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

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

Acknowledgements
Institute of Education Sciences (Grant R305F100002)
Investigators:
  Laura Justice (PI)
  Ron Nelson
  Shirley Cole (Co-PI)
  Diane Nielsen
  Hugh Catts (Co-PI)
  M. Adelaida Restrepo
  Stephen Petrill
  Kate Cain (Co-PI)
  Jim Bovaird
  Shayne Piasta
  Richard Lomax
  Ann O’Connell
  Mindy Bridges


Filename: LARRC_2012_NCME_AssessingCognitiveProcessesELL
Research Questions

Study 1 - Longitudinal

• 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?

Sampling Methods

School Selection

• 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

Sampling Results – Inclusion Rate

• 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%

Sample (N = 286)

Age, Gender, IEP

Sample (N = 286)

Race, Ethnicity

All 286 students are Hispanic.
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

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

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

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
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

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

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

• 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
Contact Information

For more information or questions, please contact:

Maria Adelaida Restrepo
Voice: 480-727-8795
E-mail: laida.restrepo@asu.edu

http://larrc.ehe.osu.edu

LARRC
Language and Reading Research Consortium
ASU • KU • IU • OSU • UNE

larrc.ehe.osu.edu