

- **Sound analysis: Letter names**
- **Phonology: Allophones; syllables**
- **Phonological awareness in early reading education**

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
- An example of phonological awareness skills in a young pre-reader

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 IPA, identifying speech sounds

- Use the **IPA symbols** for **consonants** and **vowels** (introduced last class) to **transcribe** how the **names** of letters of the alphabet are **pronounced**
 - The first one is done for you: B = [bi]
- Why do this?
 - The *name* of each alphabet letter is a *word* of English itself → **practice transcribing** these (usually very short) words in **IPA**
 - Then we can think about ways in which the names of the letters in English do/don't help as **clues** to the sounds they are used to spell

2. Practice with IPA, identifying speech sounds

- After transcribing the letter names in each group, consider these questions:
 - Does the letter's **name** serve as a good example of the letter's **sound**?
 - What is the **relationship** between letter names and letter sounds in each group?

2. Practice with IPA, identifying speech sounds

- What is the **name** of each of these letters (use IPA)?

B [bi]

V

D

Z

J

C

K

G

P

T

Q

- How do the names of these letters relate to the **sounds** that they (can) spell?

2. Practice with IPA, identifying speech sounds

- Do these **names** relate to **sounds** the letters 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 IPA, identifying speech sounds

- Do these **names** relate to **sounds** the letters spell?

B [bi]

V [vi]

D [di]

Z [zi]

J [dʒe]

C [si]

K [ke]

G [dʒi]

P [pi]

T [ti]

Q [kju]

- Name includes (one) sound the letter spells
- Sound comes at **beginning** of name

2. Practice with IPA, identifying speech sounds

- What is the **name** of each of these letters (use IPA)?

F

R

L

S

M

X

N

- How do the names of these letters relate to the **sounds** that they (can) spell?

2. Practice with IPA, identifying speech sounds

- Do these **names** relate to **sounds** the letters 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 IPA, identifying speech sounds

- Do these **names** relate to **sounds** the letters spell?

F [ɛf]

R [ɑɹ]

L [ɛl]

S [ɛs]

M [ɛm]

X [ɛks]

N [ɛn]

- Name includes (one) sound (or sound combination) the letter spells
- Sound comes at **end** of letter name

2. Practice with IPA, identifying speech sounds

- What is the **name** of each of these letters (use IPA)?

H

W

Y

- How do the names of these letters relate to the **sounds** that they (can) spell?

2. Practice with IPA, identifying speech sounds

- Do these **names** relate to **sounds** the letters spell?

H [eɪ]

W [dʌbəl jʊ]

Y [wəj]

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

2. Practice with IPA, identifying speech sounds

- Do these **names** relate to **sounds** the letters spell?

H [eɪ]

W [dʌbəl jʊ]

Y [wəj]

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

2. Practice with IPA, identifying speech sounds

- How do these letter **names** relate to **sounds** the letters spell?

A [e]

E [i]

I [aɪ]

O [o]

U [ju]

2. Practice with IPA, identifying speech sounds

- How do these letter **names** relate to **sounds** the letters spell?

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 IPA, identifying speech sounds

- *Bonus topic: What's up with "long" and "short" vowels?*
 - "Short *i*" = [ɪ] vs. "long *i*" = [aj]
 - In Middle English, these categories were pronounced as [i] vs. [i:] — 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**l**]

slide [sl**l**aɪd] *felt* [fɛ**l**t]

allow [ə**l**aw] *alter* [a**l**tə̃]

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

<i>knot</i>	[nɑ t]	<i>knotting</i>	['nɑ r ɪŋ]
<i>nod</i>	[nɑ d]	<i>nodding</i>	['nɑ r ɪŋ]
<i>atomic</i>	[ə' t amɪk]	<i>atom</i>	['æ r əm]
<i>addition</i>	[ə' d ɪʃən]	<i>adding</i>	['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
 - Question: 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.
 - **More awareness of counting than dividing!**

<i>shoe</i>	1	
<i>rabbit</i>	2	(Hard to say where [b] belongs!)
<i>electricity</i>	5	Which / t / is a flap?
<i>allowance</i>	3	Which / l / appears here?
<i>alteration</i>	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. Alphabetic writing systems

- English uses an **alphabetic** writing system
 - What is an **alphabet**?

5. Alphabetic writing systems

- 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?
 - We will discuss this next time!

6. Check-in: Spelling, phonetics, phonology

Discussion

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. Phonological awareness in a pre-reader

- Watch this video: "[Phonemic Awareness Routine](#)" (4:57)
- Does this video include activities that involve...
 - **phonics**?
 - **phoneme** (phonemic) awareness?
 - **onset/rime** awareness?
 - **syllable** awareness?

(What might have been a better title?)
- Which activity was the hardest for the child?
 - What might that indicate about the state of his phonological awareness?

8. Some take-away points

- **Phonemes** (mental sound categories) may include two or more different **allophones** (pronunciations), often produced in specific sound contexts
- The **phonology component** of a speaker's mental grammar includes information about
 - phonemes and their allophones
 - how sounds are grouped into syllables
- **Phonological awareness** is **conscious** awareness of phonological aspects of mental grammar
 - PA can be taught / contributes to reading ability

9. For next time

- No preparation due
Rest and refresh on the holiday weekend and well-being day!
- We will look at some different kinds of **writing systems** and talk about the connection between **graphemes/glyphs** (written symbols) and the **sounds** of spoken language