

Jamilah, M.Pd.

jamilah@uny.ac.id

LESSON II

ENGLISH SOUNDS AND THEIR TRANSCRIPTION SYMBOLS

Human Speech Organs

As discussed in Lesson I, there are 44 different sounds (or phonemes) in English, including 12 vowels, 8 diphthongs, and 24 consonants (see Table 1: English Sounds). Those speech sounds are produced by our speech organs, including our mouth: lips, tongue, teeth, hard and soft palates, and alveolar ridge; nasal cavity; pharynx and larynx. (See the diagram below). Articulation happens when the air stream is interrupted, shaped, restricted, or diverted.

- | | |
|-------------------|-----------------|
| 1. Upper lip | 10. Larynx |
| 2. Nasal cavity | 11. Lower teeth |
| 3. Upper teeth | 12. Lower lip |
| 4. Alveolar ridge | 13. Tongue |
| 5. Hard palate | a. tip |
| 6. Soft palate | b. blade |
| 7. Uvula | c. front |
| 8. Pharynx | d. centre |
| 9. Glottis | e. back |

Figure: Human Speech Organs

The articulation of Vowels

Vowel Sounds are produced when the air stream is voiced through the vibration of the vocal cords in the larynx, and then shaped using the tongue and the lips to modify the overall shape of the mouth. The description of vowels refers to the height of the tongue, the part of the tongue which is raised, and the lip positions. Based on the height of the tongue, vowels are classified into close, mid, and open vowels. Close vowels are those produced with the tongue quite high in the mouth, while open vowels are those produced with the tongue low in the mouth. Mid vowels are those produced with the tongue neither high nor low in the mouth. In connection with the part of the tongue which is raised, vowels are classified into front, centre,

and back vowels. While in reference to the lip position, vowels are produced with the lips rounded, spread, or neutral.

The following diagram summarizes vowels of English.

Figure 2: English Vowels

Diphthongs

A crude definition of diphthong might be a combination of vowel sounds. A slightly closer analysis shows us that there is a glide (or a movement of the tongue, lips, and jaw) from one pure vowel sound to another. The first sound in each phoneme is longer and louder than the second. English is usually described as having 8 diphthongs, and are grouped into centring diphthong, and closing diphthongs. Centring diphthongs end with a glide towards /ə/. They are called centring because /ə/ is a central vowel (refer to the above diagram). This group includes /ɪə/, /ʊə/, and /eə/. Closing diphthongs end with a glide towards /i/ or towards /u/. The glide is towards a higher position in the mouth. This group includes /ei/, /ɔi/, /ai/, /əu/, and /au/.

The articulation of Consonants

Consonants can be described from three standpoints: the presence or absence of voicing (voiced or voiceless), the manner of articulation, and the place of articulation.

With regard to the manner of articulation the vocal tract may be completely closed so that the air is so temporarily unable to pass through. Alternatively there may be a closing movement of the lips, tongue, or throat, so that it is possible to hear the sound made by air passing through. Or, as in case of the nasal sounds, the air is diverted through the nasal passages. The various terms used are explained in the following table:

| Manner of articulation | |
|------------------------|---|
| Plosive | A complete closure is made somewhere in the vocal tract, and the soft palate is also raised. Air pressure increases behind the closure, and is then released 'explosively', e.g. /p/, /b/ |
| Affricate | A complete closure is made somewhere in the mouth, and the soft palate is raised. Air pressure increases behind the closure, and is then released more slowly than in plosive, e.g. /tʃ/ and /dʒ/ |
| Fricative | When two vocal organs come close enough together for the movement of air between them to be heard, e.g. /f/, and /v/ |
| Nasal | A closure is made by the lips, or by the tongue against the palate, the soft palate is lowered, and air escapes through the nose, e.g. /m/, /n/, /ŋ/ |
| Lateral | A partial closure is made by the blade of the tongue against the alveolar ridge. Air is able to flow around the side of the tongue, e.g. /l/ |
| Approximant | Vocal organs come near to each other, but not so close so as to cause audible friction, e.g. /r/, and /w/ |

With regard to the place of articulation, the following table summarizes the main movements of the various articulators:

| Place of Articulation | |
|-----------------------|--|
| Bilabial | Using closing movement of both lips, e.g. /p/, /m/ |
| Labio-dental | Using the lower lip and the upper teeth, e.g. /f/, and /v/ |
| Dental | The tongue tip is used either between the teeth or close to the upper teeth, e.g. /θ/, and /ð/ |
| Alveolar | The blade of the tongue is used close to the alveolar ridge, e.g. /t/, and /s/ |
| Palato-alveolar | The blade (or tip) of the tongue is used just behind the alveolar ridge, e.g. /tʃ/ and /dʒ/ |
| Palatal | The front of the tongue is raised close to the palate, e.g. /j/ |
| Velar | The back of the tongue is used against the soft palate, e.g. /k/, /ŋ/ |
| Glottal | The gap between the vocal cords is used to make audible friction, e.g. |

| | |
|--|-----|
| | /h/ |
|--|-----|

Voicing, manner, and place of articulation are together summarized in the following table:

| | | Place of articulation | | | | | | | |
|------------------------|-------------|-----------------------|--------------|--------|----------|-----------------|---------|-------|---------|
| | | Front | | | | Back | | | |
| | | bilabial | Labio-dental | dental | Alveolar | Palato-alveolar | palatal | velar | Glottal |
| Manner of articulation | plosive | p b | | | t d | | | k g | |
| | affricate | | | | | tʃ dʒ | | | |
| | fricative | | f v | θ ð | s z | ʃ ʒ | | | h |
| | nasal | m | | | n | | | ŋ | |
| | Lateral | | | | l | | | | |
| | approximant | (w) | | | | | r | j | w |

Exercise 1

We saw in Lesson two that there are 12 pure vowels and 8 diphthongs in English.

English pure Vowels

Listen to the tape and repeat after it.

1. /i/ bead key
 cheese scene
 police people
 quay
2. /ɪ/ hit sausage
 biggest rhythm
 mountain busy
 women sieve
3. /ʊ/ book good

| | | |
|----------|------------------------|---------|
| | woman | push |
| | pull | |
| 4. /u:/ | food | rude |
| | true | who |
| | fruit | soup |
| 5. /e/ | egg | left |
| | said | head |
| | read | instead |
| | any | leisure |
| | leopard | |
| 6. /ə/ | about | paper |
| | banana | nation |
| | the (before consonant) | |
| 7. /ɜ:/ | shirt | her |
| | word | further |
| | pearl | serve |
| | myrtle | |
| 8. / / | fork | call |
| | snore | taught |
| | bought | board |
| | saw | pour |
| | broad | all |
| | law | horse |
| | hoarse | |
| 9. /æ/ | hat | attack |
| | antique | plait |
| 10. /ʌ/ | run | uncle |
| | front | nourish |
| | does | come |
| | flood | |
| 11. /ɑ:/ | far | part |

| | | |
|------------|-----------|-----------|
| | half | class |
| | command | clerk |
| | memoir | aunty |
| | hearth | |
| 12. // | dog | often |
| | cough | want |
| | because | knowledge |
| | Australia | |
| Diphthongs | | |
| 1. /iə/ | beer | beard |
| | fear | pierce |
| | Ian | here |
| | Idea | |
| 2. /uə/ | sure | moor |
| | tour | obscure |
| 3. /eə/ | where | wear |
| | chair | dare |
| | stare | there |
| 4. /ei/ | cake | way |
| | weigh | say |
| | pain | they |
| | vein | |
| 5. / / | toy | avoid |
| | voice | enjoy |
| | boy | |
| 6. /ai/ | high | tie |
| | buy | kite |
| | might | cry |
| | eye | |
| 7. /əu/ | go | snow |
| | toast | home |

| | | |
|----------|-------|----------|
| | hello | although |
| 8. / au/ | house | loud |
| | down | bow |
| | bough | |

Exercise 2: Pronounce the following pairs

/i:/ and /ɪ/

| | | | |
|---------------|---------------|-------------------|---------------|
| bead - bid | lead - lid | deed - did | heed - hid |
| reed - rid | greed - grid | greased - grist | scheme - skim |
| gene - gin | ease - is | leave - live | each - itch |
| beach - bitch | peach - pitch | reach - rich | leak - lick |
| peak - pick | teak - tick | check - chick | sleek - slick |
| seek - sick | week - wick | deal - dill | meal - mill |
| real - rill | seal - sill | teal - till | steal - still |
| eel - ill | feel - fill | heel - hill | kneel - nil |
| peel - pill | spiel - spill | team - Tim | deem - dim |
| bean - bin | dean - din | lean - Lynn | keen - kin |
| green - grin | seen - sin | teen - tin | heap - hip |
| cheap - chip | leap - lip | reap - rip | deep - dip |
| sheep - ship | sleep - slip | sneaker - snicker | eat - it |
| beat - bit | heat - hit | cheat - chit | feast - fist |
| wheat - whit | neat - knit | seat - sit | feet - fit |

I and ei

| | | | |
|---------------|-------------|----------------|---------------|
| bib - babe | limb - lame | hissed - haste | lid - laid |
| mid - maid | rid - raid | grid - grade | ridge - rage |
| give - gave | kick - cake | lick - lake | flick - flake |
| brick - brake | sick - sake | tick - take | stick - stake |
| quick - quake | wick - wake | nil - nail | bill - bale |
| bill - dale | fill - fail | gill - gale | hill - hale |
| skill - scale | mill - mail | pill - pail | rill - rail |

| | | | |
|---------------|--------------|---------------|------------------|
| trill – trail | till – tail | still – stale | quill –quail |
| dim – dame | bin – bane | fin - fain | gin – Jane |
| chin – chain | kin – cane | pin – pane | spin – Spain |
| grin – grain | sin – sane | win – wane | rip – rape |
| drip – drape | grip – grape | tip – tape | shiver – shaver |
| his – haze | kiss – case | it – ate | bit – bait |
| fit – fate | hit – hate | skit – skate | lit – late |
| slit – slate | spit – spate | wit – wait | script – scraped |
| fist - faced | list – laced | wrist – raced | mix – makes |

e and æ

| | | | |
|------------------|-----------------|-----------------|----------------|
| dead – dad | led – lad | blessed – blast | said – sad |
| end – and | bend – band | lend – land | blend – bland |
| mend – manned | spend – spanned | send – sand | tend – tanned |
| dense – dance | beg – bag | leg – lag | wrench – ranch |
| flesh – flash | mesh – mash | Beth – bath | neck – knack |
| peck – pack | wreck – rack | trek – track | shell – shall |
| gem – jam | hem – ham | Ben – ban | then – than |
| men – man | pen – pan | wren – ran | ten – tan |
| leather – lather | mess – mass | guess – gas | sect – sacked |
| bet – bat | met – mat | net – gnat | pet – pat |
| set – sat | vet – vat | left – laughed | pent – pant |
| adept – adapt | slept – slapped | lest – last | pest – past |
| guest – gassed | vest – vast | X – axe | sex – sacks |

æ and ^

| | | | |
|-----------------|-----------------|---------------|-----------------|
| cab – cub | bad – bud | mad – mud | gassed – gust |
| sand – sunned | stand – stunned | dance – dunce | rabble – rubble |
| paddle – puddle | ankle – uncle | staff – stuff | bag – bug |
| hag – hug | drag – drug | hang – hung | rang – rung |
| sang – sung | tang – tongue | match – much | back – buck |

| | | | |
|-----------------|---------------|---------------|---------------|
| lack – luck | track – truck | sack – suck | stack – stuck |
| bank – bunk | drank – drunk | mask – musk | task – tusk |
| cam – come | dam – dumb | ham – hum | tan – ton |
| sadden – sudden | cap – cup | clamp – clump | bass – bus |

Exercise 3

Listen to the tape and repeat after it

(Plosive Consonants):

| | | | | |
|-----|-----|------|---------|-------|
| /p/ | pin | cap | happen | |
| /b/ | bin | cab | cabbage | |
| /t/ | to | hat | hotter | |
| /d/ | do | had | harder | |
| /k/ | cot | pick | packet | queue |
| /g/ | got | pig | forget | |

Affricate Consonants:

| | | |
|------|--------|--------|
| /tʃ/ | church | nature |
| /dʒ/ | judge | larger |

Fricative Consonant:

| | | | | |
|-----|-------|--------|-------------|-------|
| /f/ | fan | hoof | café | phase |
| /v/ | van | hooves | cover | above |
| /θ/ | think | both | mathematics | |
| /ð/ | the | bathe | father | |
| /s/ | sue | this | icy | |
| /z/ | zoo | these | lazy | |
| /ʃ/ | she | beige | nation | |
| /ʒ/ | | fish | measure | |
| /h/ | hello | behind | | |

Nasal Consonant:

| | | | | |
|-----|------|------|---------|---------|
| /m/ | more | room | camera | |
| /n/ | no | on | infant | know |
| /ŋ/ | sing | sink | singing | sinking |

Lateral Consonant:

| | | | |
|-----|------|------|---------|
| /l/ | live | pool | pulling |
|-----|------|------|---------|

Approximants:

| | | | | | |
|-----|---------|-------|-------|-------|---------|
| /r/ | red | hurry | party | car | |
| /j/ | yes | young | usual | few | queue |
| | educate | suit | | | |
| /w/ | wood | walk | wet | wheat | hallway |

Exercises 4: Pronounce the following pairs

p and f

| | | | |
|-------------------|---------------------|-------------------|------------------|
| packed – fact | pail – fail | paint – faint | pair – fair |
| pan – fan | passion – fashion | past – fast | peel – feel |
| pig – fig | pile – file | pin – fin | pinch – finch |
| pit – fit | plea – flea | plight – flight | pool – fool |
| pour – four | praise – phrase | prose – froze | pry – fry |
| leaped – leafed | lapped – laughed | ripped – rift | sipped – sift |
| leaping – leafing | snipping – sniffing | cupping – cuffing | copper – cougher |
| supper – suffer | reaps – reefs | clips – cliffs | snips – sniffs |
| cops – coughs | cups – cuffs | copy – coffee | puppy – puffy |
| stripe – strife | wipe – wife | lope – loaf | cheap – chief |
| leap – leaf | reap – reef | chap – chaff | beep – beef |
| skip – skiff | clip – cliff | gulp – gulf | limp – lymph |

f and v

| | | | |
|-------------|---------------|-------------|-------------|
| fail – veil | fairy – very | fan – van | fast – vast |
| fat – vat | fault – vault | fear – veer | fee – V |

| | | | |
|---------------------|---------------------|-----------------|------------------|
| feel – veal | feign – vain | fender – vendor | ferry – very |
| few – view | file – vile | final – vinyl | fine- vine |
| first – verse | focal – vocal | foist – voiced | fuse – views |
| shuffled – shoveled | infested – invested | rifle – rival | refuse – reviews |
| leafing – leaving | safer – saver | wafer – waiver | belief – believe |

v and w

| | | | |
|---------------|---------------|-----------------|-----------------|
| veil – wail | vain – wane | vary – wary | veered – weird |
| vend – wend | vent – went | veer – we're | vet – wet |
| vile – wile | vine – wine | viper – wiper | visor – wiser |
| verse – worse | roved – rowed | moving – mooing | roving – rowing |
| dove – dough | groove – grew | grove – grow | stove – stow |

θ and t

| | | | |
|--------------------|------------------|-----------------|------------------|
| thank – tank | theme – team | thick – tick | thicker – ticker |
| thicket – ticket | thigh – tie | thin – tin | thong – tong |
| thorn – torn | thought – taught | thrash – trash | three – tree |
| threw – true | thrill – trill | thrust – trust | thug – tug |
| rethread – retread | ether – eater | deaths – debts | oaths – oats |
| faiths – fates | tenths – tents | fourths – forts | sheath - sheet |
| myths – mitts | bath – bat | death – debt | heath – heat |
| math – mat | path – pat | wrath – rat | with – wit |
| both – boat | booth – boot | tooth – toot | broth – brought |
| froth – fraught | dearth – dirt | hearth – heart | growth – groat |

ð and d

| | | | |
|----------------------|---------------------|--------------------|--------------------|
| than – Dan | their – dare | then – den | thence – dense |
| they – day | those – doze | though – dough | thy – die |
| breathing – breeding | wreathing – reading | loathing – loading | seething – seeding |
| other – udder | breathes – breeds | loathes – loads | worthy – wordy |
| bathe – bayed | sheathe – she'd | soothe – sued | scythe – side |

s and j

| | | | |
|------------------|-------------------|------------------|------------------|
| sack – shack | said – shed | sail – shale | sake – shake |
| sallow – shallow | same – shame | save – shave | sealed – shield |
| seat – sheet | see – she | seed – she'd | seep – sheep |
| seer – sheer | self – shelf | sell – shell | sewn – shone |
| sigh – shy | sign – shine | single – shingle | so – show |
| sore – shore | sort – short | sour – shower | subtle – shuttle |
| suck – shuck | sue – shoe | suit – shoot | sun – shun |
| gassed – gashed | classed – clashed | fasten – fashion | pussy – pushy |
| Paris – parish | bass – bash | mass – mash | mess – mesh |

s and z

| | | | |
|--------------------|-------------------|-------------------|------------------|
| seal – zeal | sewn – zone | sing – zing | sink – zinc |
| sip – zip | sipper – zipper | sue – zoo | sounds – zounds |
| muscle – muzzle | gristle – grizzle | facing – fazing | racing – raising |
| bracing – braising | gracing – grazing | ceasing – seizing | racer – razor |
| maces – mazes | races – raises | prices – prizes | lacy – lazy |
| peace – peas | face – faze | lace – lays | place – plays |
| mace – maze | pace – pays | race – rays | brace – brays |
| grace – graze | trace – trays | fleece – fleas | niece – knees |
| ice – eyes | dice – dies | lice – lies | spice – spies |
| rice – rise | price – prize | pence – pens | since – sins |
| fierce – fears | pierce – peers | force – fours | sauce – saws |
| base – bays | dense – dens | loss – laws | floss - flaws |

Exercise 5: Read the following dialogue

Listen to conversation between two friends.

Woman : Wasn't that a fascinating lecture on dolphins? I didn't know that dolphins traveled in such large groups, or were able to communicate with other members of their group with those whistle-like sounds.

Man : And they also use clicks as a sort of sonar.

Woman : I really couldn't understand that part of the lecture. You could?

Man : Yes, the dolphins use clicks to identify objects in the water; they can even identify tiny objects more than 100 meters away using these clicks. Scientists believe that a dolphin may even have a sonar-like image in its brain of a distant object so that it can identify the object long before the dolphin can actually see the object.

Woman : So the dolphins use these clicks mostly to identify objects in the water?

Man : I think so, and they have considerably more ability to do this than humans do.

Woman : It is hard to believe that, in addition to these sonar clicks, dolphins are actually learning some human language.

Man : Yes, I believe that the lecturer said that some dolphins had already learned around fifty human commands, and that those dolphins were able to understand not only individual words but words clustered together in sentences!

Woman : Dolphins must certainly be amazing animals to do all of that.

Man : I'm sure they are, and we're only just beginning to find out how intelligent they are.