

Preschool Dual Language Learners Intervention Practices

March 2, 2015

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Alliance**

School Readiness
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- Core alliance membership includes representatives from the Florida Department of Education, regional early learning coalitions, and higher education institutes
- Alliance focuses on exploring issues related to early learning and helping build research capacity at the local and state levels in this area

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Goals

- Understand the evidence-based components of Pre-K dual language learners professional development programs;
- Understand the characteristics of interventions for language, literacy, math, and social-emotional concerns; and
- Understand potential instructional strategies approaches/applications by referencing findings of the Nuestros Niños study.

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Agenda

- Overview of the Nuestros Niños School Readiness Study
- Implications of the Study
- Q & A
- REL Stakeholder Feedback Survey

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Introduction

- Dr. Dina Castro, Professor and Velma E. Schmidt Endowed Chair in Early Education, College of Education, University of North Texas
- Dr. Cristina Gillanders, Associate Professor, School of Education and Human Development, University of Colorado–Denver
- Dr. Ximena Franco, Investigator, FPG Child Development Institute, University of North Carolina at Chapel Hill

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Preschool Dual Language Learners Intervention Practices



DINA C. CASTRO, PH.D., CRISTINA GILLANDERS, PH.D.,
XIMENA FRANCO, PH.D.

UNIVERSITY OF NORTH TEXAS, UNIVERSITY OF COLORADO DENVER, AND
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

We would like to know our audience. Please let us know your role in your organization: early childhood teacher, administrator, curriculum specialist, trainer, program director, student.

-- COMPLETE POLL --

CONTEXT

- > Changes in the demographic composition of children and families served in early care and education programs.
- > The school readiness gap.
- > Increased accountability requirements.
- > The educational success of these children is critical to the overall progress of our educational system and the economic future of the nation.

DIVERSITY WITHIN THE DLL POPULATION

- > Countries of origin
- > Immigrant vs non-immigrant experience
- > Proficiency in English and their non-English language
- > Socioeconomic status and parental education

Please indicate the languages of the DLL children you serve in your programs:
Spanish, French Creole, Chinese, Arabic, Tagalog, French, Vietnamese, Korean, Russian, Italian, Hindi, Korean, Other

– COMPLETE POLL –

CONSIDERATIONS

- Developmental characteristics of dual language learners (DLLs).
- Socio-cultural contextual factors that influence children's experiences (societal, community, family, ECE setting)
- Early education not designed to address the needs of DLLs.

DEVELOPMENTAL COMPETENCIES

- Traditional Approach
 - Monolingual norms
 - Two monolinguals in one
- Bilingualism affects all developmental domains



NEUROSCIENCE AND BILINGUALISM

- Brain-imaging techniques are now being used to study how the bilingual condition changes brain functioning.
- Bilingual infants (10-12 months old) process language input in different parts of the brain than monolingual infants.
- Receiving input from two languages during the first year of life increases early brain plasticity and expands linguistic processing ability.

COGNITIVE DEVELOPMENT OF DLLS

- The experience with two languages, no matter how short, changes the way language is organized in the brain.
- Typically developing bilingual children show more advanced skills than their monolingual peers in non-verbal executive control skills (inhibitory control; cognitive flexibility; working memory)

Barac, R., Bialystok, E., Castro, D. C., & Sanchez, M. (2014). The Cognitive Development of Young Dual Language Learners: A Critical Review. *Early Childhood Research Quarterly, 29*, 699-714.

LANGUAGE AND LITERACY DEVELOPMENT OF DLLS

- Consensus that DLLs have two separate and connected language systems.
- Transfer exists between the two: consistent on phonological awareness, mixed on vocabularies.
- Transfer is influenced by children's dominant language and the structural overlap between the two languages.

Hammer, C. S., Hoff, E., Uchikoshi, Y., Gillanders, C. & Castro, D. C. (2014). The Language and Literacy Development of Young Dual Language Learners: A Critical Review. *Early Childhood Research Quarterly, 29*, 715-733.

INFLUENCES ON LITERACY



- > L2 oral language predicts L2 literacy development
- > *Growth* of L1 during preschool years found to predict L1 & L2 literacy outcomes in k & 1st grade
- > Similarly, *growth* of L2 during preschool found to predict L1 & L2 literacy

SOCIO-EMOTIONAL DEVELOPMENT OF DLLs

- > DLLs showed higher levels of self-control than their English monolingual peers at K entry and continued to achieve higher levels through fifth grade.
- > Fluent bilingual Latino children had higher levels of self-control than native English speakers.
- > DLLs found to have slower growth in internalizing and externalizing behaviors from kindergarten to fifth grade and lower levels of problem behaviors in fifth grade.

Halle, et al. (2014) The social-emotional development of dual language learners: Looking back at existing research and moving forward with purpose. *Early Childhood Research Quarterly*, 29, 734-749.

IN SUMMARY...

- > The development of DLLs is different from monolinguals' development. They have two separate language systems from very early in life; and the two languages influence each other.
- > Young children have the capacity to learn more than one language, it does not confuse them or hinder English language development.
- > *Bilingualism has no inherent negative consequences for children's development.* It may benefit young children, cognitively, linguistically, and socially.
- > Strong language skills in the first language will facilitate English language development for DLLs.

EARLY CARE AND EDUCATION FOR DLLS

- What constitutes the benefit of high quality instruction for monolingual English speakers is equally beneficial for DLLs (Goldenberg, 2006; Shanahan & Beck, 2006).

However...

- "High quality instruction ...alone would be insufficient to support equal academic success for language minority students." (August & Shanahan, 2006, p. 448)



THE NUESTROS NIÑOS SCHOOL READINESS PROGRAM

THE NUESTROS NIÑOS PROGRAM


- First study (2001-2004), Descriptive, to identify the state of practice
 - Funded by the Office of Educational Research and Improvement, USDOE.
- Second study (2004-2008), NN Language and Literacy intervention
 - Funded by the Institute of Education Science, USDOE.
- Current study (2009-2015), NN School Readiness intervention
 - Funded by the National Institute of Child Health and Development, USDHHS.

NUESTROS NIÑOS SCHOOL READINESS TEAM

<p>Investigators</p> <ul style="list-style-type: none"> > Dina Castro (PI, FPG)* > Cristina Gillanders (Co-PI, FPG)** > Donna Bryant (Co-PI, FPG) > Marlene Zepeda (Co-PI, CAL State-LA) > Ximena Franco (Investigator/Project Director, FPG) > Michael Willoughby (Statistician, FPG) <p>Teacher Consultants</p> <ul style="list-style-type: none"> > Jenny Alaid > Meytal Barak > Haylari Beckles > Yanina Criolani > Claudia Llerena > Maria Cristina Marin > Lily Trivinos 	<p>Recruitment & Data Collection Coordinator</p> <ul style="list-style-type: none"> > Adis Lij <p>Data collectors</p> <ul style="list-style-type: none"> > Linda Carolina Soto > Sandra Garcia > Lucia Mendez > Cristina Luna Evans > Gabriela Saicido > Jodie Marquez > Jackie Hernandez > Miralka Rodriguez > Audrey Hernandez > Jennifer Romero > Aracely Castellanos > Angelica Herrera <p>Administrative Assistant</p> <ul style="list-style-type: none"> > Jeannette Laboy
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* Dr. Castro is now at Univ. North Texas
** Dr. Gillanders is now at Univ. Colorado Denver

PURPOSE



To evaluate the efficacy of the Nuestros Niños Program, an intervention to promote school readiness in Spanish-English dual language learners (DLLs).

SPECIFIC AIMS

- > Evaluate the efficacy of the NNSR intervention on children's school readiness outcomes during pre-K
- > Determine whether specific child/family and teacher/program factors moderate the effects of the NN intervention

RESEARCH DESIGN

- Random assignment of pre-K teachers to treatment and control groups
- Follows teachers over 2 years of intervention
- Two groups of children per each cohort of teachers (one per each year of intervention)

SETTINGS

- EC programs (Head Start, PreK, child care) in North Carolina, California and Florida
- High quality classrooms (4-5 Stars in NC and FL Rating System; 5 CA Step Rating System)
- Non-prescriptive curriculum (Creative Curriculum & High Scope)
- Teacher with BA or AA working towards BA
- Primary language of instruction is English
- 25%-75% of children are Spanish-speaking DLLs
- At least one adult in the classroom speaks Spanish

STUDY SAMPLE: COHORT 1 & 2 - YEARS 1 & 2

	Intervention	Control
Classrooms	30	26
Teachers & Assistants	60	52
Children	178	162

STUDY SAMPLE: COHORT 1 & 2 - YEARS 1 & 2

Children	Frequency	Percent
Country of Origin/Heritage		
- Central America	153	45
- Mexico	186	55
Gender		
- Male	178	52
- Female	162	48
Site		
- North Carolina	126	37
- California	64	19
- Florida	150	44

STUDY SAMPLE: COHORT 1 & 2 - YEARS 1 & 2

Teachers	Frequency	Percent
Ethnicity-Latina	35	62
Lead & Assistant Bilingual	22	39
Teacher Education		
- CDA	2	3
- AA	12	21
- BA/MA	43	77

MEASURES: CLASSROOM PRACTICES

- Classroom Assessment Scoring System (CLASS)
 - ❑ Emotional Support
 - ❑ Classroom Organization
 - ❑ Instructional Support
- Early Language and Literacy Classroom Observation for DLLs (ELLCO-DLL)
 - ❑ Classroom Observation
 - ❑ Literacy Activities
 - ❑ Literacy Environment
- ❑ Language Interaction Snapshot (LISn)

MEASURES: CHILD LANGUAGE DEVELOPMENT

English

- > The Woodcock Language Proficiency Battery-Revised- Picture Vocabulary Subscale (WJ-III; Woodcock & Muñoz-Sandoval, 1995)
- > Receptive One Word Picture Vocabulary Test (ROWPVT; Brownell, R, 2000)
- > Expressive Word Knowledge Probe (NNSR research team, 2010)

Spanish

- > Bateria III Woodcock-Muñoz-Vocabulario de Imágenes (Bateria III; Woodcock & Muñoz-Sandoval, McGrew, & Mather, 1995)

Bilingual

- > Receptive One Word Picture Vocabulary Test (Bilingual-ROWPVT) (Martin & Brownell, 2000)

MEASURES: CHILD LITERACY DEVELOPMENT & MATHEMATICS ABILITY

Literacy

- > Woodcock Language Proficiency Battery-Revised – Letter Word Identification-English and Spanish Forms (WLPB-R Woodcock & Muñoz-Sandoval, 1995)
- > The Phonological Awareness Task (PAT; Miccio and Hammer, 2002.
- > Write Your Name Task (Yaden & Tardibuono, 2004)

Mathematics

- > Test of Early Mathematics Ability-Third Edition (TEMA-3; Ginsburg & Baroody, 2003)

PROCEDURE

- > Data collection was conducted in Fall & Spring of the school year.
- > The administration of child assessment measures (English & Spanish) was conducted in two sessions, one week apart, at the preschool setting. Different assessors per each language.
- > Teachers responded to a questionnaire that included demographic and PD information, and a Literacy, Language, and Curriculum Beliefs and Practices measure.
- > Teachers completed the child socio-emotional measure.
- > Parents responded to a phone interview that included demographic information, acculturation and child socio-emotional measure.

NUESTROS NIÑOS SCHOOL READINESS PROGRAM



- A professional development intervention to improve quality of teacher practices for promoting language, literacy, mathematics and socio-emotional development in young DLLs.
- Designed to complement core curriculum providing instructional enhancements to support educators in English-only classrooms.
- Teachers learn and apply core concepts, instructional strategies and classroom resources specific to support DLLs.

NUESTROS NIÑOS SCHOOL READINESS: CONTENT AREAS

- Foundations for teaching young DLLs
- Socio-emotional development of young DLLs
- Bilingual language development
- Early reading in DLLs
- Early writing in DLLs
- Teaching mathematics to DLLs



NUESTROS NIÑOS PROFESIONAL DEVELOPMENT COMPONENTS

- Institutes (3 days in Year 1 and 2 days in Year 2)
- Consultations (every other week in Years 1 and 2)
- Professional Learning Communities (every other week in Year 1; one a month in Year 2)

CRITICAL FEATURES OF THE NUESTROS NIÑOS PROFESSIONAL DEVELOPMENT

- Summaries from most current research on DLLs' development and effective strategies for DLLs.
- Opportunities for practice
- Staff collaboration
- Multidimensional methods of delivery
- Child development and learning monitoring
- Intensity and duration is appropriate depending on the complexity of the skills (Zaslow et al., 2010)

AN EXAMPLE OF READING ALOUD

Please observe how the teacher maximizes comprehension and participation of dual language learners

AN EXAMPLE

(Video of an example of reading aloud here)

MAXIMIZING COMPREHENSION

- Introduce the book in a picture walk
- Select a limited set of core words (3 to 5) per week
- Use the children's L1 strategically
- Read the story several times during the week
- Incorporate culturally relevant thematic units and books

MAXIMIZING PARTICIPATION

- Be aware of DLLs second language acquisition
- Encourage DLLs to retell and/or to dramatize the story
- Expand the ideas in the book to other centers
- Teach core vocabulary words in small groups

AN EXAMPLE OF VOCABULARY DEVELOPMENT

- (A video example here of a small group vocabulary development session)

AN EXAMPLE

- Ask questions to expand DLLs understanding of the word
- Ask children to repeat the word aloud
- Provide a definition of the word
- Offer examples of the word in different contexts
- Provide opportunities for children to demonstrate their understanding of the word

(Beck, McKeown, and Kucan, 2002)

PROMOTING MATHEMATICAL THINKING

- Take into consideration DLLs interests and sociocultural background
- Integrate with other content areas
- Use intentional and systematic teaching
- Assess DLLs' mathematical knowledge in the primary language
- Make sure DLLs are familiar with the mathematical vocabulary

(Castro, Gillanders, Franco, & Zepeda in collaboration with Sorkin & Pappas, 2011)

EXAMPLE OF MATHEMATICAL DEVELOPMENT

- (Video here of a small group mathematical development session)

FINDINGS: CLASSROOM OUTCOMES (COHORTS 1 & 2 – YEARS 1 & 2: NC, CA & FL)

Outcomes	Tests		Comparison		Effect size
	Tx*Time*Biling	Tx main	Tx	Ct	
CLASS					
Instructional support	0.3 (2, 107)	3.7 (1, 133)+	2.4	2.2	0.34
Classroom organization	0.4 (2, 89.4)	2.0 (1, 122)	5.2	5.0	–
Emotional support	0.2 (2,92.3)	1.7 (1,115)	5.7	5.8	–
ELLCO-DLL					
Language, literacy & curriculum	1.1 (2, 96.6)	4.2 (1,120)*	17.8	16.7	0.32
Classroom observation-Tot	1.0 (2, 96.6)	3.8 (1, 119)+	23.8	22.4	0.29
Literacy activities	0.2 (2, 109)	0.3 (1, 132)	0.69	0.80	–

Note: + p < .10, * p < .05, ** p < .01, *** p < .001

FINDINGS: CLASSROOM OUTCOMES (COHORTS 1 & 2 – YEARS 1 & 2: NC, CA & FL)

Outcomes	Tests		Comparison		Effect size
	Tx*Time*Biling	Tx main	Tx	Ct	
LISn - English					
Complex	1.7 (2, 100)	0.7 (1, 126)	7.8	8.6	–
Basic	1.4 (2, 103)	0.2 (1, 124)	17.4	17.9	–
LISn - Spanish					
Complex	7.2 (2, 96.1)**	3.1 (1, 128)+	2.8	1.8	0.39
Basic	3.5 (2, 102)*	3.0 (1, 126)+	4.1	2.8	0.30

Note: + p < .10, * p < .05, ** p < .01, *** p < .001

FINDINGS: CLASSROOM OUTCOMES (COHORTS 1 & 2 – YEARS 1 & 2: NC, CA & FL)

Outcomes	Tests	Comparison		Effect size
	Tx*Time*Biling	Tx	Ct	
LISn – Complex – Spanish				
Tx main; Post - Year 2	0.0123*	3.1	0.6	0.77
Biling teachers; Pre - Year 2	0.0002***	8.9	2.9	1.24
Biling teachers; Post - Year 2	0.0004***	5.8	0.3	1.74
LISn – Basic – Spanish				
Biling teachers; Pre - Year 2	0.0192*	10.5	5.5	0.94
Biling teachers; Post - Year 2	0.0062*	8.5	2.5	1.10

Note: + p < .10, * p < .05, ** p < .01, *** p < .001

FINDINGS: CHILD OUTCOMES (COHORTS 1 & 2 – YEARS 1 & 2)

Outcomes	Tests		Comparison		Effect size
	Tx*Time*Biling	Tx Main	Tx	Ct	
WJIII LWI-Eng	0.2 (1, 285)	1.1 (1, 218)	96.0	94.9	–
WJIII-LWI-Sp	4.4 (1, 278)**	0.2 (1, 100)	86.3	85.9	–
WJIII-PV-Eng	0.6 (1, 285)	0.2 (1, 224)	79.9	80.5	–
WJIII-PV-Sp	1.4 (1, 285)	2.2 (1, 202)+	66.9	64.5	–
ROWPVT-Eng	0.1 (1, 278)	2.7 (1, 196)	36.8	38.3	–
ROWPVT-Bilingual	0.5 (1, 264)	5.8 (1, 202)*	49.6	46.2	0.25

Note: + p < .10, * p < .05, ** p < .01, *** p < .001.

FINDINGS: CHILD OUTCOMES (COHORTS 1 & 2 – YEARS 1 & 2; NC, CA & FL)

Outcomes	Tests	Comparison		Effect size
	Tx*Time*Biling	Tx	Ct	
Letter Word Identification-Spanish				
Biling teachers; Year 2	0.0376*	93.6	87.7	0.59

Note: + p < .10, * p < .05, ** p < .01, *** p < .001.

FINDINGS: CHILD OUTCOMES (COHORTS 1 & 2 – YEARS 1 & 2)

Outcomes	Tests		Comparison		Effect size
	Tx*Time*Biling	Tx Main	Tx	Ct	
Expressive Word Knowledge	0.1 (1, 208)	5.4 (1, 160)*	1.9	1.5	0.39
PA-English	0.0 (1, 286)	0.0 (1, 292)	13.3	13.3	0.20
PA-Spanish	2.3 (1, 286)	1.4 (1, 206)	15.2	15.9	–
Write Name-English	1.3 (1, 71)	0.8 (1, 106)	2.1	2.0	–
Write Name-Spanish	0.1 (1.90)	12.6 (1, 109)**	2.3	1.9	0.67
TEMA-English	1.0 (1, 285)	2.4 (1, 208)	90.4	88.7	–
TEMA-Spanish	0.2 (1, 284)	3.8 (1, 232)*	84.5	82.4	0.20

Note: + p < .10, * p < .05, ** p < .01, *** p < .001.

CONCLUSIONS

- There are positive findings on general classroom practice, showing a trend towards improvement of instructional support.
- There were also positive findings on practices targeting Latino DLLs, indicating a trend to an increase in practices to specifically address the needs of these children.
- An increase has been found in the amount of language interactions between the focal children and their teachers or teacher assistants, and among DLLs and their peers, in particular in classrooms with two bilingual teachers in their second year of intervention.

CONCLUSIONS

- At the child level, positive changes were observed in selected English and Spanish outcomes:
 - English: Word knowledge, with a trend (ns) for improvements on phonological awareness and mathematics ability.
 - Spanish: letter identification, writing, vocabulary, and mathematics ability
 - Bilingual: Receptive conceptual vocabulary
- Based on theory and previous empirical evidence, language changes for DLLs may occur first in the language they are more proficient, and those acquired abilities may transfer to facilitate English acquisition later on.

WHAT DO THESE FINDINGS MEAN FOR EARLY EDUCATION?

- That high quality early care and education environments for dual language learners should take into account the unique features of these children's experiences.
- That early care and education programs need to support dual language learners' development in their two languages.
- Since these children are learning through two languages, assessments of dual language learners' development and academic performance should be conducted in their first language and English.
- That professional development for teachers who work with DLLs has to be of sufficient duration, have a focus in recent research, provide multiple opportunities for practice and for staff collaboration, use multidimensional forms of delivery and have the full support of the administration.

THIS IS WHAT TEACHERS ARE SAYING

- > (Video here of teacher talking about her participation in NNSR)

RELATED RESOURCES

- > Castro, D. C. (2014). The development and early care and education of dual language learners: Examining the state of knowledge. *Early Childhood Research Quarterly*, 29(4), 693-698.
- > Gillanders, C., Castro, D. C., & Franco, X. (2014). Learning Words for Life. *The Reading Teacher*, 68(3), 213-221.
- > Gillanders, C., & Castro, D. (2011) Storybook Reading for young Dual language learners. *Young Children*, 66(1), 91-95
- > Castro, D. C., Espinosa, L., & Pérez, M. (2011). Defining and measuring quality early childhood practices that promote dual language learners' development and learning. In Zaslow, M., Martínez-Beck, I., Tout, K., & Halle, T. (Eds.), *Quality Measurement in Early Childhood Settings*. Baltimore: Brookes Publishing.
- > Castro, D. C., Peisner-Feinberg, E., Buysse, V. & Gillanders, C. (2010). Language and literacy development of Latino dual language learners: Promising instructional practices. In O. N. Saracho & B. Spodek (Eds.), *Contemporary perspectives on language and cultural diversity in early childhood education (Contemporary Perspectives in Early Childhood Education Series)* (pp 65-93). Charlotte, NC: Information Age Publishing



FOR MORE INFORMATION

Contact Dr. Dina Castro
dina.castro@unt.edu

Please visit <http://nnpf.fog.unc.edu>

Thanks!

Questions & Answers

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Closing

- Thank you for your attendance and participation!
- Please complete the REL Stakeholder Feedback Survey
- For questions or additional information, please feel free to contact

**Deborah Mazzeo, School Readiness Research
Alliance Manager**
(800) 762-5001
dmazzeo@rmcres.com

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