

- **Phonetics practice: Letter names**
- **Phonology: Allophones; syllables**
- **Writing systems and orthographic depth**

Background:

- *Language Files* Ch 3, Files 3.0–3.1

0. Key points today

- Phonetics vs. phonology
- Exercise: Transcribing letter names
 - Practice with speech sounds, phonetic symbols
 - Find patterns in how letters are named
- Allophones of phonemes
- Syllables and their structure
- Alphabets and other types of writing systems
- Orthographic depth

1. Setting the stage—phonetics and phonology

- **Phonetics:** The physical articulation (and acoustics, and perception) of speech sounds
- **Phonology:** How speech sounds are stored and organized by the mental grammar

Examples:

- One **phoneme** (mental sound category) can have multiple **allophones** (pronunciations)
- The mental grammar regulates how sounds can be grouped into **syllables**

2. Practice with phonetics: Letter names

Group activity

- Use the phonetic symbols for consonants and vowels to **transcribe** how the names of the letters of the alphabet are pronounced
- Does the letter's **name** serve as a good example of the letter's **sound**?
 - Is the relationship between letter names and letter sounds the same for all letters?

2. Practice with phonetics: Letter names

- Do these letter **names** relate to **sounds** they spell?

B

V

D

Z

J

C

K

G

P

T

Q

2. Practice with phonetics: Letter names

- Do these letter **names** relate to **sounds** they spell?

B [bi]

V [vi]

D [di]

Z [zi]

J [dʒe]

C [si]

K [ke]

G [dʒi]

P [pi]

T [ti]

Q [kju]

- What is the name/sound **pattern** here?

2. Practice with phonetics: Letter names

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P [pi]

T [ti]

Q [kju]

- Letter name includes (one possible) letter sound
- Sound comes at **beginning** of letter name

2. Practice with phonetics: Letter names

- Do these letter **names** relate to **sounds** they spell?

F

R

L

S

M

X

N

2. Practice with phonetics: Letter names

- Do these letter **names** relate to **sounds** they spell?

F [ɛf]

R [ɑɹ]

L [ɛl]

S [ɛs]

M [ɛm]

X [ɛks]

N [ɛn]

- What is the name/sound **pattern** here?

2. Practice with phonetics: Letter names

- Do these letter **names** relate to **sounds** they spell?

F [ɛf]

R [ɑɹ]

L [ɛɫ]

S [ɛs]

M [ɛm]

X [ɛks]

N [ɛn]

- Letter name includes (possible) letter sound
- Sound comes at **end** of letter name

2. Practice with phonetics: Letter names

- Do these letter **names** relate to **sounds** they spell?

H

W

Y

2. Practice with phonetics: Letter names

- Do these letter **names** relate to **sounds** they spell?

H [eɪ]

W [dʌbəl jʊ]

Y [wəj]

- What is the name/sound **pattern** here?

2. Practice with phonetics: Letter names

- Do these letter **names** relate to **sounds** they spell?

H [eɪ]

W [dʌbəl jʊ]

Y [wəj]

- Letter name **does not include** letter sound!
- The **sounds** of these letters are actually **harder** to master, for learners who know letter names

2. Practice with phonetics: Letter names

- How do these letter names relate to letter sounds?

A [e]

E [i]

I [aɪ]

O [o]

U [ju]

2. Practice with phonetics: Letter names

- How do these letter names relate to letter sounds?

A [e]

E [i]

I [aɪ]

O [o]

U [ju]

- Letter names for vowels are the same as the so-called “**long vowel**” letter sounds

2. Practice with phonetics: Letter names

- What's up with "long" and "short" vowels?
 - "Short *i*" = [ɪ] vs. "long *i*" = [aɪ]
 - In Middle English, these categories were pronounced as [i] vs. [iː] — this is literally a short/long distinction
 - Similarly with other "short"/"long" vowel pairs
 - The "long" vowels have had a shift in pronunciation, making them phonetically very different from their "short" counterparts in modern English...but the labels persist

3. Phonology: Allophones of phonemes

- The mental grammar of each language distinguishes:
 - **phonemes**—**mental** sound categories
 - **allophones**—**physical** pronunciations of sounds

3. Phonology: Allophones of phonemes

- **phonemes** — **mental** sound categories
- **allophones** — **physical** pronunciations of sounds
- A phoneme may have **more than one** allophone
 - Allophones are usually chosen according to their (phonological) **context**
 - Speakers often consider two allophones of a phoneme to be “the **same** sound”
- Two sounds belong to **distinct phonemes** if they can be used to distinguish **meanings**
 - *time* [tajm] vs. *dime* [dajm] — so /t/ ≠ /d/

3. Phonology: Allophones of phonemes

- Example from American English: “L sounds”

leaf [**l**if] *feel* [fi**ɫ**]

slide [s**l**aɪd] *felt* [fɛ**ɫ**t]

allow [ə**l**aw] *alter* [a**ɫ**tə̃]

- The phoneme / **l** / has allophones [**l**] and [**ɫ**]
- [**l**] occurs at the beginning of a word, or...
- [**ɫ**] occurs at the end of a word, or...

3. Phonology: Allophones of phonemes

- Example from American English: “L sounds”

leaf [**l**if] *feel* [fi**l**]

slide [sl**l**aɪd] *felt* [fɛ**l**t]

allow [ə**l**aw] *alter* [a**l**tə̃]

- The phoneme / **l** / has allophones [**l**] and [**l̥**]
- [**l**] occurs (at the beginning of a word, or) before a vowel
- [**l̥**] occurs at the end of a word, or before a consonant

3. Phonology: Allophones of phonemes

- Example from American English: “Flap” (['] = stress)

knot [nɑ**t**] *knotting* ['nɑ**r**ɪŋ]

nod [nɑ**d**] *nodding* ['nɑ**r**ɪŋ]

atomic [ə'**t**amɪk] *atom* ['æ**r**əm]

addition [ə'**d**ɪʃən] *adding* ['æ**r**ɪŋ]

- Phoneme / **t** / has allophones [**t**] and [**r**] (+ others)
 - Phoneme / **d** / has allophones [**d**] and [**r**]
 - For both phonemes, the flap appears between vowels when the 2nd is not stressed
- When you hear a flap in a new word, it isn't obvious whether it is from / **t** / or from / **d** /!

3. Phonology: Allophones of phonemes

- Why do phonemes and allophones **matter for reading?**
 - Most **alphabetic** writing systems assign symbols to whole **phonemes**, not individual allophones
 - Learners must learn to group **phonetically distinct sounds** together into one unit
 - It does seem that speakers are more consciously aware of phonemes than of allophones
 - But, to what extent is this actually *reinforced* by learning a writing system?

4. Phonology: Syllables

Discussion

- How many syllables are in the following words?
 - First count the syllables, then divide the words into their component syllables.
 - Which is easier: counting or dividing?

shoe

rabbit

electricity

allowance

alteration

4. Phonology: Syllables

Discussion

- How many syllables are in the following words?
 - First count the syllables, then divide the words into their component syllables.
 - Which is easier: counting or dividing?

shoe 1

rabbit 2 Where does [b] belong?

electricity 5 Which / t / is a flap?

allowance 3 Which / l / appears here?

alteration 4 Which / l /? Which / t /?

4. Phonology: Syllables

- Syllables in English consist of | Try: *bright* [bɹaɪt]
 - **nucleus** — usually a vowel (incl. diphthongs, [ə])
 - **onset** — any consonants before the nucleus
 - **coda** — any consonants after the nucleus
- Subparts of a syllable
 - **rime** — nucleus + coda
 - **head** — onset + nucleus
 - Therefore, **syllable** = **onset** + **nucleus** + **coda**
onset + { **rime** }
{ **head** } + **coda**

4. Phonology: Syllables

- Syllables are **abstract**: they are not found in the acoustic stream, but in the **mental representation** of the speaker/hearer
 - Syllables are more **accessible** to conscious awareness than consonants and vowels, especially for those who don't read an alphabet
- Syllable position sometimes determines which **allophone** of a phoneme appears
- **Different languages** allow different kinds of syllable structure

5. Alphabets and other writing-system types

- English uses an **alphabetic** writing system
 - What is an **alphabet**?
 - A writing system where each **grapheme** (symbol or symbol combination) represents one **phoneme** (single consonant or vowel)
 - What **other** kinds of writing systems are there?
 - **Syllabic**: grapheme → syllable
 - **Logographic**: grapheme → morpheme/word
 - **Abugida**: grapheme → C + default V, or other V
 - **Abjad**: like an alphabet, but consonants (C) only
 - Other variations/subtypes of these

6. Check-in: Spelling, phonetics, phonology

- **Poll time**

If two sounds are **spelled with the same letter** of the English alphabet, does that prove that they are **allophones of the same phoneme?**

6. Check-in: Spelling, phonetics, phonology

- Here's an example to check your understanding
 - **Spelling:** What is an example of a word that contains the "long A" sound? "Short A"?
 - **Phonetics:** How would we phonetically transcribe these two sounds in IPA?
 - Or: What are the "color" keywords?
 - **Phonology:** Does changing from one of these sounds to the other change the meaning?
 - Are these two sounds separate phonemes, or allophones of the same phoneme?

6. Check-in: Spelling, phonetics, phonology

- Here's an example to check your understanding
 - **Spelling:** "Long A" — *mate* "Short A" — *mat*
 - **Phonetics:** [e] [æ]
(gray) (black)
 - **Phonology:** Does changing from one of these sounds to the other change the meaning? | *yes*
 - **Separate phonemes:** /e/ /æ/

In English, a **single spelling** may represent **different phonemes**

7. Orthographic depth

- As we've seen, **English letters** do not always **directly** represent speech sounds one-to-one
 - How many **speech sounds** are there in these English words?
 - (a) *she* 2
 - (b) *six* 4
 - (c) *using* 5...but maybe not the ones you thought?
- A sequence of letters can spell one sound (& vice versa)
The same letter(s) can spell different sounds
The same sounds can be spelled by different letters

7. Orthographic depth

- Guess! How would you read the following words and phrases of **Finnish** aloud?

huomenta

'good morning'

päivää

'how do you do'

hauska tutustua

'pleased to meet you'

Anteeksi, mutta minä en puhu suomea.

'Sorry, but I do not speak Finnish.'

(Audio, spellings, and English translations from *Finnish for Foreigners*, at <http://donnerwetter.kielikeskus.helsinki.fi/FinnishForForeigners/ch1-en/ch1-8-tervehtimiset.htm>)

7. Orthographic depth

- Guess! How would you read the following words of **French** aloud?

houx

'holly tree'

acheter

'to buy'

cher

'dear, expensive'

ville

'city, town'

fille

'girl, daughter'

7. Orthographic depth

- Guess! How would you read the following words of **French** aloud?

houx	[u]	'holly tree'
acheter	[aʃte]	'to buy'
cher	[ʃɛʁ]	'dear, expensive'
ville	[vil]	'city, town'
fille	[fij]	'girl, daughter'

7. Orthographic depth

- **orthography**: conventions for writing a language
 - **shallow** orthography: correspondence with pronunciation is **systematic**
 - **deep** orthography: correspondence with pronunciation is **irregular**
- Which language has a more **shallow** orthography, Finnish or French?
- What do people actually mean when they say a language has a “phonetic” spelling system?

7. Orthographic depth

Reminder: **phonics** (from Hanford (2018)):

“showing [beginning readers] how different letters and combinations of letters connect to the speech sounds in words”

- Do you expect the issue of phonics in reading education to matter more for languages with **deep** or **shallow** orthographies?
- How would you classify the orthography of **English**: deep or shallow?

8. For next time & upcoming topics

- In place of Thursday's class, you will do some self-paced activities
 - Watch a video showing a teacher and a young child working on pre-reading skills
 - Inspect a first-grade reading curriculum
 - There are a few questions to answer on Canvas for each of these activities (due Tu Jan 30, 11:30am)
- There is also some preparation to do for next week
 - Try a puzzle about word structure in Swahili
 - Watch a video about sentences and meanings