

***The Kindergarten Language Study:
Improving the language and literacy skills
of Spanish-English bilingual
kindergarteners***

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Research Goals

- The goal of this longitudinal study is to design, develop, and implement an intervention program to improve the vocabulary skills of Spanish-English bilingual kindergarten students and to assess the impact of the intervention on their language and early literacy skills (kindergarten through second grade)

Research Questions

- ❑ Does participation in either of the intervention models result in Spanish and/or English language and/or literacy gains above those of the control group?
- ❑ Which type of intervention generates the greatest language and literacy gains—English classroom intervention or Spanish home intervention linked to English classroom intervention?
- ❑ Do the intervention effects differ for children with different language and literacy skills at the start of the study? Which groups of learners show the greatest gains and for which type of intervention?
- ❑ What are the long-term effects of the intervention? Do results/gains on oral English skills persist over time as students move from kindergarten to first and second grade?

Research Design

- Year 1: Development of structure for the intervention program, selection and development of measures and instruments
- Year 2: Pilot implementation of intervention program to develop and refine the curricula and instruments while assessing potential effects on student outcomes
- **Year 3: Implementation of intervention program with three conditions:**
 - Classroom only
 - Home-plus-classroom
 - Control group
- Year 4 and 5: Follow-up assessments of participants, data processing, analysis, and writing

Intervention Design

- The intervention included parallel school and family components linked theoretically and practically:
 - The same books were used in both English and Spanish
 - The same vocabulary words were targeted in both English and Spanish, with special focus on cognates
 - The school component focused on pre-, during, and post-read-aloud activities to foster oral language and vocabulary growth
 - The family literacy component focused on read-alouds with authentic language and literacy activities that are culturally appropriate and relevant

KLS Classroom Intervention Description

Classroom Component

- Instruction was informed by:
 - Research on specific vocabulary teaching methods shown to be effective with ELL students (August et al., 2005; August & Gray, 2010)
 - Michael Graves' (2006) theoretical framework for vocabulary instruction

- Word Selection was informed by:
 - Beck, McKeown, & Kucan's (2002)
 - Andrew Biemiller's work with the Living Word Vocabulary List (Dale and O'Rourke, 1981)

Classroom Component

- ❑ Development of the intervention included: selection of books (English and Spanish) and vocabulary words (key and basic vocabulary words)
- ❑ 16 week intervention structured in four monthly units
- ❑ Each monthly unit is thematically organized around three books for teaching a total of 18 key words and 24 basic words
- ❑ Each monthly unit is introduced with a training session
- ❑ Each week consists of four scripted 20 minute read-aloud lessons
- ❑ Total number of words 72 key and 96 basic words

Fidelity Observations

- Each Unit and Lesson Day was represented
- Observed 12.9% of the intervention lessons (total of 65 observations)
- The mean score across teachers was 96.0% with a standard deviation of 11.6%
- Mean fidelity scores for individual teachers ranged from 82.49% to 100%
- There were no significant mean differences between teachers ($F=1.97$, $p=.079$) or schools ($t=1.83$, $p=.078$)

Family Literacy Intervention Description

Family Literacy Component

- Sénéchal and Young (2008) found through their review of research that educating parents to tutor specific literacy skills with activities was most effective type of parent intervention
- Roberts (2008) found that combining primary- or second-language home storybook reading with second-language classroom storybook reading was a viable means to enhance vocabulary learning
- Family literacy program was informed by:
 - Project FLAME (Rodriguez-Brown, 2003)
 - Project EASE (Jordan, Snow, & Porshe, 2000)
 - The Inter-generational Literacy Program (Paratore, 2001)

Family Literacy Component

- Parallel to the classroom, these sessions take place once a month at the school sites
- Sessions are offered during the morning and late afternoon with childcare
- Sessions present language and literacy concepts, books for the particular unit, and authentic activities
- Concepts stressed the importance of:
 - Reading in the home
 - Vocabulary learning
 - Home language use
- Sessions are interactive and allow parents to share their experiences, concerns, questions and to familiarize themselves with the books

Data Collection and Assessment

- Pre-intervention data collection:
 - Language and literacy assessments
 - Classroom observations of language and literacy environment
 - Teacher and school questionnaires
 - Parent questionnaires
- During the intervention data collection:
 - Classroom observations for fidelity of implementation
 - Parent weekly reports
 - Field notes of teacher and parent workshops
- Post-intervention data collection:
 - Language and literacy assessments
 - Follow-up interview with participating parents
 - Follow-up interview with teachers

Instruments and Constructs

Instrument or Data Source	Constructs
Test of Oral Language Development – Fourth Edition	Oral Vocabulary, Picture Vocabulary, Relational Vocabulary, Syntactic Understanding
Woodcock-Muñoz Language Survey – Revised, Spanish	Picture Vocabulary, Letter-Word Identification, Passage Comprehension, Verbal Analogies
KLS Semantic Assessment	Vocabulary targeted during the intervention books and lessons
Parent Weekly Report	Information about books read, time spent on reading, number of readings per book, and other literacy activities related to the intervention
Demographic Survey	Parent education level, number of years in U.S., SES, and ethnicity; children's gender and generational status; home language use; and language and literacy support in the home
Teacher Questionnaire	Teacher demographics, as well as language and literacy practices
Early Language and Literacy Classroom Observation	Rating of the quality of classroom language and literacy instruction in classrooms

Methods and Procedures

- Implemented intervention program in four school sites (2 intervention and 2 control) for a total of 16 teachers and kindergarten classrooms (8 intervention and 8 control)
- Three conditions were examined (N=152):
 - Classroom only intervention (n=41)
 - Home-plus-classroom intervention (n=46)
 - Control Intervention (n=65)
- Hypothesis: The condition linking Spanish language enrichment in the home to English development in the classroom will be the most effective to develop and sustain English reading skills for students in Kindergarten

Control Condition

- Selected to match key characteristics of intervention sites
- Teachers were provided with the same books
- Families were given access to the books in Spanish through lending libraries established in each classroom
- Collected data regarding the use of the libraries

Study Sample

- Sample demographics
 - Average age at Time1 was 5.05 and at Time 2 was 5.58
 - Gender: M (42%) F (58%)
 - 93% of children born in US
 - 73% attended preschool prior to study
- Urban, Spanish-speaking low SES families
 - 84% less than \$30k, 25% less than \$10k
 - 24% single mothers
 - 94% parents foreign born
 - Maternal education varied with high school as mode (53.7%)

Findings: Standardized Assessments

- Statistically significant differences by group for the measure of general receptive vocabulary in English on the TOLD-4 Picture Vocabulary Subtest ($F=3.985$, $p=.021$)
- Statistically significant differences by group for the WMLS-R Letter Word Identification Subtest ($F=3.671$, $p=.029$)
- The home-plus-classroom condition demonstrated the largest gains

Findings: Target Vocabulary

- Statistically significant differences by condition on the KLS Semantic Assessment
 - Oral Expressive Vocabulary ($F=25.857$, $p<.001$)
 - Receptive Basic Vocabulary ($F=7.833$, $p=.001$)
 - Receptive Key Vocabulary ($F=22.018$, $p<.001$)

Findings: Family Literacy Practices

- Parents eagerly seek support to use Spanish at home and demonstrated high levels of engagement with the intervention activities
 - Attendance rates to the workshops
 - Weekly and monthly reports
- Evidence indicates that parents have increased the frequency of parent-child reading
- Additionally, each intervention book was read multiple times by the families in the intervention
- Follow-up with home visits to a sub-sample (L.Gómez)

Findings: School Literacy Practices

- Classroom teachers found the intervention books effective instructional tools for vocabulary development
- The classroom teachers reported the benefits of:
 - Kindergarten-friendly definitions
 - Visual support for vocabulary development
 - Multimodal approach to instruction
- The principals were also enthusiastic for the intervention, both observed classroom lessons and one participated in the parent workshops

Implications and Next Steps

- Improvements in depth and breadth of vocabulary skills for intervention students supports the importance of explicitly teaching vocabulary.
- High levels of engagement from the families who participated in the intervention program and increased reading at home demonstrate families are eager to support their children.
- Findings from the study show the potential for combining efforts in schools and at home to improve students' vocabulary skills.

THANK YOU!

<http://www.cal.org/vias/subproject2/index.html>