS:**Definition:**

The emphasis given to a syllable in a word or words within a sentence and usually involves an increase in volume and a change in intonation .

Production and perception. We feel we know the difference between a stressed and an unstressed syllable.

FACTORS OF STRESS PROMINENCE:

At least four different factors are important to be appreciably taken responsible for the prominence of stress:



Rules of Stress Placement Within The Word:

- a) Whether the word is morphologically simple.
- b) Whether the word is complex as a result of containing one or more affixes.
- c) Whether the word is compound as a result of combine to independent words.
- d) The grammatical category to which the word belongs (noun, adjective, verb, adverb, etc.
- e) The number of syllables in the word.
- f) The phonological structure of the syllables in the word

Simple Words:

Definition: Simple words are those ones not composed of more than one grammatical unit.

If the second syllable of a “two-syllable verb” has

1) A long vowel or diphthong or it has more than one ending consonant , the second syllable receives stress:

re'move a'pply
a'rrive a'ttract

2) A short vowel and one or no ending consonant , the first syllable receive stress

'open 'enter
'equal 'envy

Complex Word:

Complex words include those words which are made from a basic stem word with the addition of an affix.

Examples:

'semi-' + "circle'	'semicircle
"person' + '-ality'	person'ality
"wide' + '-en'	'widen
"fun' + '-y'	'funny

Compound Words:

Words which are those which are constituted of at least two independent words is called compound word.

Examples:

'sun' + 'rise' 'sunrise'
 bad- 'tempered
 heavy- 'handed
 east - 'west
 ill - 'treat

Word- class pairs:

Verbs	Nouns	Adjectives
re'bel	'rebel	'rebel
in'sult	'insult	'insult
im'port	'import	'import
per'fect	'perfect	'perfect
pre'sent	'present	'present

Unstressed words:

Unstressed words are generally function words like articles ,pronunciations,progressives,prepositions,auxiliary verbs and conjunctions.

Examples:

They,An,And,in