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Filename: LARRC_2012_NCME_AssessingCognitiveProcessesELL



Assessing Cognitive Processes at the Core of Reading Comprehension in Preschool English-Language Learners



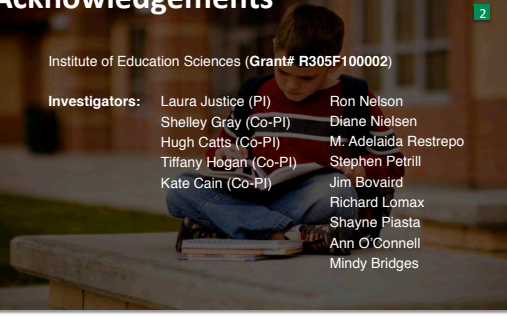



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Investigators:

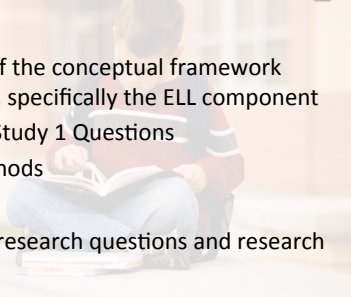

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Goals of the Presentation

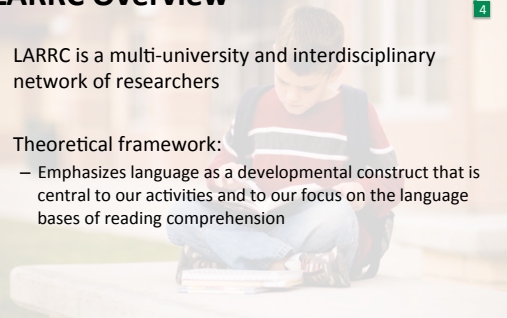

To provide:

- An overview of the conceptual framework behind LARRC, specifically the ELL component
- ELL Research Study 1 Questions
- Sampling Methods
- Measures
- Link between research questions and research design

LARRC Overview

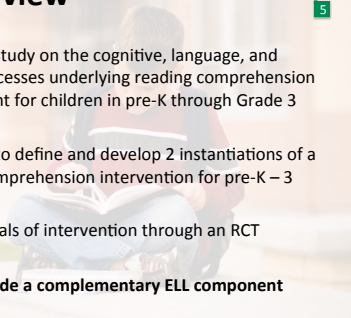

- LARRC is a multi-university and interdisciplinary network of researchers
- Theoretical framework:
 - Emphasizes language as a developmental construct that is central to our activities and to our focus on the language bases of reading comprehension

LARRC Overview

- Study 1: Research study on the cognitive, language, and environmental processes underlying reading comprehension and its development for children in pre-K through Grade 3
- Study 2: Designed to define and develop 2 instantiations of a language based comprehension intervention for pre-K – 3
- Study 3: Efficacy trials of intervention through an RCT

All studies include a complementary ELL component

Research Questions

Study 1 - Longitudinal 6

- What is the nature of the prospective relationship between ELLs' lower- and higher-level language and cognitive skills in L1 and L2 in early childhood (PK, K, 1, 2, and 3) and their L2 reading comprehension?
- What is the nature of the prospective relationship between ELLs' environmental and classroom characteristics in early childhood (PK, K, 1, 2, and 3) and their L2 reading comprehension?

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Study 1 ELL Sample

Chart showing target number of children assessed / followed up per year 7

Grade	PK	K	G1	G2	G3	N
Year 1	285					285
Year 2		280				280
Year 3			280			280
Year 4				280		280
Year 5					280	280

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Sampling Methods

School Selection 8

- School districts selected because of the size and diversity of student populations
- Research applications in each district were approved
- District administrators chose schools from their district that would be amenable to research activity
- To include more ELL preschoolers, we contacted the Maricopa County Head Start program and obtained permission
- Administrators from each district served as liaisons between the research project and the principals

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Sampling Results – Inclusion Rate

9

- 317 children were consented
- 25 children were excluded due to
 - Age (<4 years old)
 - No plan to attend kindergarten next year
 - Not meeting Spanish proficiency criteria
- Parents withdrew 6 children due to
 - Child did not cooperate
 - Family moving out of the area

Inclusion Rate: 286/317 = 90.2%

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Sample (N = 286)

Age, Gender, IEP 10

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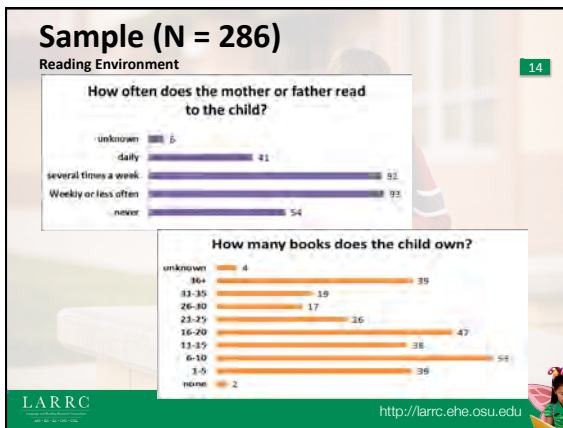
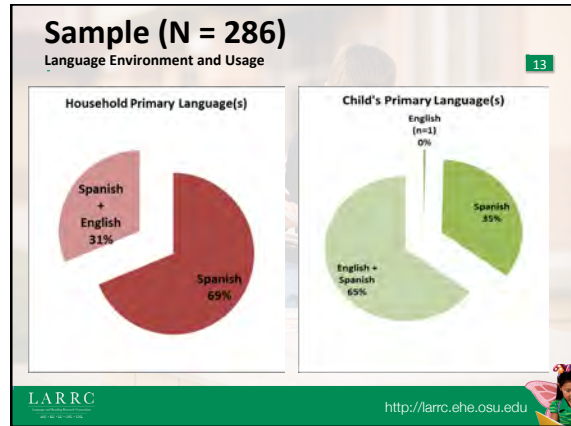
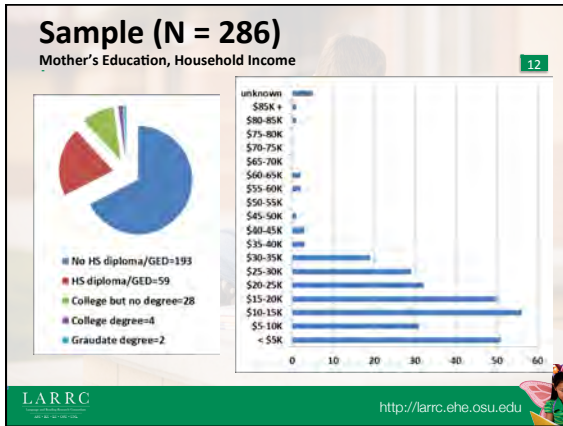
Sample (N = 286)

Race, Ethnicity 11

- White = 211
- Other = 65
- Black = 4
- Native American = 1
- Hawaiian/Pacific Islander = 1
- Asian = 0
- Unknown = 4

All 286 students are Hispanic.

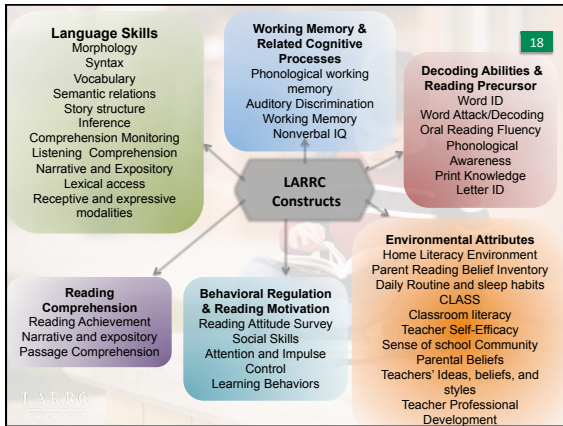
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- ### Measures
- Selection
- Prek and Kindergarten measures are primarily in Spanish
 - They capture estimates of L1 and L2 lower-and higher-level language skills in the early grades to the extent this is possible
 - Lower grades more emphasis in Spanish – L1
 - Higher grades more emphasis in English – L2
 - K more lower level in English – L2
 - *Reading instruction from K and later in Arizona is done only in English, and thus the focus on English measures in later grades*
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- ### Measures
- Selection
- Three guiding principles for selections
 - Multiple constructs, enable use as latent variables
 - Important for reading comprehension
 - Need for different modalities of measurement
 - Need for variability in task demand.
 - Measures skills that span pre-reading to conventional reading across the two languages
 - Pre-reading in Spanish, but conventional reading in English due to instructional and testing time constraints
 - Developmentally appropriate for each grade
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- ### Measures
- Generalizable versus Experimental Measures
- Limited availability of quality assessments of certain study constructs, specifically higher-level language skills are not available in Spanish
 - The following measures were developed/adapted to Spanish from English model:
 - Detecting inconsistent information in short narratives
 - Tests of knowledge of narrative structure
 - Inferences
 - Updating
 - Picture arrangement (translated)
 - Questionnaires (translated and adapted to ELL issues)
 - TOPEL
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Measures

Constructs and Language

	Pre-K	Kindergarten	Grades 1-3	
LANGUAGE SKILLS	Lower-level language: Grammar	Spanish	Spanish/English	English
	Lower-level Language: Vocabulary	Spanish/English	Spanish/English	English
	Higher level language	Spanish	Spanish	English
COMPREHENSION	Listening comprehension	Spanish	Spanish/English	English
	Reading Comprehension			English
MEMORY	Working Memory	Spanish	Spanish/English	English
	Serial rapid naming		Spanish/English	English
READING PRECURSORS	Decoding		English	English
	Phonological Awareness	Spanish	English	
	Print Knowledge	Spanish	English	
READING MOTIVATION & BEHAVIORAL ATTRIBUTES	Reading Motivation	Spanish/English	Spanish/English	Spanish/English
	Behavioral Regulation	English	English	English
	Home attributes	Spanish	Spanish	Spanish
	Classroom attributes	English	English	English
	Teacher attributes	English	English	English

Measures

Process for Establishing Validity

- Process
 - Reliability
 - Validity
 - Table with reported reliabilities for measures
- Spanish adaptations controlled for vocabulary level, concept complexity, sentence complexity, and similar contextual information that is culturally relevant for Latino children
 - A few measures were translated, most were designed in Spanish following the English framework

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Data Collection

- 286 children were evaluated last spring
- All parent data was collected in person in interview format to reduce missing data
- Bilingual teams were deployed to schools for assessment
- Tests divided into 9 blocks of 25-35 minutes each
 - Arranged by language, need to record, and post-scoring
- Pre-K testing took approximately 5 hours per child, plus parent and teacher questionnaires
- Kindergarten testing is taking 6 hours and is currently under way

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Conclusions

- Challenges:
 - ELL families were consented in person and questionnaires were filled out with an assistant
 - High attrition rate for classroom observations from teachers
 - Many do not want to be videotaped – observe with no video for CLOP
 - Sample spread over 75 schools in kindergarten
 - We now have 12 teams testing
 - Keeping up with experimental measures adaptations to Spanish
 - Sample is mostly low income, may confound language status and SES, but good representation of that segment

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Conclusions

- Successes:
 - Very low attrition rate on the part of the children and families
 - Personal contact with all the families for consent, interviews, and follow up
 - Sample is mostly low income
 - Very little missing data
- Longitudinal design affords ability to examine the development of reading comprehension in ELLs
 - Able to do in-depth analyses for this population

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Contact Information 24

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