# Assessment for Children who are Dual Language Learners: Early Intervention and Preschool

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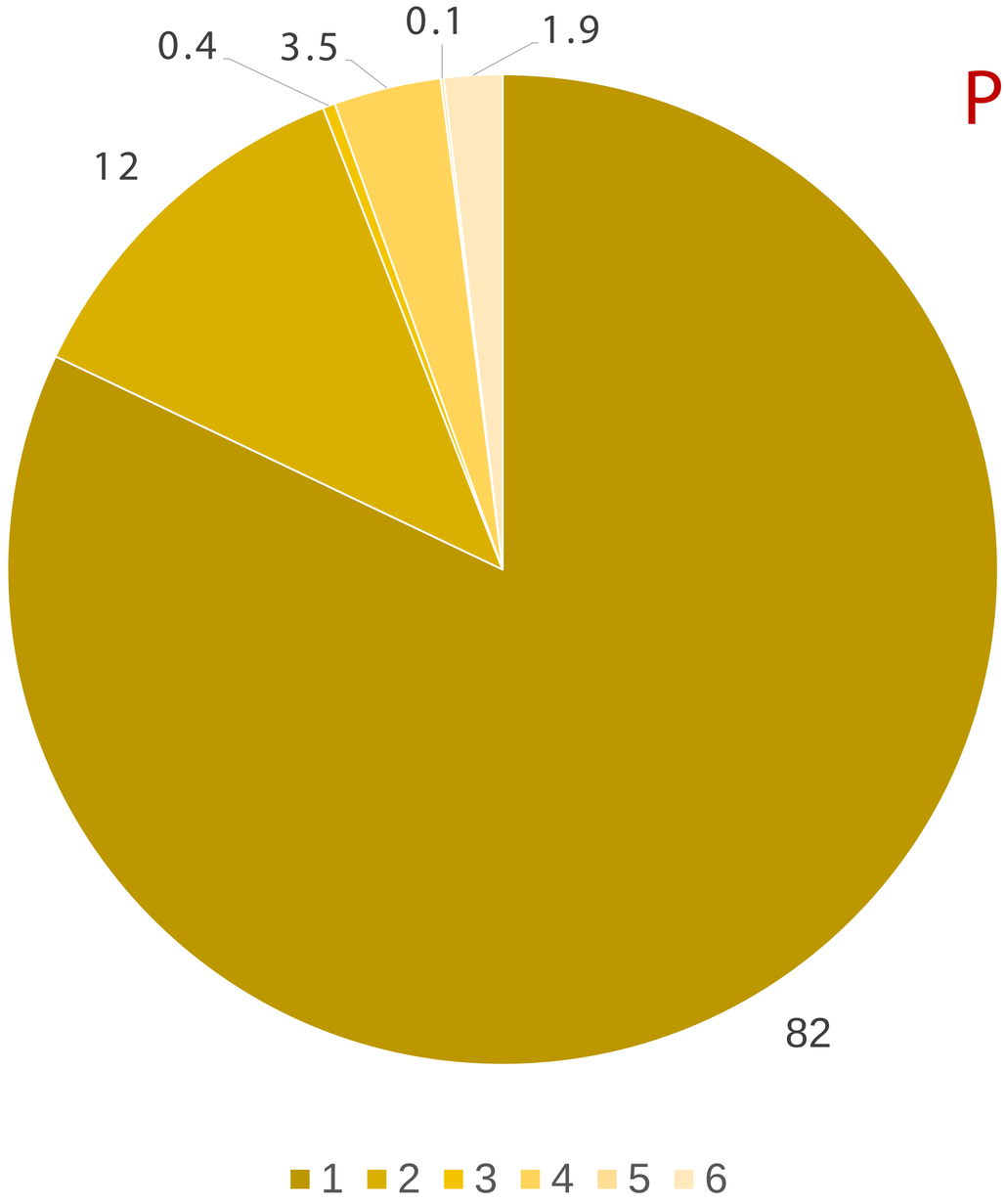
# Learning outcomes

Participants will be able to:

1. Describe critical information to gather in linguistic history
2. Compare and contrast a language delay and a language difference
3. Determine the appropriateness of assessment tools for children who are learning both English and another language
4. Summarize best practices for collaborating with interpreters




# Pennsylvania demographics

Ethnicity

7% Hispanic/Latino
77% White, non Hispanic

# Early Intervention

Children ages 0 to 3 with an IFSP exposed to a language other than English:

Pennsylvania: 3,304

Top 6 languages:

Spanish, Other, Arabic, Chinese (Mandarin), Russian, Portuguese

Spanish: 2,250 (68%)

# Dual language learners

(also called English language learners,
limited English proficient students,
culturally and linguistically diverse
children, and
bilingual children)

Activity #1

Every young child with disabilities or other special needs and every family has strengths, including culture and language.

Activity #2

# Cultural assets and linguistic assets

- Values shared from one generation to another through parenting practices and communicative behaviors.

- Multilingualism is an asset.

# Bilingualism as an asset, and not a deficit

- Bilingual advantage
  - Brain development
  - Cognitive control
  - Attention control and shift
  - Executive functioning
  - Social emotional development
  - Future opportunities

US Department of Health and Human Services, US Department of Education. (2017). Policy statement on supporting the development of children who are dual language learners in early childhood program.

# Early language milestones for both monolinguals and bilinguals

**Canonical babbling (6 - 10m)** (Oller et al., 1998)

**Speech perception favors home language(s) (6 - 12m)** (García-Sierra et al., 2011; Sundara & Scutellaro , 2010)

**Word segmentation and identification (8 - 10m)** (Bosch et al., 2013 ; Fennell & Byers-Heinlein, 2013; Mattock et al., 2010; Polka & Sundara, 2003 ; Vihman et al., 2007 )

**First words production (10 - 14m)** (Åguila , 2004; DeHouwer , 2007)

**Initial 50 words and vocabulary spurt (15 - 24m)** (Conboy , 2002; Core et al., 2013; DeHouwer et al., 2013; Hoff et al., 2011; Patterson, 1998; Pearson et al., 1993)

**Word combination (18 - 24m)** (Conboy , 2002; Hoff et al., 2011; Marchman & Martínez-Sussman; Pearson et al., 1993)

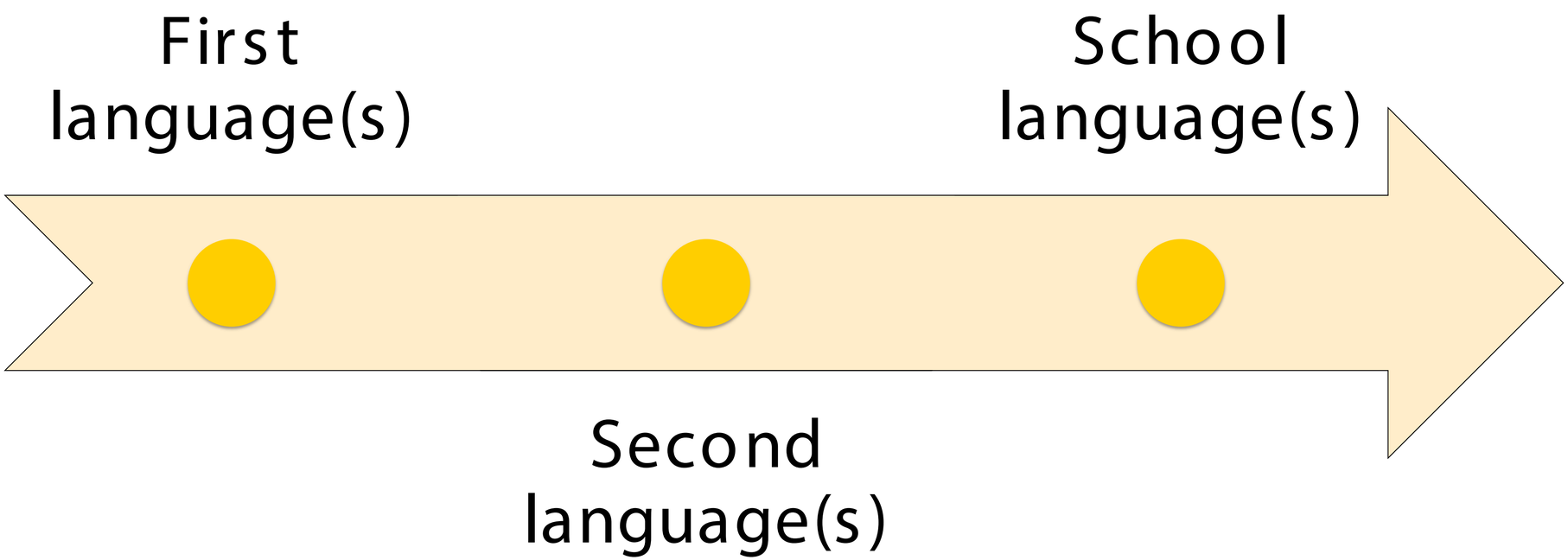
**Mean length of utterance growth (2 - 3 years)** (Conboy & Thal, 2006)

# Clinical implications

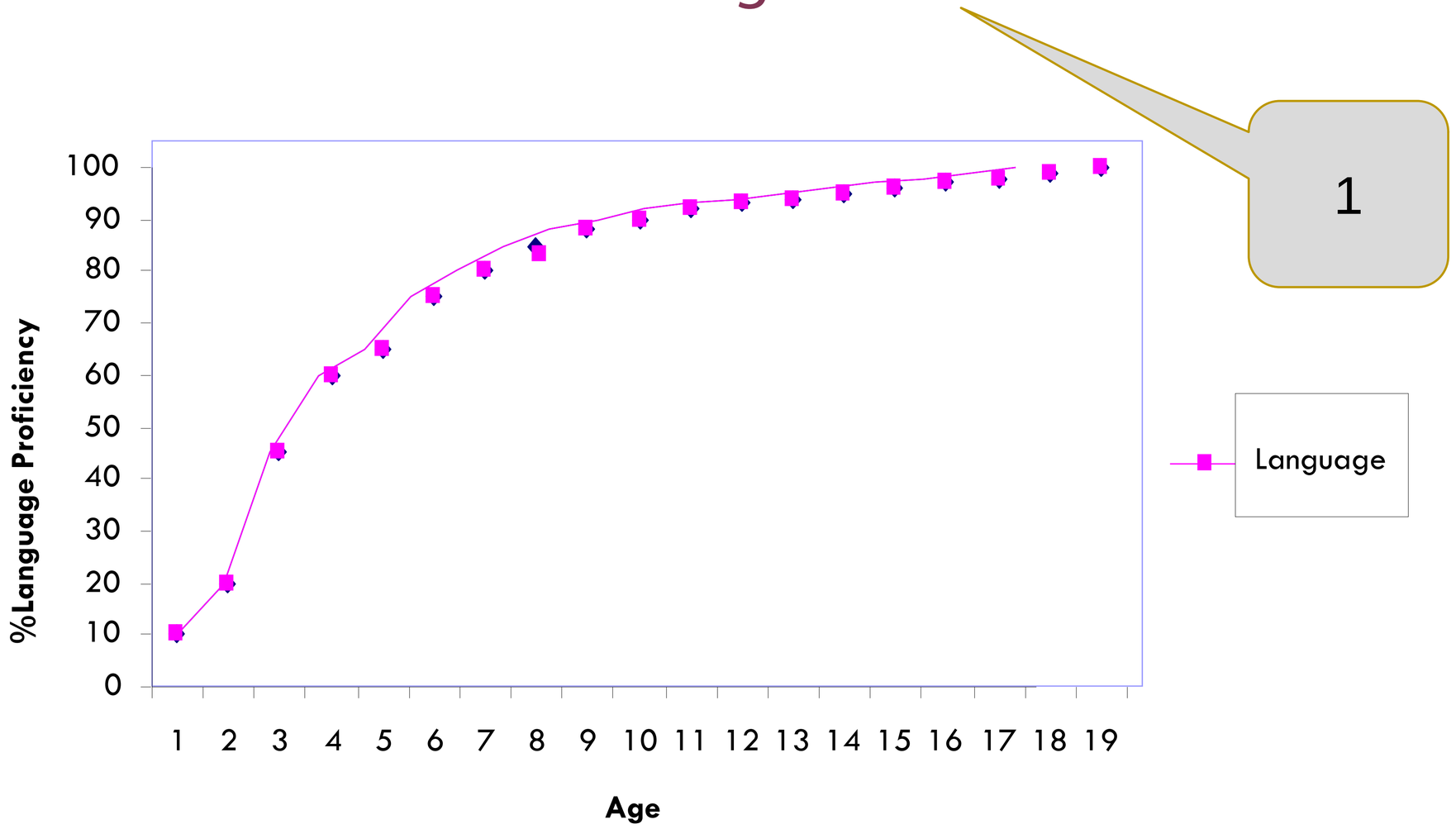
- Bilingualism does not imply delay
- Consider the two languages
  - If you leave one out, you are not including strengths.

# Learning two languages

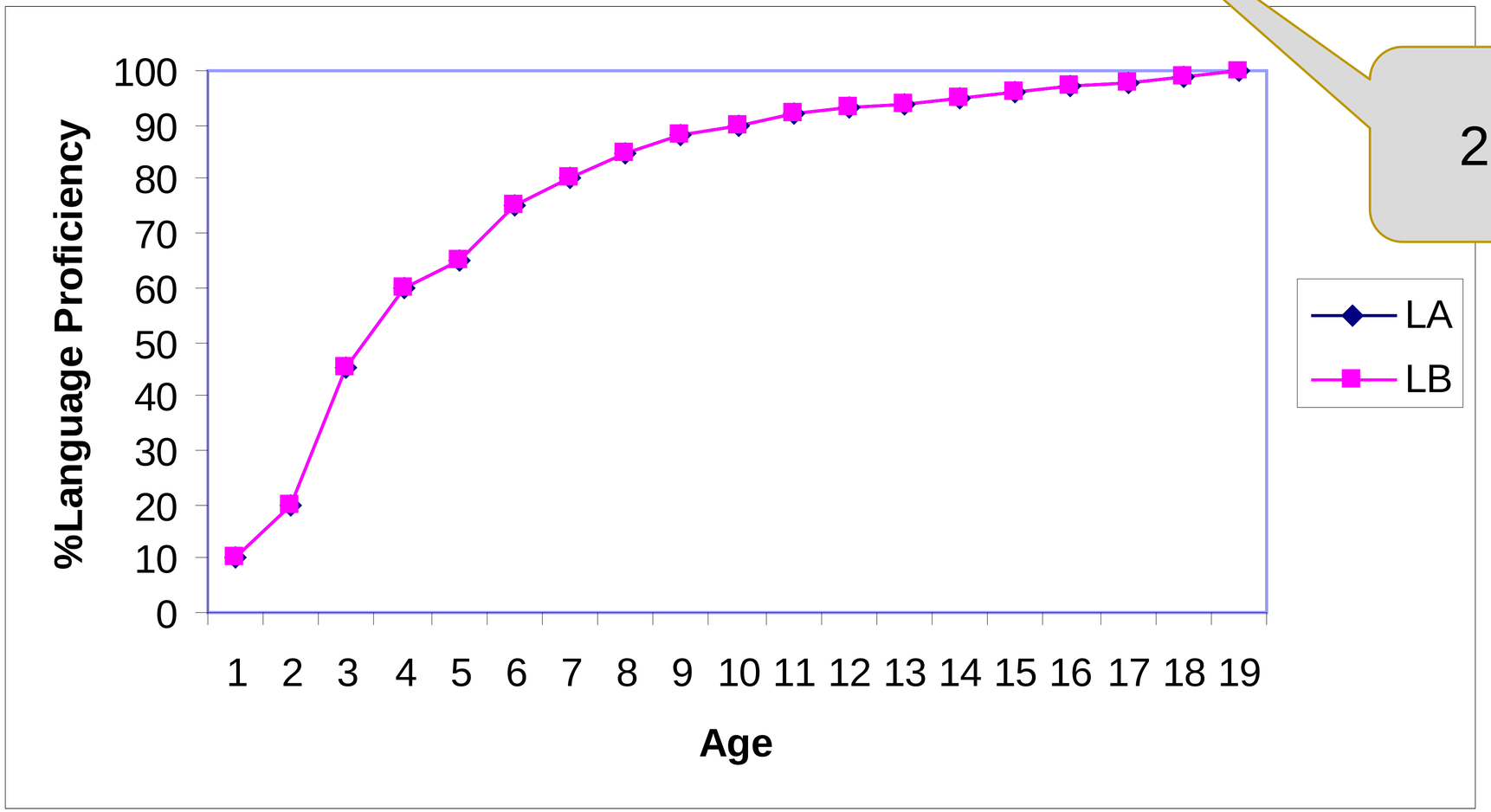
# The importance of a good linguistic history



# Relationship between language proficiency and age in monolinguals



# “Balanced” bilingual profile

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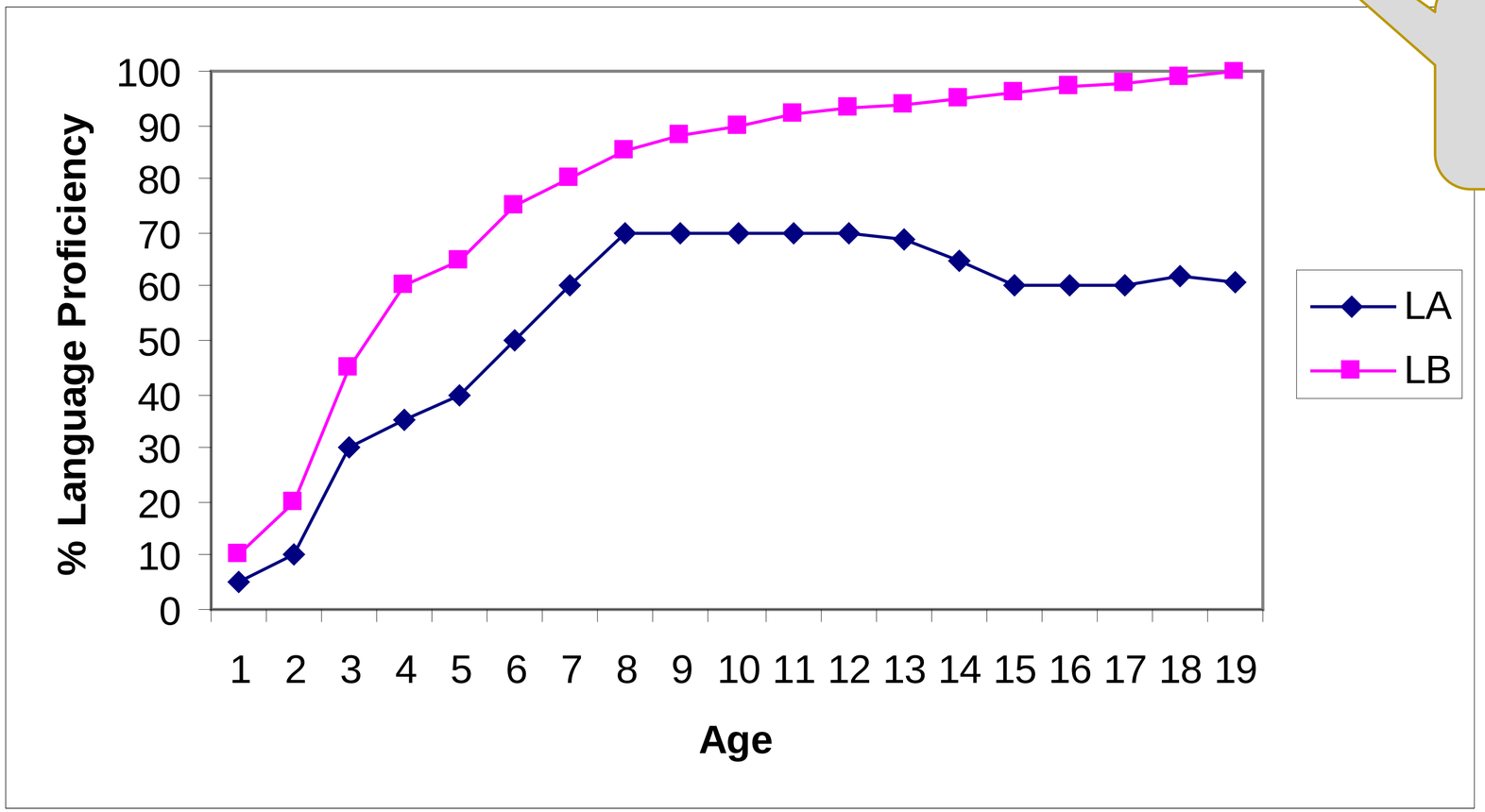
# Typical bilingual profile

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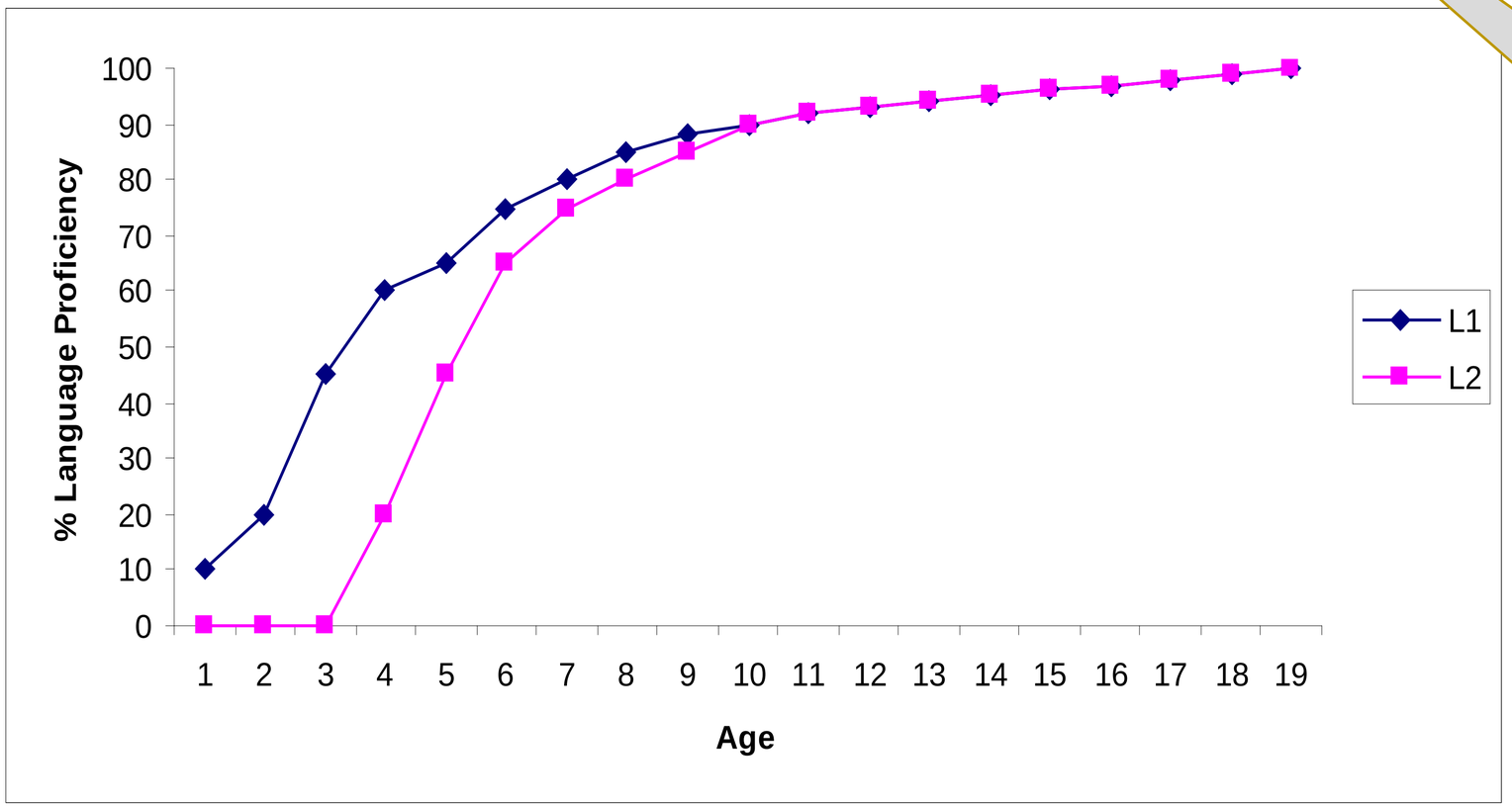
# Typical bilingual profile

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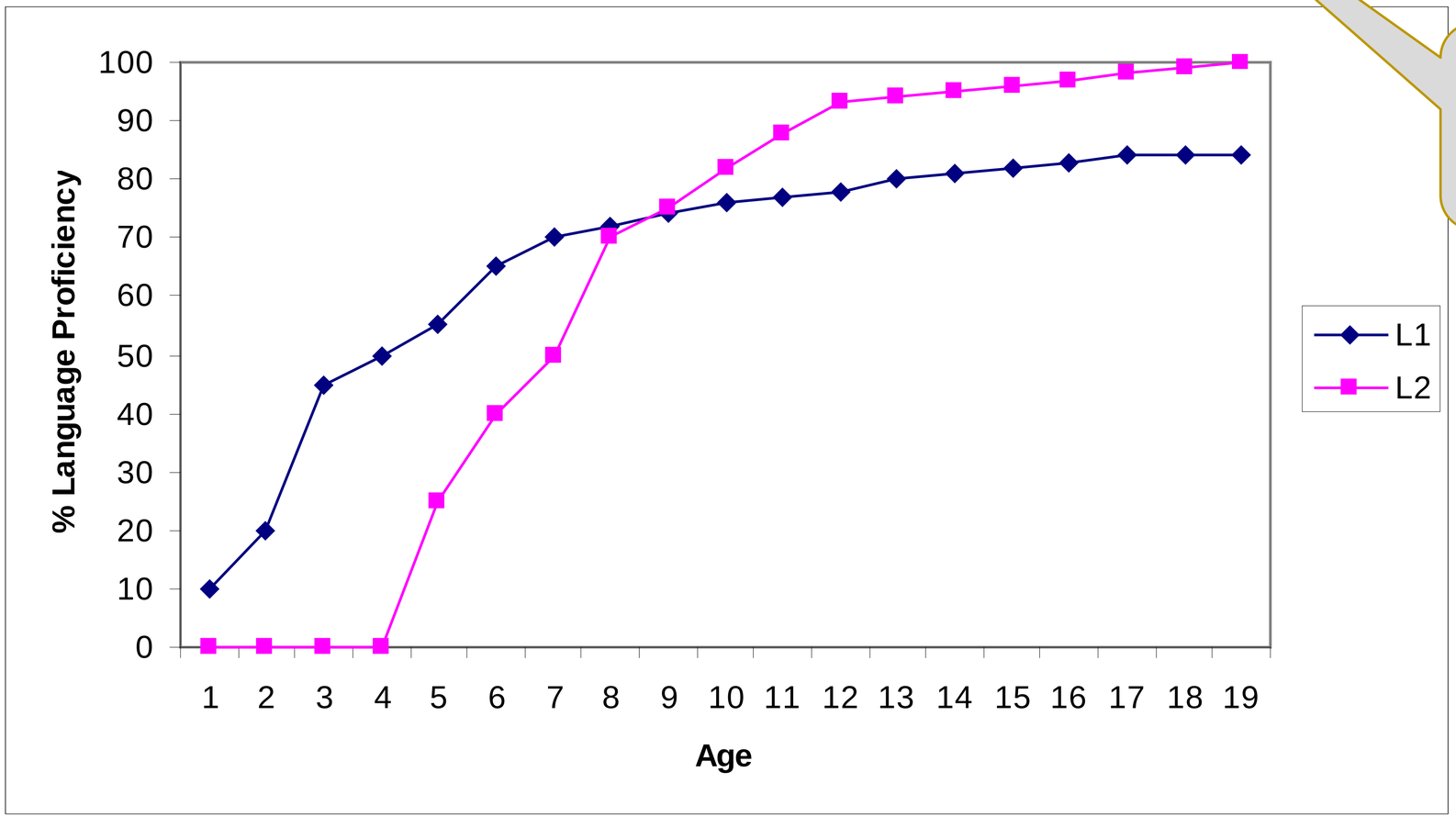
# Typical bilingual profile

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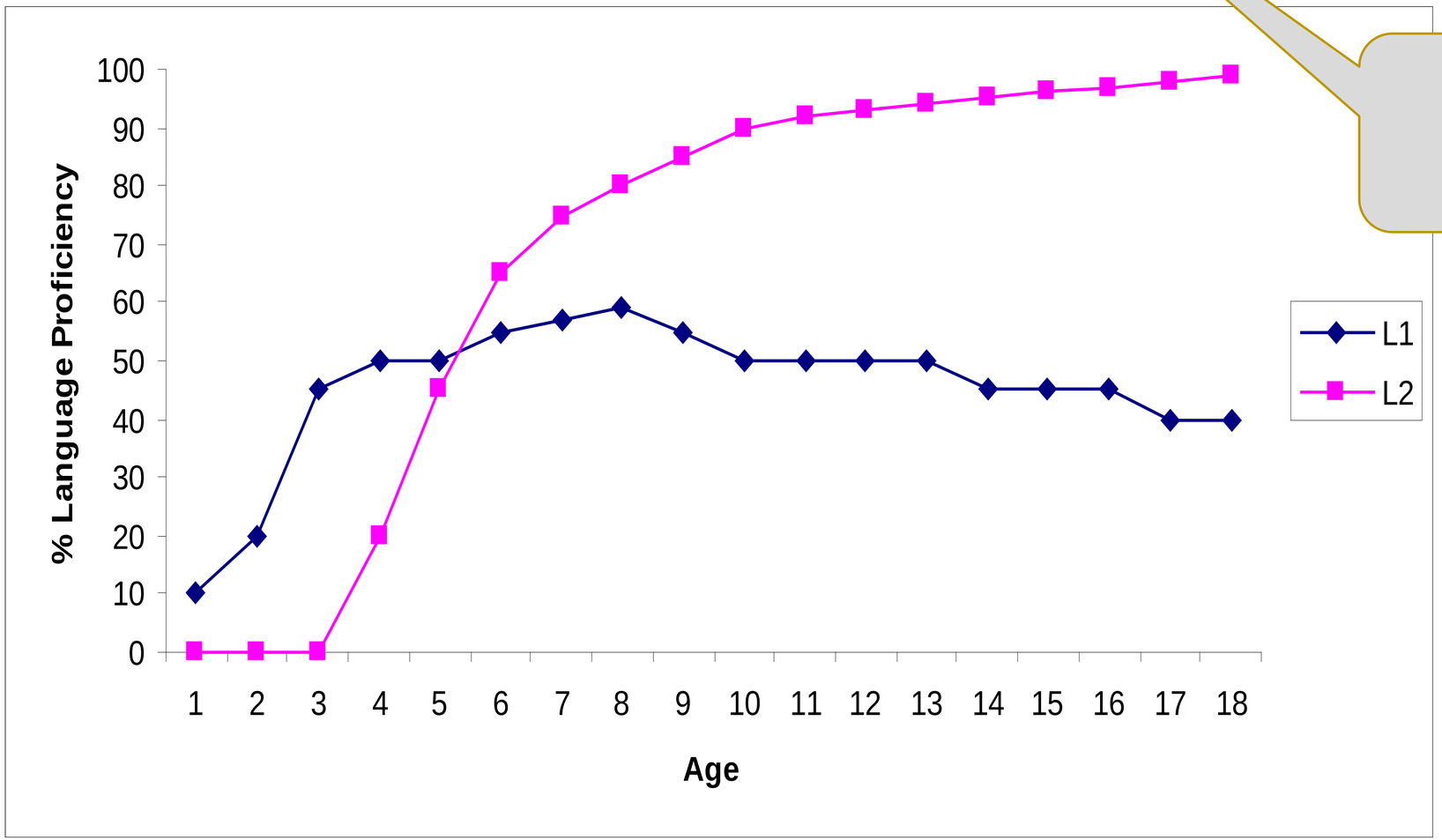
(cf., Kohnert & Bates, 2002; Kohnert et al.,1999)

# Typical bilingual profile

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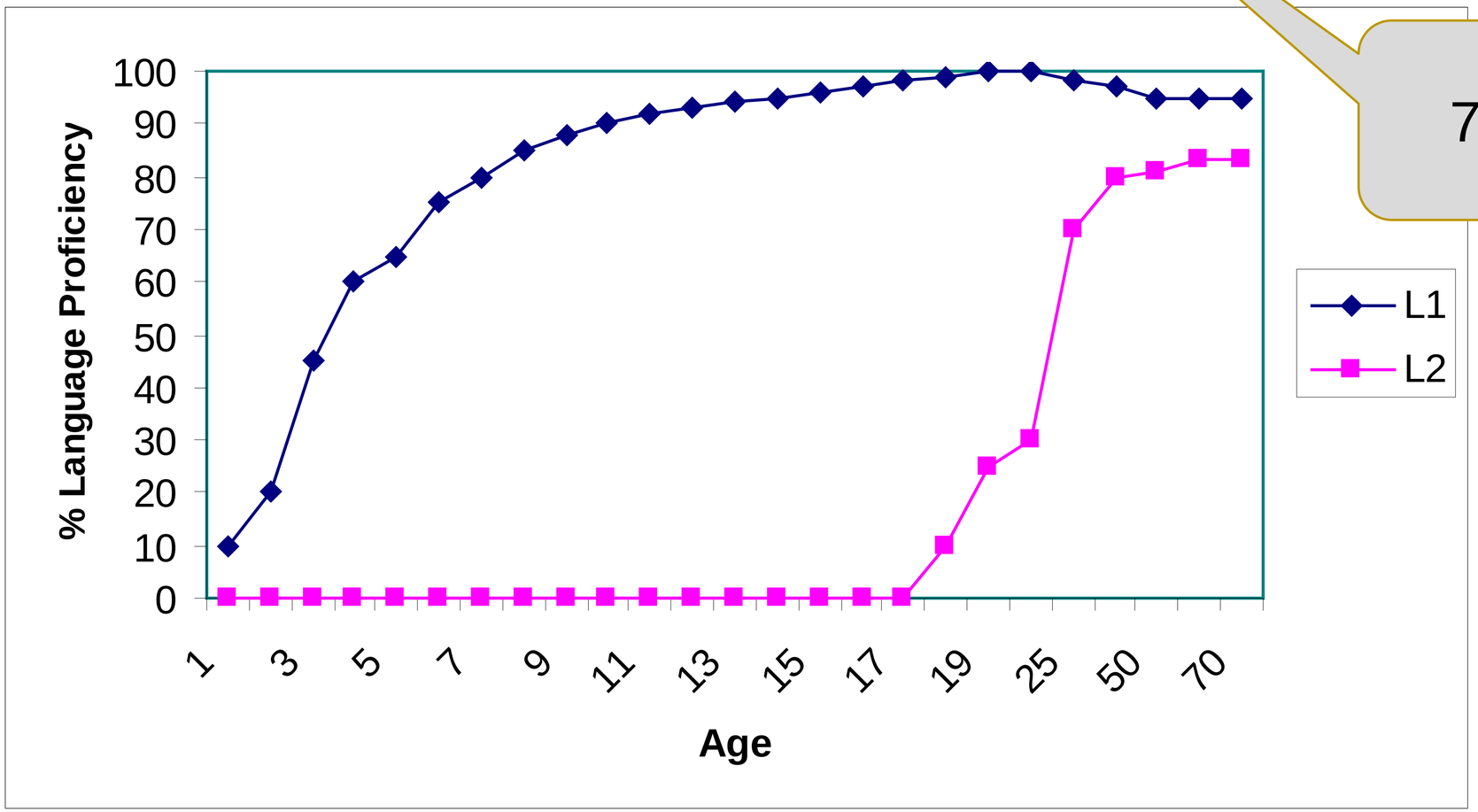
(cf. Kan & Kohnert, 2005)

# Typical bilingual profile



# Who are you?

1. Monolingual
2. “Balanced” simultaneous bilingual (LA = LB)
3. Simultaneous bilingual (LA<LB)
4. Early sequential bilingual (L1 = L2)
5. Early sequential bilingual (L2 > L1, L1 is maintained)
6. Early sequential bilingual (L2 > L1, L1 is in attrition)
7. Late sequential bilingual

# Assessment implication

- We must evaluate the two languages of every dual language learner.
  - *We cannot anticipate what linguistic profile a child will present without obtaining a thorough parent interview and without direct assessment of the two languages.*

# CASE STUDIES ACTIVITY #4

1. Read the case carefully.
2. What did you learn about the linguistic history of the child?
3. What information you don't have and would like to obtain to understand the linguistic history of this child?
4. What type of linguistic profile best describes the child?
5. How much English do you expect these children to demonstrate?

# Case study - Sophia

- Sofia, age 4, was born in Philadelphia to Puerto Rican parents who moved to the U.S. when they were young adults.
- She lives in a predominantly Puerto Rican neighborhood where she is exposed to Spanish at home and in her community (church, children in the neighborhood).
- Sofia travels to Puerto Rico twice a year for extended holidays. Sofia is exposed to English and Spanish from both her parents and neither parent is associated with one language.

# Case study - Amiir

- Amiir is a 3-year-old who was born in a refugee camp near the border of Kenya and Somalia. His family fled violence and poverty of the civil war in their home country Somalia, and lived in the camp for two years before arriving to Chicago, Illinois.
- The family moved to the U.S. when Amiir was 2-years-old. They communicate in Somali. Amiir's parents have had very little schooling.
- The older children in the family now mostly speak English with each other.

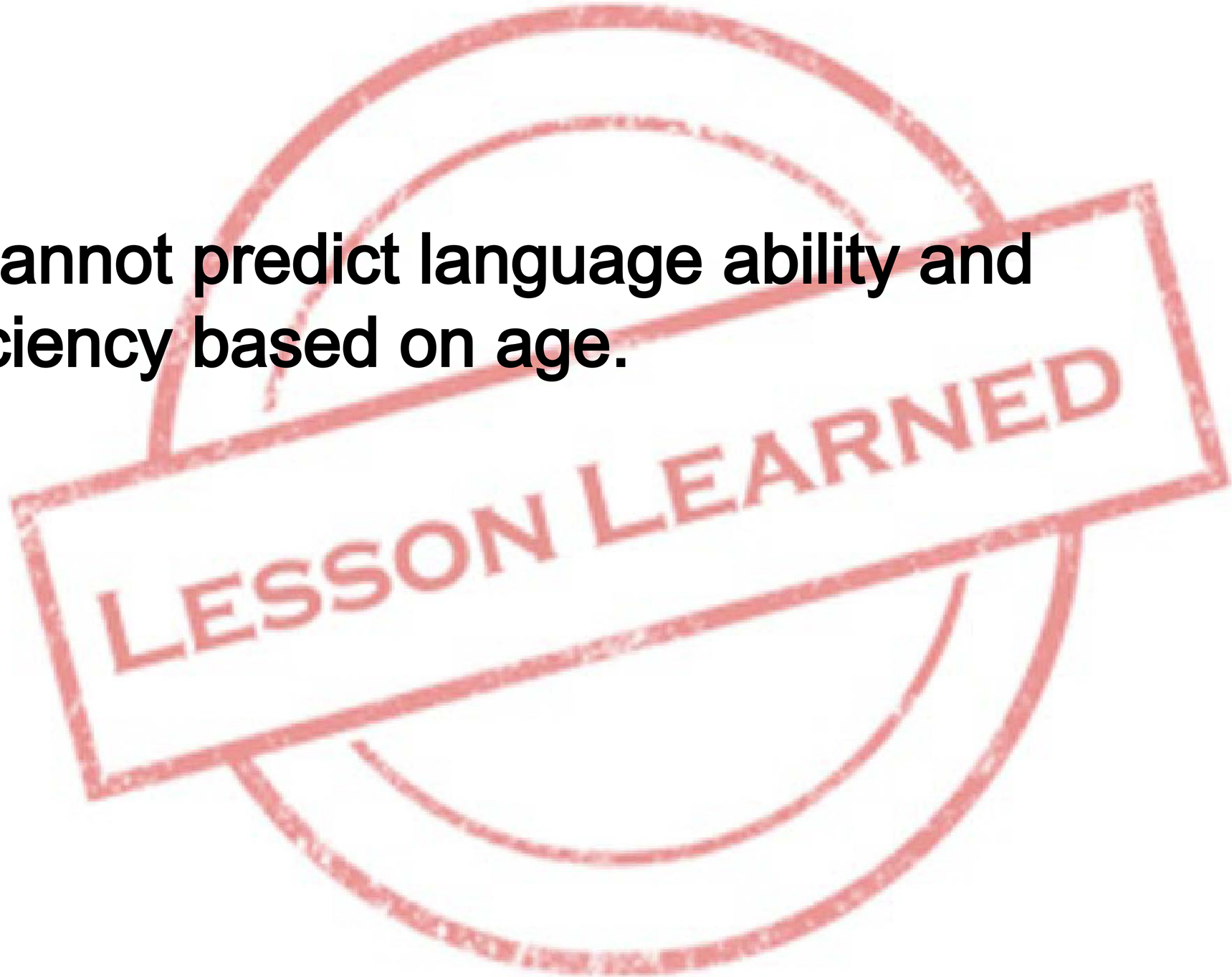
# Case study - Jackie

- Jackie is a 3-year-old boy who was born in China and moved to the United States when his father was offered a job at a tech company in Pittsburgh.
- Upon their arrival in the U.S. his parents enrolled Jackie in a preschool program, where he quickly began to learn English.
- Mandarin is the primary language spoken in the home. His parents make an effort to teach him basic concepts such as colors, numbers and shapes in both Mandarin and English when he is at home.

# Case study - Kaley

- Kaley is a 3-year-old who lives in Harrisburg. She was born in Russia and her birth name was Katerina, which is now one of her middle names.
- Kaley was adopted by American parents. Kaley entered the orphanage at the age of 6 months and was adopted when she was 2.5-years-old.
- It was not clear how much Russian Kaley learned before being adopted. Kaley appeared to have lost knowledge of Russian after being adopted. Kaley was slow to produce words in English.

- We cannot predict language ability and proficiency based on age.



Family is the single most important influence on the growth and development of a young child.

"There is no such thing as a baby. There is a baby and someone"

DH Winnicott (1960)

There is a baby and a mom, dad, caregiver….

# The role of the family in language development

- Language development is supported by all members of a family.
  - Mothers
  - Fathers
  - Grandparents
  - Siblings

Hoff, E. (2006). How social contexts support and shape language development. Developmental review, 26(1), 55-88.

# Families may prioritize different aspects of communication

## Communication partners

- Adults
- Mom (dyad)
- Grandparents

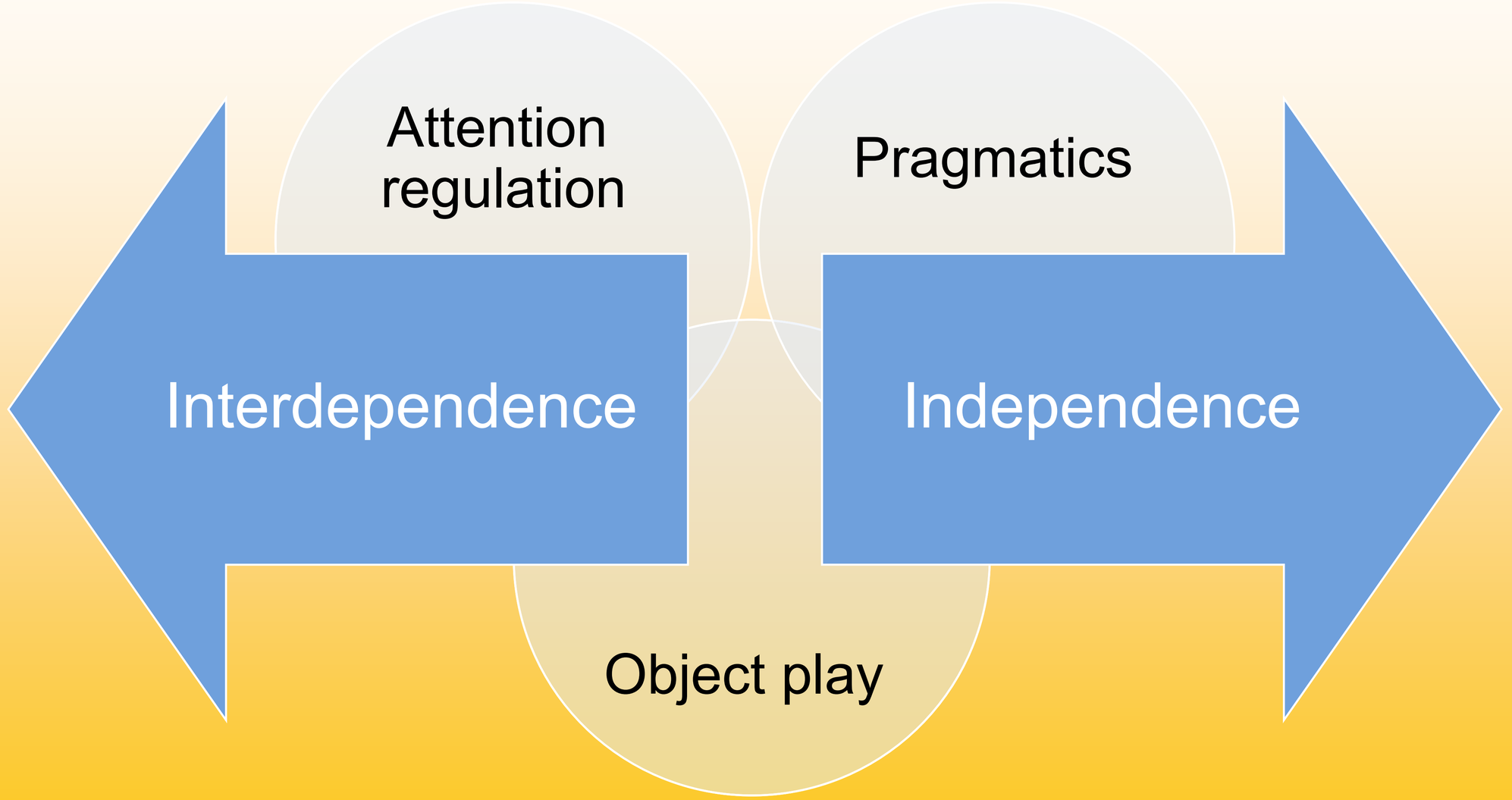
- Siblings
- Peers

## Play interactions

- Mother and child
- Teacher and child

- Multiple siblings
- Multiple peers

# Caretaker-children interactions across the continuum




Vigil, D.C. & Hwa-Froelich, D.A. (2004)

# Attention regulation

## Interdependence

- Directs child’s attention
- Encourages attention to self or other person
- Attends  to several activities simultaneously

## Independence

- Follows child’s lead
- Encourages attention to environment
- Watches  child to determine child’s next move
- Focuses on one activity at a time

# Pragmatic input

## Interdependence

- Attentional directives
- Produces imperatives
- Asks questions to redirect attention

## Independence

- Descriptives
- Describes child’s behavior
- Remarks on child’s interest

# Object engagement and play

## Interdependence

- Teaches explicitly how to play and use objects
- Manipulates child’s hands and toy
- Teaches child to play with toy correctly

## Independence

- Holds object
- Allows child to explore toys
- Allows play with toy different from intended use

# Assessment considerations

- What type of language is emphasized?
- What is the role of the parent?
- Who are likely to engage in routines with the child?
- What routines are emphasized?

# Additional cultural and linguistic considerations

- Establish rapport with the family.
  - If there is a language barrier, collaborate with an interpreter.
  - Look for strengths as well as weaknesses .
- Are parents familiar with early intervention? Are they expecting you to know best ?
- What does the family perceive about the child's disability and the role of therapy?

# CROSSLINGUISTIC DIFFERENCES

# We cannot predict ability based on age.
# What to find out?

- Language(s) at home and the community
- Child language(s) proficiency
- Child language(s) use
- Language(s) exposure

# Language(s) at home and the community: English and other languages

# Framework

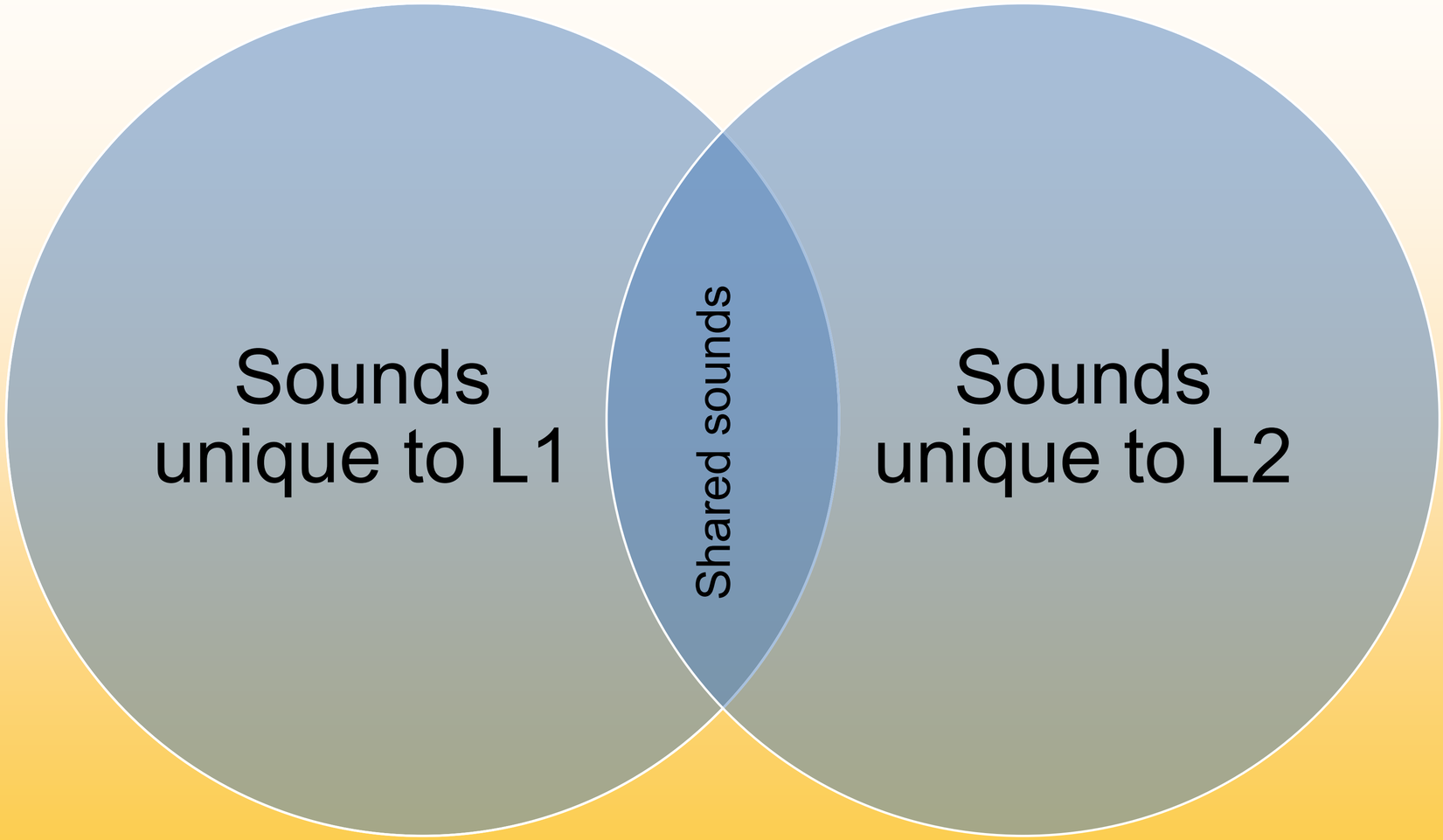
- Learn about language family, oral and written language, general information
- Compare and contrast the other language and English
- Consider dialectical differences (e.g., regional, urban/rural, etc.)
- Find developmental norms

# Most spoken languages other than English in PA

| Languages | Spanish | Arabic | Mandarin | Russian |
|---|---|---|---|---|
| **Family** | Indo-European, Italic, Romance | Afro-Asiatic, close to Aramaic, Hebrew, Ugaritic and Phoenician, Semitic | Sino-Tibetan, Sinitic | Indo-European, Balto-Slavic, Slavic, East Slavic |
| **Writing system** | Roman script, 27 letters and 3 digraphs (ch, ll, rr) | Abjad; written from right-to-left; 28 letters | Chinese characters (pinyin) | Cyrillic; 33 letters |

Kester, E.S. (2014). Difference or Disorder? Understanding Speech and Language Patterns in Culturally and Linguistically Diverse Students. Austin, TX: Bilinguistics .

# The sound system

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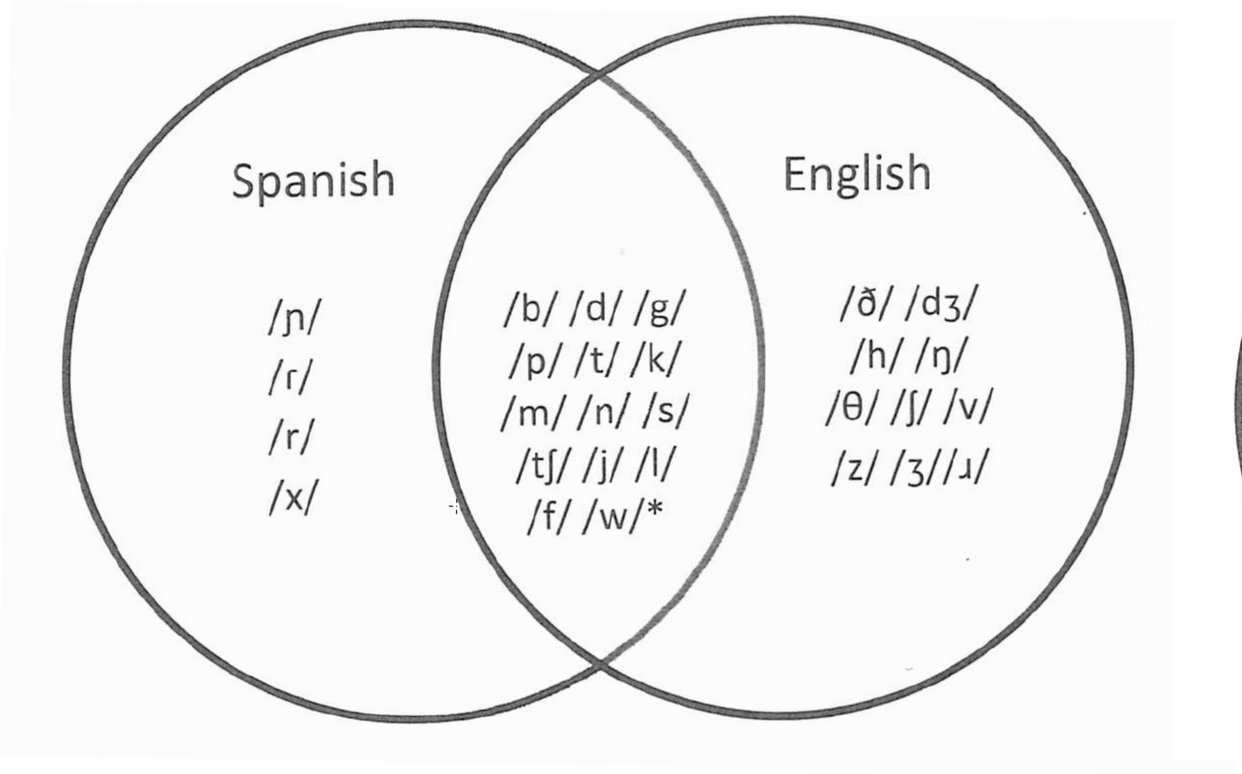
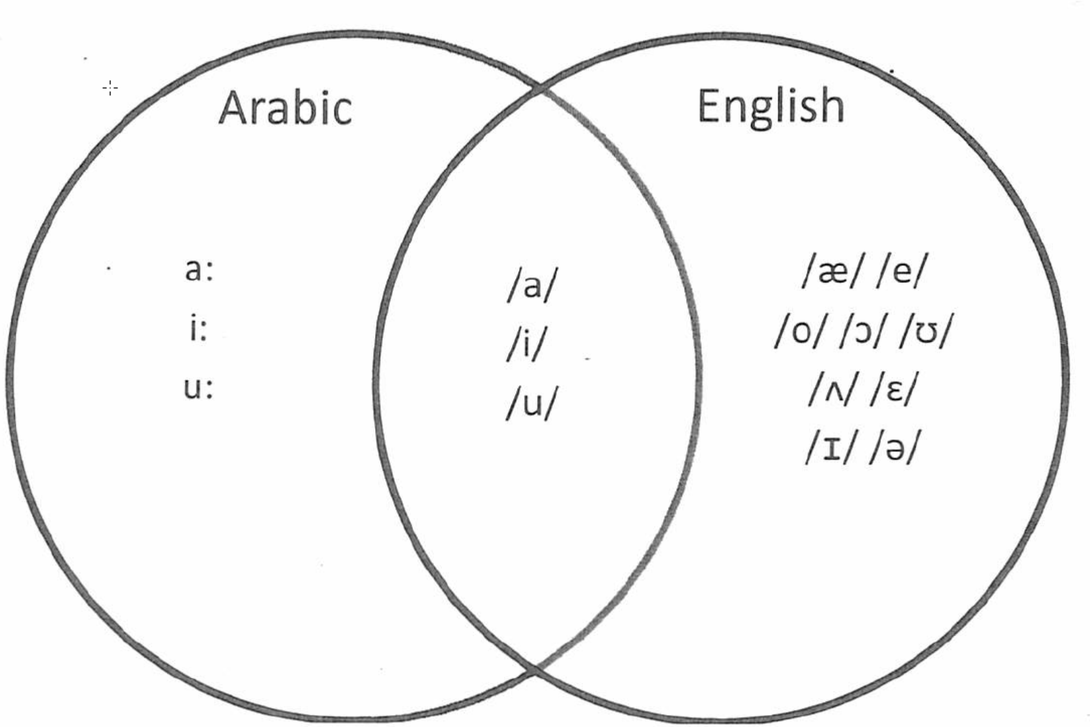
# Examples

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# Developmental norms (Spanish)

## DEVELOPMENTAL NORMS FOR SPEECH

| Age | Sounds |
|---|---|
| 3 | /m, b, p/ |
| 4 | /k, l, w, y, t, f, n/ |
| 5 | /r, g, d, ɲ, ʧ/ |
| 6 | /x, s/ |
| 7 | /r/ |

Note: This information is based on the age at which 90% mastery is expected.
(Acevedo, 1992; Jimenez, 1987)

Kester, E.S. (2014). Difference or Disorder? Understanding Speech and Language Patterns in Culturally and Linguistically Diverse Students. Austin, TX: Bilinguistics.

# Developmental norms (Russian)

## DEVELOPMENTAL NORMS FOR PHONOLOGICAL PROCESSES

| Age of Suppression | Phonological process |
|---|---|
| 1;8 | Initial and/or final consonant deletion |
| 1;10-2;0 | Consonant cluster reduction, metathesis |
| 2;0-2;6 | Assimilation, elision, metathesis |
| 2;6-3;0 | Assimilation decreasing, metathesis |
| 3;0-7;0 | No phonological processes should exist except for occasional metathesis |

(Logoped, 2005; Povalyaeva, 2004)

Kester, E.S. (2014). Difference or Disorder? Understanding Speech and Language Patterns in Culturally and Linguistically Diverse Students. Austin, TX: Bilinguistics.

# Cross-linguistic patterns from Mandarin to English

## PHONOLOGY AND PHONOTACTICS

| Patterns of Native Language Influence: Pattern: | Example: |
|---|---|
| Omission of final consonants or substitution of /m/ or /ŋ/ in final position | cup – cu<br>ton-toŋ |
| Devoicing of phonemes | dog – tog |
| Confusion between /l/ and /r/ | lamp – ramp |
| Confusion between /tʃ/and /ʃ/ | children – shildren |
| Addition of a neutral vowel such as /ə/ between consonants in a cluster | play – puhlay |
| Reduction of a consonant cluster to a single consonant | play – pay |
| Omission of a consonant cluster | central – cenal |
| Substitution of [θ] with [s] | thin – sin |
| Lengthening of the short vowels of English ( /æ/ /ʌ/ /ʊ/ /ɪ/) | give – geev |

(Hua, 2007; Hua & Dodd, 2000; Peña-Brooks & Hegde, 2007)

Kester, E.S. (2014). Difference or Disorder? Understanding Speech and Language Patterns in Culturally and Linguistically Diverse Students. Austin, TX: Bilinguistics.

# Contrastive analysis:  Morphosyntax

- Spanish-English
  - Flexible word order in Spanish
  - Gender marking in articles, adjectives, and nouns in Spanish

- Russian-English
  - Case system in Russian
  - No articles in Russian

Kester, E.S. (2014). Difference or Disorder? Understanding Speech and Language Patterns in Culturally and Linguistically Diverse Students. Austin, TX: Bilinguistics.

- Arabic-English
  - Adjective follows noun in Arabic
  - No modal verbs in Arabic
  - No indefinite articles in Arabic

- Mandarin-English
  - No gender pronouns in Mandarin
  - No verb conjugations in Mandarin
  - No auxiliary verbs in Mandarin

Kester, E.S. (2014). Difference or Disorder? Understanding Speech and Language Patterns in Culturally and Linguistically Diverse Students. Austin, TX: Bilinguistics.

# Developmental norms for language

- Not always available
- Available for Spanish

Kester, E.S. (2014). Difference or Disorder? Understanding Speech and Language Patterns in Culturally and Linguistically Diverse Students. Austin, TX: Bilinguistics.

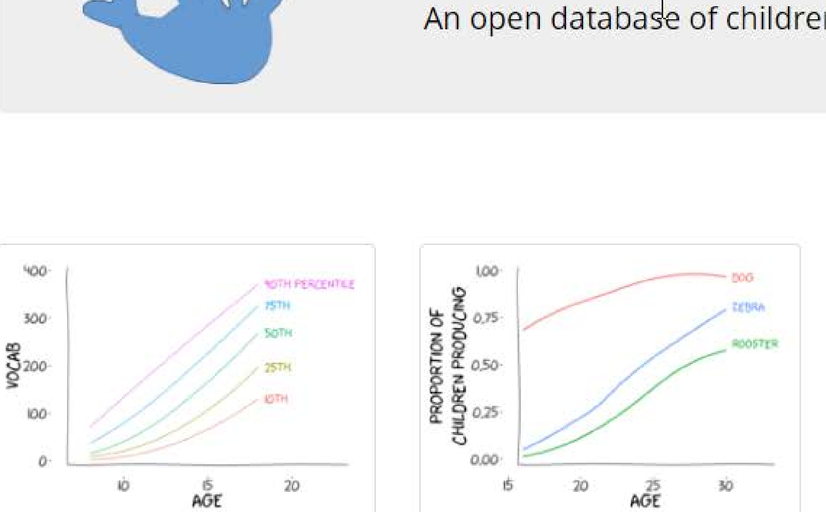
# Example for Spanish

| 1-2 years | |
|---|---|
| Follows simple commands | 12-15 months |
| Begins to respond to questions with gestures/pointing | 12-17 months |
| Engages in symbolic play | 18 months |
| Begins to combine 2 words ("more milk/ más leche") | 1-2 years |
| Begins to make environmental noises (animal/car sounds) | 1-2 years |
| Points to named items in book/picture | 1-2 years |

Kester, E.S. (2014). Difference or Disorder? Understanding Speech and Language Patterns in Culturally and Linguistically Diverse Students. Austin, TX: Bilinguistics.

# Wordbank

An open database of children's vocabulary development



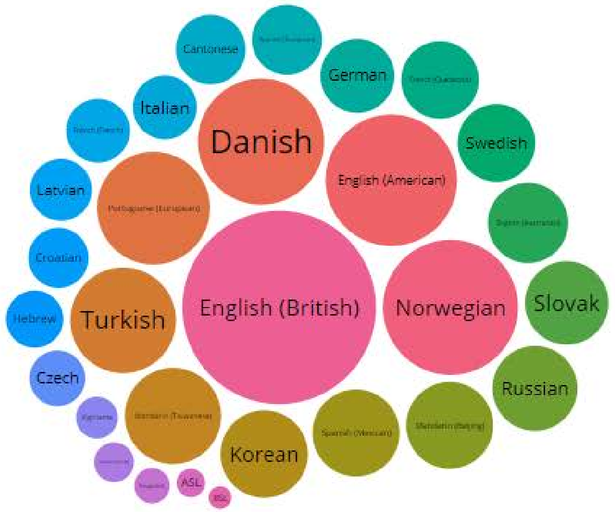

## Vocabulary Norms

Explore vocabulary size growth curves for various languages and demographic groups.

## Item Trajectories

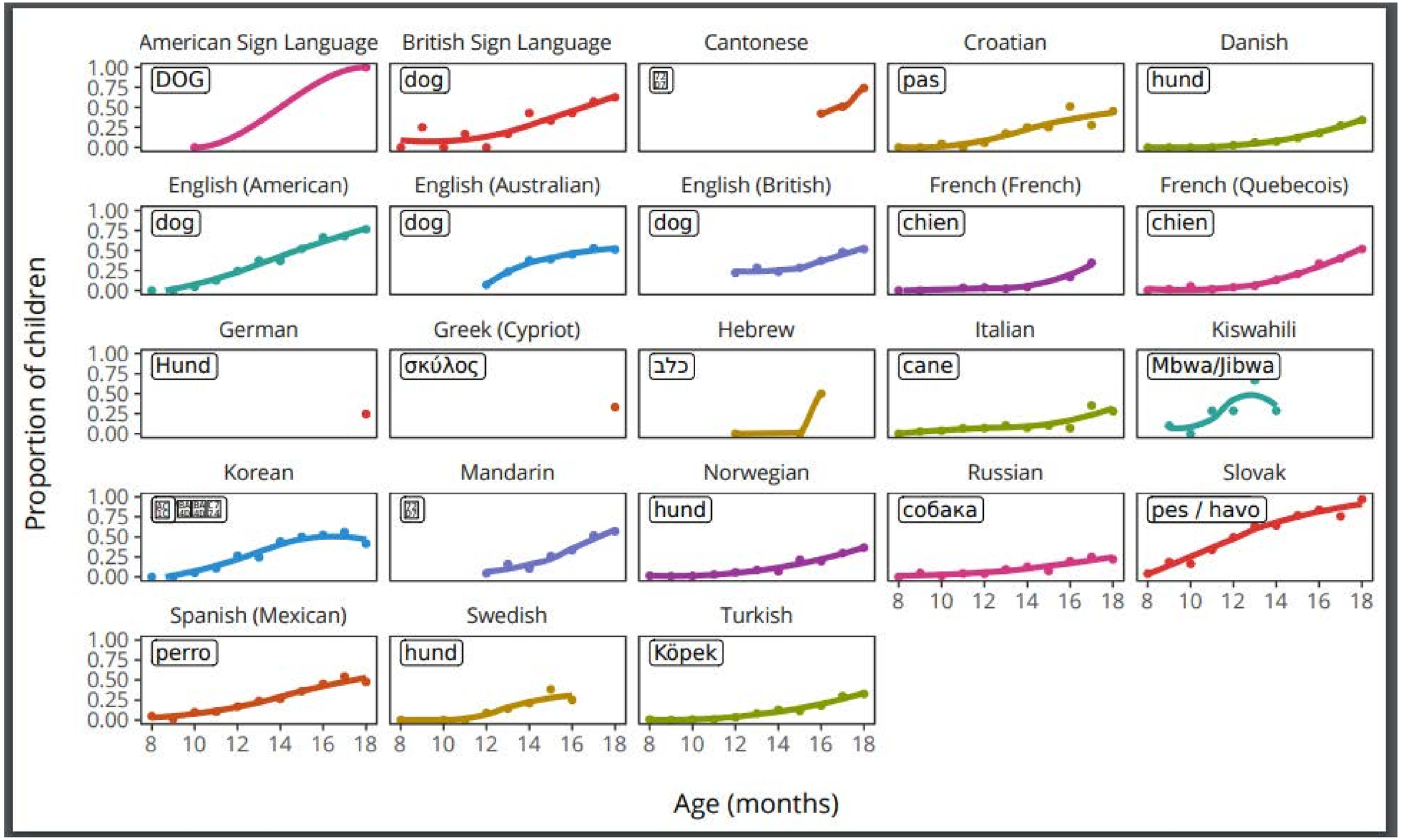
Explore trajectories of individual words, word categories, and grammar items.

Wordbank contains data from 75,144 children and 82,983 CDI administrations, across 29 languages and 56 instruments:




Wordbank is an open database of children's vocabulary growth, featuring data from contributors around the world.

Wordbank archives data from the MacArthur-Bates Communicative Development Inventory (MB-CDI), a family of parent-report questionnaires and enables researchers to browse these data in interactive analyses and access them via the wordbankr R package.


American Sign Language
British Sign Language
Cantonese
Croatian
Danish
English (American)
English (Australian)
English (British)
French (French)
French (Quebecois)
German
Greek (Cypriot)
Hebrew
Italian
Kiswahili
Korean
Mandarin
Norwegian
Russian
Slovak
Spanish (Mexican)
Swedish
Turkish
DOG
dog
pas
hund
chien
Hund
σκύλος
כלב
cane
Mbwa/Jibwa
собака
pes / havo
perro
Köpek
Proportion of children
Age (months)
1.00
0.75
0.50
0.25
0.00
8
10
12
14
16
18

# English Dialects

Standard

Puerto Rican

Chicano

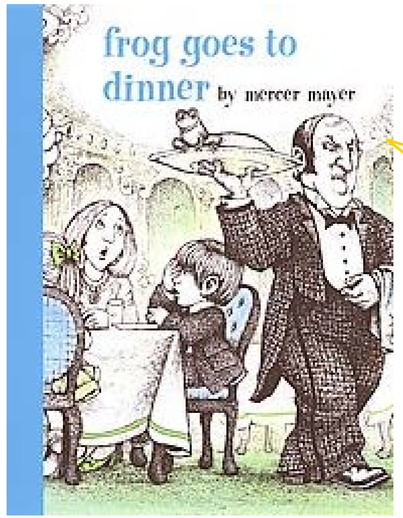
African American

Regional, etc.

# Anything else?

## Code-switching!

Alternation of two languages within a single constituent, sentence, or discourse.




C And then>
C (La agarró) primero la agarró.
C Then he jump in the water.
C And then se fue del señor.

# Many communities use code-switching.

Not a deficit.

A strategy in early learners.

Do not assume it is always a “crutch”.

Develop an “ear” for typical code-switching and for the typical pragmatics of code-switching.

# Activity #6

# Questionnaires

# Current Language(s) Proficiency Ratings

How well does the child understand and speak English?

¿Cuán bien habla y entiende el niño o la niña el español?

Ask parents to rate BOTH languages.

Ask teachers to rate BOTH languages.

# Why?

Parents are good judges of the home language.

Teachers are good judges of English.

Gutierrez -Clellen & Kreiter , 2003; Paradis et al., 2009

# Current Language(s) Use Ratings

How often does your child hear and use English?

¿Cuánto habla y oye el niño o la niña el español?

# English language use: Why?

Ratings correlated with English grammaticality (Gutierrez-Clellen & Kreiter, 2003).

Use predicted their **English morphosyntactic development** (Bohman, Bedore, Peña, Mendez-Perez, & Gillam, 2010) and **English vocabular**y in young children (Hammer et al., 2012).

Positively predicted **growth in English for a picture description task** (Gutierrez-Clellen, Simon-Cereijido, & Sweet, 2012).

Associated with **reduced growth in Spanish for a sentence repetition task after** the intervention ended (Simon-Cereijido, Gutierrez-Clellen, & Sweet, 2012)

# Home language use: Why?

Ratings correlated with **Spanish grammaticality** (Gutierrez-Clellen & Kreiter, 2003).

Use predicted their **Spanish morphosyntactic development** (Bohman, Bedore, Peña, Mendez-Perez, & Gillam, 2010).

**Children who spoke to their mothers in Spanish** had larger **Spanish vocabularies** (Hammer et al., 2012).

# Language exposure

Not a consistent predictor.

Some studies find correlations between exposure and proficiency.

Other studies do not find associations.

# Summary
# Linguistic History

## Languages and dialects

- To select what to observe.
- To help us differentiate between difference and disorder.

## Current Home Language and English Proficiency

- Parents are good raters of home language.
- Teachers are good raters of English.

## Current Home Language and English Use

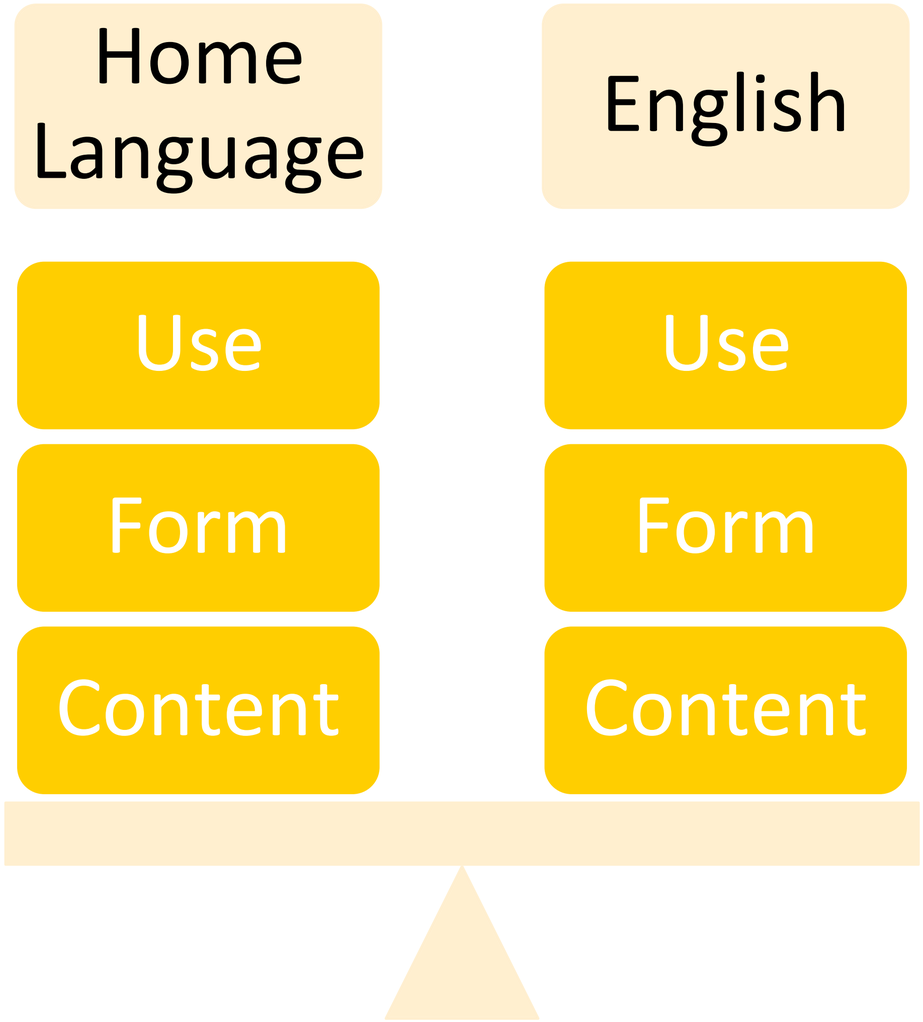
- Home language use predicts home language growth.
- English use predicts English growth and potential home language attrition.

## Language exposure

- Associated with language abilities in both languages.

# Assessing the child's languages: Direct assessment

# Always both languages



# Challenges in Assessment

Variability in bilingual language development and bilingual contexts.

Second language learning may “appear” as speech language impairment.

First language loss may “appear” like speech language impairment.

# Non-linguistic observations

Attention

Imitation

Play

Sensorimotor development

Self-help skills

Consider family and cultural variation.

Consider how you communicate with the family, when you do not use the family language.

# How to select appropriate assessment tools for dual language learners.

# Common errors

- **Informal translation** of an existing measure.
- **Selection** of a non-English version of an assessment **based solely on the psychometric properties of the English version**.

Barrueco, Lopez, Ong, & Lozano (2012) Assessing Spanish-English bilingual preschoolers. A guide to best approaches and measures.

# Common errors

- **Collection of inadequate information from parents and providers**.
- **Use of family members during the administration of a standardized assessment**.

Barrueco, Lopez, Ong, & Lozano (2012) Assessing Spanish-English bilingual preschoolers. A guide to best approaches and measures.

# Common errors

- Use of a measure's published **normative data that does not match a particular child's background**.
- Under-identification.
- Over-identification.

Barrueco, Lopez, Ong, & Lozano (2012) Assessing Spanish-English bilingual preschoolers. A guide to best approaches and measures.

# Selecting appropriate measures

- Two basic considerations:
- Basic psychometric properties
- Cultural and linguistic appropriateness

Barrueco, Lopez, Ong, & Lozano (2012) Assessing Spanish-English bilingual preschoolers. A guide to best approaches and measures.

# Basic Psychometric Features

- Reliability:
  - How precise or trustworthy a test score is in capturing the skills it is supposed to measure

# Basic Psychometric Features

- Validity:
  - Whether the measure tests what it is supposed to test
  - The degree to which all accumulated evidence supports the interpretation and use of test scores for a particular purpose

# Cultural and Linguistic Features

- A translation **does not ensure that the psychometric properties automatically carry over** from the English version to the Spanish version.

Barrueco, Lopez, Ong, & Lozano (2012) Assessing Spanish-English bilingual preschoolers. A guide to best approaches and measures.

# Cultural and Linguistic Features

- Is the **translation adequate**?

# Content equivalence of items and measure

- Are the domains and questions **relevant to the population**?
  - E.g., winter weather questions asked to students coming from tropical countries

Barrueco, Lopez, Ong, & Lozano (2012) Assessing Spanish-English bilingual preschoolers. A guide to best approaches and measures.

# Semantic equivalence

- The degree to which versions of a measure possess the **same meaning across languages** or even across distinct dialects within a given language.
  - For translations: how was the translation done? Background of translators? Was the meaning maintained across languages? How were discordances dealt with?

Barrueco, Lopez, Ong, & Lozano (2012) Assessing Spanish-English bilingual preschoolers. A guide to best approaches and measures.

# Structural consistency across versions

- How similar are the **items, length, and format of the measures across the languages**?
  - This is important for comparisons across languages.

Barrueco, Lopez, Ong, & Lozano (2012) Assessing Spanish-English bilingual preschoolers. A guide to best approaches and measures.

# Standardization

- The **sample and procedures** utilized to develop the measure.

# Technical equivalence in reliability and validity

- Does the adapted or translated version have similar **reliability** psychometrics as the original assessment?

- Does the adapted or translated version have similar **validity** results as the original assessment?

Barrueco, Lopez, Ong, & Lozano (2012) Assessing Spanish-English bilingual preschoolers. A guide to best approaches and measures.

# Summary

| BASIC PSYCHOMETRIC FEATURES | CULTURAL AND LINGUISTIC FEATURES |
|---|---|
| Test-retest reliability | Content equivalence of items and measure |
| Alternate-form reliability | Semantic equivalence |
| Internal consistency | Structural consistency across versions |
| Interrater or interscorer reliability | Standardization |
| Face validity | **TECHNICAL EQUIVALENCE ACROSS MEASURES** |
| Content validity | Technical equivalence in reliability |
| Construct validity | Technical equivalence in validity |
| Criterion validity | |

Barrueco, Lopez, Ong, & Lozano (2012) Assessing Spanish-English bilingual preschoolers. A guide to best approaches and measures.

Measures developed
from a bilingual perspective.

# Suggested measures based on evidence

- Questionnaires for language history, proficiency, use, and exposure
- Direct assessment:
  - Infants/Toddlers: MacArthur-Bates CDIs in both languages.
    - If family clearly uses more English, consider using the BDI-2. Use caution with the Spanish version.
    - There is no evidence for DAYC
  - Preschoolers: BESA in both languages, find the BEST score. Additionally use language sample analysis in both languages.
    - CELF Preschool-2 and PLS tests are options but you need to use caution with the Spanish versions.

# Limitations

- Spanish-English speaking children age 3-4
  - If delayed in communication, the MacArthur-Bates CDIs (I and II) may be useful.
  - MacArthur-Bates CDI III in English
  - CELF-P and PLS tests, with caution

- Non-linguistic children
  - MacArthur-Bates CDIs (I and II) for gestures and early pragmatics
  - Early developmental norms (e.g., babbling, gestures) are expected to occur in the same order across languages and cultures.

# Use developmental norms

- Center for Early Care and Education Research- Dual Language Learners
  - http://cecerdll.fpg.unc.edu/

- Transdisciplinary Play-Based Assessment, Second Edition (TPBI2)  (Linder, 2008)

# Working with interpreters

# Working with interpreters

- An interpreter converts the content of one language into another language through speech or sign language.

- Collaboration is required to make sure that the interpreter is knowledgeable about:
  - Professional ethics and client/patient confidentiality.
  - Professional terminology.
  - Basic principles of assessment and/or intervention principles to provide context to understand objectives.

# Working with interpreters

- Interviews and Conferences
- Assessment and Intervention

  – Briefing (pre-interaction meeting)
  – Debriefing (post-interaction meeting)

# INTERPRETING OBSERVATIONS AND RESULTS

- Bilingual children who have communication delays must show the delays in both languages.

- If one language is developing typically, the child does not have a language disorder.

- The linguistic history and the direct assessment results should portray the child in context.

# Reporting

- Provide a detailed linguistic history
  - Home
  - Daycare/Preschool, if applicable
- Report findings for each communication domain in each language
  - E.g., speech abilities in the strongest language first, followed by the speech abilities in the second language
- Provide a global picture of the relative language strengths
  - E.g., the child may be equally dominant across languages or the child may have stronger skills in Spanish than in English or the child may be in the process of Spanish language attrition.

# CASE STUDY– PUTTING IT ALL TOGETHER

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# QUESTIONS?