

Today's topic:

- **Pre-presentation discussion:**
Bilingual early readers and PA

Background:

- O'Brien, Mohamed, Yussof, & Ng (2019),
"The phonological awareness relation to early reading in English for three groups of simultaneous bilingual children"

0. Course info and announcements

- **Article presentation** on Tu
 - Check-in with Group 1 members
 - See presentation **assignment handout**, linked from [Daily syllabus](#) or [Links for assignments](#) web page
 - Reminder: A score of '5' on the self and peer evaluation form should be for something **really exceptional**

1. Warm-up: Phonetics, phonology, reading

Discussion

- Do you agree or disagree with the following?
 - All English sounds spelled with the same letter belong to the same phoneme.
 - English spelling is so irregular that there is no point trying to teach letter-to-sound correspondences.
 - The English language is not as phonetic as languages like Finnish or Spanish.

1. Warm-up: Phonetics, phonology, reading

Discussion

- Which of the following is a method for teaching beginners how to read?
 - Phonetics
 - Phonics
 - Both — these terms mean the same thing

1. Warm-up: Phonetics, phonology, reading

Discussion

- How many phonemes are in each of these words?
 - *rack*
 - *rate*
- How many phonemes are found in both words?

1. Warm-up: Phonetics, phonology, reading

Discussion

- How many phonemes are in each of these words?
 - *rack* | [**r**æk]
 - *rate* | [**r**et] (sometimes seen as [ɹejt], [ɹeɪt])
- How many phonemes are found in both words?
- Phonemes are **contrastive sound categories** in the **spoken language**
 - Multiple phonemes may share the same spelling
 - The same phoneme may have multiple spellings

2. Background and key concepts

Article (Group 1)

- O'Brien, Mohamed, Yussof, & Ng (2019),
“The phonological awareness relation to early reading in English for three groups of simultaneous bilingual children”
 - [Article link](#) (through UNC Libraries)

2. Background and key concepts

- **Phonological awareness**

- What is this, generally speaking?
- What are some **examples** of individual phonological-awareness skills?
 - What phonological-awareness skills were demonstrated in the video with the teacher and the young child?
 - What phonological-awareness skills were assessed in O'Brien et al. (2019)?

2. Background and key concepts

- **Phonological awareness**
 - **Conscious awareness** of the **sound structure** of one's (oral) language
 - Ability to add, delete, switch, compare, or otherwise **manipulate** sounds (ex., in words)
 - Note that this is **not** about letters, or even about letter-to-sound correspondences

2. Background and key concepts

- **Examples** of phonological-awareness skills (O'Brien et al, 2019: 920)
 - Elision (deletion) — syllable, phoneme
 - Blending — syllable, phoneme
 - For more info, see [Shanahan \(2005: 6–7\)](#)
“The National Reading Panel Report: Practical Advice for Teachers” section on “Phonemic awareness”
 - but note that *phonemic* awareness is a subcase of *phonological* awareness

2. Background and key concepts

- Phonological awareness: **Grain size**
 - Where in the article is this term explained?
(How accessible is the authors' explanation?)

2. Background and key concepts

- Phonological awareness: **Grain size**
 - Looks at awareness of phonological units of different **sizes** (“grain” as in “fine-grained”)
- There may be a cross-linguistic (“language-general”) **large→small unit-size progression** in awareness
 - English: syllable → onset/rime → phoneme
 - Chinese: Evidence for syllable → phoneme

2. Background and key concepts

- What are some reasons we might expect **differences** in phonological awareness, and its relation to reading, in **different languages**?

2. Background and key concepts

- What are some reasons we might expect **differences** in phonological awareness, and its relation to early reading, in **different languages**?
 - **Phonological structure** of the (oral) language might increase awareness of certain structures
 - Complexity of consonant clusters in Czech vs. English
 - Variety of syllable shapes in English vs. Cantonese
 - **Structure of the writing system** might affect which kinds of phonological awareness are reinforced in learning reading

2. Background and key concepts

- What does it mean for a writing system to be...?
 - non-alphabetic
 - syllabic
 - morpho-syllabic
 - alphasyllabic

- **glyph** — a single symbol used in a writing system

2. Background and key concepts

- Links to writing-system information on:
 - [Chinese](#)
 - [Tamil](#)
 - [Malay](#) *from omniglot.com*
 - Compare: [Kana](#) in Japanese
- What **phonological grain size** would each of these writing systems be predicted to **reinforce**?

2. Background and key concepts

- Why do the authors consider **vocabulary size** to be a potential influence on early reading skills?
 - Possible **direct** effect
 - Possible **indirect** effect via _____

2. Background and key concepts

Discussion

- What does it mean to be **bilingual**?
 - What are some different kinds of bilingualism?
 - See 'scenarios': [Kaplan \(2016: Ch 7, p 133\)](#)

2. Background and key concepts

- Bilingualism can be more or less **balanced**
 - One language is often **dominant** (to some degree)
 - **Heritage** speaker: A first language is no longer the dominant one
- Types of bilingualism based on **timing** of acquisition
 - **Simultaneous** bilingual — Acquires two languages (L1s) at the same time, in infancy
 - **Sequential** bilingual — Acquires a second language (L2) after acquisition of a first language (L1) has begun

2. Background and key concepts

- How is the term '**bilingual**' used by O'Brien et al. (2019)?
- What do the authors mean by '**simultaneous biliterate children**'?
 - Are all the children in the study **simultaneous bilinguals** by the typical criterion?

3. Research questions

Discussion

- **Big-picture research questions?**

4. Data analysis and statistical analysis

- Two reasons for statistical analysis in this article
 - To find out whether the groups of children are similar enough to compare
 - To answer the actual research questions
- Where are the researchers looking for a **significant** effect, and where are they hoping for a **lack** of a significant effect? Why?

4. Data analysis and statistical analysis

- **ANOVA** (and similar) — are means in groups with multiple crossed factors same/different?
 - **main effect:** this predictor matters when the categories of the other predictor are combined
 - **interaction:** the effect of one predictor differs based on the value of the other

4. Data analysis and statistical analysis

- **Correlation**

- What does it mean when we find that X correlates with Y?
- What's the famous warning about correlation? What does it mean for this study?

4. Data analysis and statistical analysis

- **Regression analyses**
 - **predictor** variable (independent variable)
 - **outcome** variable (dependent variable)
 - **control** variable
- **Main effect vs. interaction** again
- **Multilevel** regression — controls for relationships in the data
 - Students are **grouped** by classrooms
 - There might be classroom-specific differences (confounds) affecting outcomes

4. Data analysis and statistical analysis

- **Moderation vs. mediation**

- [From theanalysisfactor.com](http://theanalysisfactor.com) (emphasis added):
“a **moderator** lets you know *when* an association will occur while a **mediator** will inform you *how* or *why* it occurs”
- Find a **moderator** by finding an **interaction**
 - X affects Y more when X is A than when X is B
- Find a **mediator** by (among other methods) **multiple linear regression**
 - If X increases A and A increases Y, A is a mediator between X and Y

4. Data analysis and statistical analysis

Notes on the authors' data graphic (Fig 2)

- **Inter-quartile range**
 - What are the **quartiles** of a data set?
 - The inter-quartile range is the “middle half” of the data: the 25% point to the 75% point
- **Distribution density**
 - Shows how many participants had each level of the outcome variable

5. Some technical tips for presentations

- See final section of [outline](#) from last time

6. For next time

- **Group 1:** Article presentation
 - Use today's discussion to help you with the stage-setting parts of your presentation
- Everyone else:
 - Support your classmates by coming prepared for the discussion they will lead!
 - Do your best to **read** and **understand** :
 - Measurable RQs
 - Experiment design
 - Results and discussion