Good Start, Grow Smart
Early Childhood Education
English Language Learners (ELL) Federal Interagency Initiative
Summary of ELL Studies, Birth to Age 5 including Kindergarten—National Literacy Panel on Language-Minority Children and Youth (LMP) and National Early Literacy Panel (NELP)

The following table summarizes studies that were included in both of the syntheses conducted by the National Literacy Panel on Language-Minority Children and Youth (LMP) and the National Early Literacy Panel (NELP). These are studies that included populations of children who were English Language Learners and were between the ages of zero and five years, including children who were of kindergarten age. To understand how the studies relate to the syntheses conducted it is important to know the research questions addressed and how the panels categorized studies. In addition, each panel developed their own rules and criteria for the inclusion and exclusion of studies in the syntheses.

Research Questions Addressed by the Panels
The National Early Literacy Panel addressed four questions.
RQ1. What are the skills and abilities of young children (age birth through five years, or kindergarten) that predict later reading, writing or spelling outcomes?
RQ2. Which programs, interventions, and other instructional approaches or procedures have contributed to or inhibited gains in children’s skills and abilities that are linked to later outcomes in reading, writing, or spelling?
RQ3. What environments and settings have contributed to or inhibited gains in children’s skills and abilities that are linked to later outcomes in reading, writing, or spelling?
RQ4. What child characteristics have contributed to or inhibited gains in children’s skills and abilities that are linked to later outcomes in reading, writing, or spelling?

In answering RQ2 the NELP identified five categories of interventions that were grouped and analyzed accordingly. These categories are:

   Category 1: Code-related interventions
   Category 2: Reading and sharing books with young children
   Category 3: Parent and home programs
   Category 4: Preschool and kindergarten programs
   Category 5: Language enhancement interventions
The National Literacy Panel on Language-Minority Children and Youth (LMP) addressed multiple questions in five overarching research domains.

1. Development of literacy in language-minority children and youth
2. Cross-linguistic and cross-modal relationships
3. Sociocultural contexts and literacy development
4. Instruction and professional development
5. Student assessment

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<th>Panel Inclusion/Notes</th>
<th>Participants</th>
<th>Synthesis Question(s)</th>
<th>Research Approach</th>
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| NELP                   | Low-income Mexican American mother-child pairs enrolled for two years when children were one year old and graduated when children turned three years old. Total of 216 pairs randomly assigned to experimental or control groups (97=experimental; 119=control). Attrition was approximately 50% and attributed to high mobility of the population. | RQ2 Category 3 | The Houston PCDC program incorporated a home visit element, the engagement of fathers and other family members, and bilingual development. The 24-month program was home-based for the first year and included 30 weekly home visits lasting one and a half hours. Families attended four weekend workshops and optional English classes were offered weekly. A center-based program in the second year included 3-hour sessions for mothers four mornings a week for eight months and both parents attended evening meetings twice a month. | Child measures only:  
   • Bayley Scales of Infant Development  
   • Stanford-Binet  
   • Concept Familiarity Index  
   Follow-up study  
   • Math, reading, language and spelling grades  
   • Iowa Test of Basic Skills (ITBS)  
   • Classroom Behavior Inventory (CBI) | Results from the original study indicated there was no differential effectiveness of the program treatment between the two cohorts. In the follow up study there were no differences between the program and control groups for any of the individual subject grades or for the total grade score. There were significant group differences favoring the program group on three of the ITBS verbal scales and on the Composite score. On the CBI there was a program effect for one scale. Students in |

**LMP**

| Twenty Spanish and Portuguese kindergarten children | Domains 3 and 4 | A year-long qualitative study that explored how a literature-based literacy curriculum supported literacy growth of ESL kindergartners in a full-day Portuguese-English bilingual program. | • Observations  
  • Interviews  
  • Audio/video tapes  
  • Children’s samples  
  • Classroom documents | Supports the notion that a balanced literacy program supports ESL children’s literacy growth and suggests that their emergent literacy behaviors develop to resemble more conventional forms in much the same way this process evolves for native English speakers. |


**NELP**

| Two cohort randomized assignment of families with pre-kindergartners to an experimental or control group (84=experimental; 98=control); two thirds of families were ethnic minorities with 34.6% not speaking English as | RQ2 Category 3 | HIPPY was a two-year program for four year old children at the beginning of the program who attended kindergarten during its second year. Mothers delivered the program over 30 weeks through a series of books and activity packets structured like detailed lesson plans. The home activities were designed to help children develop age-appropriate literacy skills. | Child pretest measure:  
  • Cooperative Preschool Inventory  
Post-test measures:  
  • Cooperative Preschool Inventory  
  • Metropolitan Readiness Test | Findings from Cohort I support the hypothesis that children who had participated in the HIPPY program would score higher on important measures of school success than children in the control group. (At the beginning of kindergarten) |
their primary language.

language skills, sensory and perceptual discrimination skills, motor skills, and problem-solving skills.

kindergarten

• Metropolitan Achievement Test—first grade
• Child Classroom Adaptation Index—first and second grades

...HIPPY children outperformed their peers on objective measures of school performance and on ratings by teachers... At the end of kindergarten, the HIPPY children had significantly higher scores on the Cooperative Preschool Inventory. At the beginning of first grade, they were rated by their teachers as significantly better students. At the end of first grade, the HIPPY children scored significantly higher on a standardized test of reading and at the beginning of second grade their teachers rated them as better adapted to the classroom. Despite the promising findings from Cohort I, conclusions regarding HIPPY effectiveness must be tempered, as these findings were not replicated in Cohort II


| LMP | Study included 659 kindergarten children enrolled in 32 schools in the North Vancouver school district. There were 540 children who | Domains 1, 2 and 4 | The purpose of the present study was to test if those variables that are considered important for reading acquisition among native speakers of English play the same role in the reading acquisition of ESL and bilingual children showed performance and growth comparable to native English speakers on measures of letter recognition. | • Reading subtest of the Wide Range Achievement Test—3 (WRAT-3) |
were native English speakers (NS), 59 children spoke English and at least one other language at home (BL), and 60 children who exclusively spoke a language other than English at home (ESL). The main languages spoken by ESL children included Chinese, Farsi, and Korean. The mean age of the total sample was 64.2 months.

| Letter identification task | Spelling task | Environmental print task | Sound mimicry subtest of the GFW Sound Symbol Test | Rhyme Detection Task from the Phonological Awareness Test | Syllable and Phoneme Identification tasks from the Phonological Awareness Test | Phoneme Deletion task from the Phonological Awareness Test | Word retrieval using a variation of the RAN task | Oral cloze task | Memory for Sentences subtest of the Stanford Binet | 1) Children’s language backgrounds influenced their proficiency in manipulating and remembering English. 

| 2) For all three groups, phonemic awareness was correlated with literacy skills by the end of kindergarten. 

| 3) Although the language group contrasts were not predictive of performance on any of the literacy measures, alphabetic | 4) The instructional programs in the district included phonological awareness training for all children in kindergarten. Additional phonological awareness training was provided to children identified as being at risk for reading problems in small groups and on an individual basis. Although intervention for potential reading difficulties is provided to children in the district when they are in kindergarten, language intervention is not available for ESL and bilingual children until they are in the first grade. Therefore, the ESL and BL children in this study received the same instruction as the NS children. 

| Identification, spelling, and word recognition, as measured by the WRAT-3 and the environmental print task. Although the NS and bilingual children were more successful than the ESL children at identifying logos from the environment, children from the three language groups performed equally well when the logos were removed and the environmental print task became a decoding task. |
knowledge and phonological awareness were important predictors of literacy performance for all children.

4) Although measures of phonological awareness, syntactic awareness, and verbal working memory are more difficult for children learning English, their limited exposure to English does not inhibit their acquisition of basic literacy skills, including word recognition and spelling.

| LMP | Participants were 1,249 children enrolled in kindergarten for the initial phase of the study. There were 351 children who did not participate in the second phase of the study resulting in a total 898 children who continued participation | Domains 1 and 2 | Three main questions informed this study. First was to determine if children’s basic literacy and reading-related skills differ as a function of proficiency in English. The second question was asked if the cognitive and linguistic profiles of NS children and children who speak English as a second language (ESL children) differ in significant | Kindergarten measures:  
- Reading subtest of the Wide Range Achievement Test—3 (WRAT-3)  
- Letter Recognition task  
- Spelling task | Results indicated that that ESL and NS children showed comparable performance in letter identification, decoding, and spelling in both kindergarten and first grade. Performance on the WRAT-3 |

in the first grade. Of the children who participated in both sessions, 727 were NS children, 131 children spoke a language other than English with their (ESL). The largest linguistic subgroups included Chinese, Farsi, Korean, Japanese, Spanish, and Tagalog. Children were classified as At-Risk or Not-At-Risk based on their performance on the Rhyme Detection Task administered in kindergarten. In total, 140 children (108 NS and 32 ESL) were classified as At-Risk and 717 children (631 NS and 86 ESL) were classified Not-At-Risk. Mean age of the children was 64.4 months.

ways. Finally, do the same cognitive, language and literacy-related skills predict first grade reading performance for NS and for ESL children? Children were tested individually on two separate occasions separated by approximately 1 year and 5 months. In kindergarten individual session of approximately 30 minutes were conducted in October and November. The following year, children were tested in March and April in individual testing sessions that lasted approximately 40 minutes.

The instructional programs in the district included phonological awareness training and systematic phonics instruction for all children. Additional phonological awareness training and phonics instruction was provided to children identified as being at risk for reading problems in small groups and on an individual basis. Although intervention for potential reading difficulties is provided to children in the district when they are in kindergarten and first grade, language intervention is not available for ESL and bilingual children until they are in the primary grades. Therefore, the ESL children in this study received the same instruction as

- Sound Mimicry subtest of the GFW Sound Symbol Test
- Rhyme Detection, Syllable Identification, Phoneme Identification, and Phoneme Deletion subtests of the Phonological Awareness Test
- Word retrieval variation of the Rapid Automatized Naming (RAN) task
- Oral cloze task
- Memory for Sentences subtest of the Stanford Binet
- Environmental Print task

First grade measures:
- Reading subtest of the WRAT-3
- Word Identification and Word Attack subtests of the Woodcock Reading
- Although ESL children read and spelled words and reading test suggested that ESL children showed greater growth between K and first grade, indicating that good instruction may help close the gap for children from linguistically diverse backgrounds. Patterns of performance showed greater divergence on the linguistic and cognitive measures. ESL children showed weaker performance on the two measures that had greater vocabulary demands (RAN and rhyme detection). However, ESL children performed as well as NS children on remaining phonological measures in Kindergarten. ESL children also performed as well as NS children on all of the phonological measure in first grade.
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<tr>
<th>Mastery Test</th>
<th>compiled by the national center for family literacy, april 2008.</th>
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<tbody>
<tr>
<td>• Spelling real words</td>
<td>• pseudowords with the same accuracy as native English speakers, they were not as fluent as native speakers in manipulating and interpreting English oral language.</td>
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<tr>
<td>• Spelling pseudowords</td>
<td>• Children from both language groups showed similar patterns of correlation, in that letter identification, spelling phoneme deletion, and syntactic awareness were strongly associated with word reading.</td>
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<tr>
<td>• Pseudoword repetition</td>
<td>• in summary, it can be concluded that despite initial difficulties in phonological awareness, syntactic awareness, and verbal memory, ESL children acquired basic literacy skills in English at the same rate as NS children. In fact, the same underlying skills, letter knowledge, spelling, and phonological processing were</td>
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<tr>
<td>• Phoneme Deletion task of the Phonological Awareness Test</td>
<td>• compiled by the national center for family literacy, april 2008.</td>
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<tr>
<td>• Items selected from Levels F, G, and H of the Auditory-Motor Skills Training</td>
<td>• compiled by the national center for family literacy, april 2008.</td>
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<tr>
<td>• Word retrieval using the RAN task</td>
<td>• compiled by the national center for family literacy, april 2008.</td>
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<tr>
<td>• Oral cloze task modified from kindergarten</td>
<td>• compiled by the national center for family literacy, april 2008.</td>
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<tr>
<td>• Memory for Sentences subtest of the Stanford Binet</td>
<td>• compiled by the national center for family literacy, april 2008.</td>
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LMP

Participants are a kindergarten teacher and 17 kindergarten students identified as Limited English Proficient (LEP) in a Pre-K through sixth grade inner-city elementary school in San Antonio, Texas. All are dominant Spanish speakers. Most are Mexican American with a few children of interracial origin. All of the children participate in the free lunch program.

Domains 1 and 2

The purpose of this case study was to describe a supportive cultural and linguistic environment where students are learning a second language naturally. It reports on the use of language experience and an natural approach to learning languages in a dual language kindergarten.

The kindergarten teacher and a paraprofessional in the classroom speak Spanish 90% of the time with the students during the day. Content area teaching is conducted in Spanish. English is used in some songs and books that the teacher reads and/or translates into Spanish. The children use Spanish in play, group work, writing, outside of the classroom and with the teachers.


LMP

NELP rejected because case study

Letters were sent to parents of Spanish-speaking kindergartners in four classrooms in two elementary schools

Domains 1, 3, 4, 5

Year-long case studies were conducted with the 10 children who were part of a larger study that examined the effects of simple, photocopies story books (Libros) on early Spanish literacy

- Classroom observations
- Interviews
- Student work samples

This case study indicated that students were learning English in a natural way.

Attending school seems to have had a very substantial effect on the frequency and the amount of time children experienced literacy.
Parents of 72 students returned the permission slip to participate in the study. Parents were then contacted in random order until a sample of 10 children was constructed; five from experimental classrooms and five from control classrooms. All parents in the sample were born in Latin America while nine of the 10 children were born in the United States. Spanish was the language of the homes. The families live in a small, urban predominantly Latino community within the Los Angeles metropolitan area.

This study attempted to answer the question: How does the context of children’s homes influence the frequency, quality and effects of learning opportunities prompted by different early literacy materials sent from school? Libros were read by teachers to children in the classroom and sent home for the children to keep. In the four Libros classrooms teachers introduced one of 12 Libros approximately every three weeks over the course of the year. At the fall parent meeting the teachers introduced the Libros to parents and explained how they would be used during the year. Parents were told to treat the Libros as they would any other children’s books: keep them in a safe place, read them with the children for enjoyment and encourage language-based interactions around the text. In the control classrooms teachers sent home packets of photocopies worksheets with letters and syllables.

<table>
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<th>12 visits (range 7-14)</th>
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<td>Interviews with parents</td>
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<td>Bilingual Syntax Measure (BSM)—used to establish initial equivalency of two groups</td>
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<td>Early Spanish literacy measures at post test:</td>
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<td>Identification of letter names and sounds</td>
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<tr>
<td>Six subtests of early literacy skill and knowledge including Concepts About Print, story comprehension, rhyme and syllable identification, reading phonetically regular words, writing words, metalinguistic language production</td>
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Events at home. The Libros and the worksheets produced different types of literacy experiences for children. However, both sets of materials prompted literacy experiences that were very similar in important ways: repetition and lack of attention to print-meaning relationships characterized children’s literacy experiences with the school materials. Moreover, the most powerful factors influencing how these materials were used did not inhere in the materials themselves, but were shaped more by the general literacy context of the family. Despite the fact that children in the classrooms using storybooks had higher scores on measures of early literacy, the frequency and duration of use of Libros in the home was not related to literacy achievement in kindergarten. In contrast, the use of the work sheets was strongly and positively associated with kindergarten.
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<td>LMP NELP rejected because about type of language</td>
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<td>Participants were 77 children enrolled in 10 different kindergarten classes at two middle-class elementary schools in a large suburban school district in the southeastern United States. The mean age of the students was 5.6 years; 51% were female. Fifty two of the children spoke only Spanish and the remaining 25 children spoke only English.</td>
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<td>This study sought to determine if exposure to age-appropriate books in their native language would affect the pre-literacy skill development of language minority kindergartners. Twenty-six of the 52 native Spanish-speaking kindergartners were randomly assigned to a treatment group that would be exposed to FRED books written in Spanish. The other 26 native Spanish-speaking students served as the control group that would be exposed to FRED books written in English.</td>
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<td>• Test of Early Reading Ability—second edition (TERA-2)</td>
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<td>Children in each group received relatively equal amounts of exposure to FRED books. Native Spanish-speaking children exposed to FRED books in Spanish scored significantly higher than did their native Spanish-speaking classmates who were exposed to FRED books written in English. Scores of native Spanish-speaking children exposed to FRED books in Spanish did not differ significantly from the scores of native English speakers exposed to FRED books in English.</td>
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<td>LMP</td>
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<td>Eleven 5- &amp; 6-year-olds and their parents randomly selected from two bilingual kindergarten classrooms and assigned to either an experimental or control group. The experimental group was comprised of two girls and three boys who ranged in age from 5.10 years to 6.6</td>
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<td>Domain 2 and 5</td>
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<td>The purpose of this study was to measure the effect of training parents in read-aloud techniques on the vocabulary development of kindergarten students. The parents of the children in the experimental group received a two-hour parent training workshop on read-aloud techniques in Spanish. It was an adaptation of the Parent Workshop Reading: A Shared Experience model that was developed by Etta Johnson and</td>
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<td>• Test de Vocabulario en Imágenes Peabody Adaptación Hispanoamericana (Peabody Picture Vocabulary Test—Hispanic-American Adaptation)</td>
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<td>Results indicated there were no significant differences between the experimental and control groups at post test. The researcher concluded benefits that increased parental involvement and made parents better teachers at home and through parent discussions determined the home literacy environment was</td>
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Compiled by the National Center for Family Literacy, April 2008.
The control group included two girls and three boys in the age range 6.1 years to 6.6 years. The Arlington Public Schools in 1988. The model has the following four major components: motivation, information, practice, and application. The control group parents received no instruction. Both groups of parents were provided with books in Spanish to read aloud to the children for five weeks.  


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<th>LMP</th>
<th>Domain 4</th>
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<td>Fifty kindergarten and first grade teachers from six schools in a single south Texas school district accepted an invitation to participate in the project. Eighty five percent of the teachers were Hispanic, and 96% were female. Teaching experience ranged from 1 to 22 years. The average number of students in each of their classrooms was 22. Over 90% of the students were Hispanic, the majority of who were classified as Limited English Proficient (LEP). The school district is located in what was described by school</td>
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| This study examined the practice of reading to children in classroom settings, specifically the literature sharing strategies of kindergarten and first grade teachers working with Hispanic children from economically disadvantaged and language-different home environments. The research goals were: (a) to characterize certain aspects of typical story time practices in such settings, and (b) to analyze the changes in teacher read-aloud strategies that resulted from participation in training sessions in which effective book-sharing strategies were derived and demonstrated.  

During an initial orientation phase teachers completed questionnaires and audio taped one book-sharing session in their classroom to serve as the primary source of baseline practices.  |
| Coding form developed for analyzing audiotapes based on the guidelines of effective reading strategies that had been developed by the teachers. Analysis was focused on the subset of verbal interactive behaviors which amounted to a total of seven behaviors.  |
| Statistically significant results were reported for differences from pre to post conditions in the use of effective reading strategies. On the pre-training tapes teachers demonstrated the use of effective strategies on a total of 7 occasions in the Before Reading Phase, 138 occasions in the During Reading Phase, and on a total of 29 occasions in the After Reading Phase. This contrasts with performance on the post training tapes in which they used effective strategies on a total of 42 occasions in the Before Reading Phase, 323 times in the During Reading Phase, and a total of 40 times in the |
officials as the third poorest county in the United States.

Training consisted of two training days for teachers to develop a rationale for reading to children, identify effective literature sharing strategies and inspect literature units to be used in their classrooms. Teachers began using literature units in their classrooms in February, resumed in September and then continued through the following year. Sixteen teachers were observed and audio taped in October during a literature sharing session. These tapes were the primary sources of post training practices.

| LMP NELP | Total of 45 participants divided into 3 groups: Group AM included 15 middle to upper class monolingual, white American children from two kindergartens in suburban Boston (mean age=4.10); Group CHi were 15 middle to upper class Mandarin Chinese speakers who were beginning to learn English in preschool (mean age=4.9); Group CHii included 15 Mandarin Chinese speaking children who were on average 1 year | Domain 2 RQ1 | First study examined whether young beginning readers would manifest a segmentation process over time. Second study examined any differences in segmentation behavior between Mandarin Chinese speaking children learning to read in both Chinese and English and native-speaker American children learning to read only in English. Study 1: • Sentence segmentation task • Invented spellings • Gates-MacGinitie Reading Readiness Skills • Mandarin-Chinese phoneme segmentation task Study 2: • Sentence segmentation task | After Reading Phase. |


Study 1: Partial findings from the study suggest that the English syllabic unit may signal a threshold level of ability among young beginning readers. The findings further suggest that, given the highly positive correlation between the segmentation of syllables and words, the ability to segment intraword boundaries may have led to the ability to segment interword boundaries.

Study 2: Overall, American monolingual children showed...
older than Group CHi (mean age=5.0) attending Chinese-language school on weekends and were included as a comparison with AM and Chi as a function of age and greater exposure to reading activities.

Increased awareness of the difference in stress status. Analyses of the AM children’s patterns in pronunciations showed sensitivity to vowel differences, assigning stress to the first syllable. Chinese Mandarin bilingual (CH) children tended to place equal stress on both syllables, which, according to the authors, shows more awareness of the plosive nature of the intervocalic obstruents than the length of the vowel and stress quality.


| NELP | Six literacy programme schools were matched to six non-literacy programme schools and were determined to be similar on the national assessment. Total of 219 four and five year olds; 120 children in the programme schools; 99 children in the non-programme control schools. Of the 219, ninety were children with English as a second language (45=programme) |
| RQ2 Category 4 | Children in the programme schools received a focused literacy teaching programme for the school year that combined a whole language approach to literacy with a structured classroom organization, including a relatively high level of direct teacher instruction. Children in the comparison schools were taught literacy according to their school policy and their class teacher’s practice. |
| Pretest measures: | • British Picture Vocabulary Test (BPVS)  • The British Ability Scale Word Reading Test  • Letter Identification  • Concepts About Print |
| Post test measures | • BPVS  • Word Reading  • Letter Identification  • Concepts About Print |

Children in the literacy programme schools made significantly more progress in reading in both Reception and Year 1, with an approximate 2 month reading age advantage at first post test and an approximate 4 month reading age advantage at second post test.

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<th>LMP</th>
<th>Four kindergarten classes with a total of 68 students aged 5.8 to 6.10 years were included. From parent report 92% of the children’s families spoke two or more languages at home while 56% reported three or more languages. Sixty eight percent of the entire kindergarten sample reported Italian as the native language.</th>
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<tr>
<td>Domains 1 and 4</td>
<td>The study examined whether explicit instruction in the alphabetic principle or phonics was effective in the development of phonemic decoding in these bilingual and multilingual kindergarten students. In addition, would the explicit instruction affect phonological processing and phonological awareness skills? The project was designed to include daily lessons in four kindergartens using a teacher-designed early reading program. The Jolly Phonics Program included teaching children the 42 speech sounds of English and their corresponding letters, using a multi-sensory approach. The program focuses on letter sound and name recognition, letter formation, sound blending, and irregular words. The sounds are practiced using classroom activities, activity sheets, and daily home review. Parents were introduced to the program in an evening meeting and a one-day teacher training was conducted prior to the start of the reading program. The program was Reading Edge, an individually administered assessment software that uses game formats to measure phonological processing, phonological awareness, and phonemic decoding.</td>
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<td>Print</td>
<td>Book level</td>
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<td></td>
<td>Dictation</td>
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<td>Stuart Non-word Reading</td>
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The kindergarten students in all four classes made significant gains in phonological processing, including phonological memory and decoding skills in nine weeks.
This study took place in a multiethnic urban primary school in the north of England with 400 working class and low income students of which 80% were Pakistani Muslims. The target class of fourteen 5- and 6-year-olds included nine Pakistani, three white British middle class, one Afro-Caribbean and one Somali child. There were six boys and eight girls. The main classroom teachers was white British, middle class woman who was teaching out-of-field with little training in early childhood education, ESL, early literacy or multicultural studies. She had limited background knowledge or experience with Pakistani culture. A part time classroom assistant served as a language support ESL teacher. The assistant had more background.

### Domains 1 and 3

This was a year-long ethnographic study that examined the influence of teacher perception of Pakistani ESL parent involvement and interest in their children’s education on teacher expectation of Pakistani ESL children’s language and literacy achievement.

- Observation
- Field notes
- Literacy artifacts
- Children’s work samples
- Structured audio taped interviews
- Informal interviews in school and classroom settings

Results indicated a discrepancy between the views of school personnel and Pakistani parents on the parents’ literacy involvement. Pakistani parents had high interest in and hope for their children’s education. The different participation patterns and beliefs of the Pakistani and white middle-class parents and the language barrier and cultural differences between parents and teachers (parents’ inability to speak English and a lack of school personnel available to help parents in the school setting) resulted in inaccurate perceptions of the Pakistani parents.

| NELP | Parents of kindergarten children attending one of two schools within the same English-language school board in Quebec were sent a letter requesting permission for the child’s participation in the study. A total of 71 children (36 boys, 35 girls; mean age = 5.8 years) participated. The children were enrolled in four different kindergarten classrooms and were taught by one of two teachers. The English kindergarten program in both schools consisted of half-day programs, but parents could register their child in a French Immersion program for the remaining half day. All children participated in the English program and 42 attended the additional French.

| RQ1 | This study was conducted to determine the relative predictive validity of phonological processing, listening comprehension, general cognitive ability, and visual-motor coordination against early reading skills.

The kindergarten tests were administered in the second term of the school year and first grade tests were administered during January and February of the next school year. Following testing parents were interviewed about their child’s previous school experience, native language, and the language(s) spoken at home.

First grade measures:
- Test of Phonological Processing—Kindergarten
- Test for Auditory Comprehension of Language—Revised (TACL-R)
- Short version of the Developmental Test of Visual-Motor Integration—Third Revision
- Two subtests of the Kaufman Assessment Battery for Children to estimate cognitive ability

Results indicated that phonological processing measured in kindergarten is the best predictor of first grade reading. Phonological processing was the only measure that had incremental validity beyond all the others. Two of the home/school background variables were predictive of the first grade reading measures. English-speaking children performed significantly better on the letter identification task than children speaking other languages at home, most likely because the former group had greater exposure to the English alphabet.
Immersion program. Native languages of the children were mainly Italian (44%) or English (31%). Of the 71 students, 65 were available for testing in first grade.


**NELP**

Children for this study were drawn from the Houston Parent-Child Development Center (PCDC). Participants were Mexican American children of low income status residing in Houston, Texas. Spanish was the preferred language in 64% of the families. Children participated in the program from the age of one to the age of three years. Children were originally randomly assigned to program and control groups, but since no main effects were found for program, the groups were not treated separately in this report.

**RQ1**

This study investigated the school performance and achievement levels of low income, Mexican American children in relation to their performance at age five on the Weschler Preschool and Primary Scale of Intelligence (WPPSI) and the Florida Kindergarten Screening Battery (FKSB). Of primary concern is whether the FKSBS acts as a better assessment tool for accounting for variance in the child’s reading ability than the WPPSI.

The number of children involved in each prediction varied from test to test. At age five, the WPPSI was administered to 59 children and 55 of them received the FKSBS. At age six and nine, numbers ranged from 34 to 46.

**Age five measures:**
- Weschler Preschool and Primary Scale of Intelligence (WPPSI)
- Florida Kindergarten Screening Battery (FKSB)

**First through fourth grade measures:**
- Final reading grade received that year
- Reading scores from the Iowa Test of Basic Skills (ITBS)

The WPPSI and FKSBS similarly predict reading performance. The WPPSI Full Scale score and the total FKSBS score are both significantly correlated with school reading grades, but not significantly different.

Multiple regression analyses revealed that scores on the WPPSI at age five could account for a significant amount of variance in the school reading grades of low income, Mexican American children. Also, even though the five measures of the FKSBS were able to account for a significant amount of variation in school reading grades, most of the variance was shared with the WPPSI.

Variance accounted for by the FKSBS over and
above that of the WPPSI was not significant.

The WPPSI Full Scale IQ and Verbal IQ correlated significantly with the ITBS reading score. The FKSB composite score was significantly correlated with the ITBS reading score. Neither kindergarten measure was significantly better correlated with reading achievement scores than the other.

When using the reading score as dependent measure in the multiple regression analysis, the findings were similar to those found with school reading grades. Scores on the WPPSI did account for a significant amount of variance in reading scores on the ITBS but the FKSB scores were unable to account for a significant amount of the variation over that accounted for by the WPPSI.


| LMP | Study participant | Domains 1, 3, and 4 | This case study examined a single participant | One of Ruben’s cases |
| Observation strategies for becoming literate | Observation strategies for becoming literate was to find meaning and wholeness when he engaged with print. He found ways to add meaning to teacher-directed skill lessons by associating syllables to works that were meaningful to him.
Ruben followed similar strategies at home to become literate.
Ruben’s case suggests ways in which the connection between home and school literacy experiences can be encouraged.
Ruben’s love of books and his ongoing crusade to obtain them suggest the need to increase children’s access to books. |

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| LMP | There were 94 children ages 5-11 years who participated in the study (39 monolingual English speaking and 55 bilingual children who spoke Sylheti and English). The children were from a Bengali Domain 1 | This study employed miscue analysis to investigate the development of reading proficiency in English by bilingual children and their monolingual peers. | McMillan Graded Word Reading Test
Two selected graded reading passages from the Diagnostic Reading Record No significant differences were found between the groups on some types of reading error such as inserted words, omissions, self-corrections, or words reversed. In addition, no significant differences |

**Compiled by the National Center for Family Literacy, April 2008.**
community in a town north of London.

were found in the number of semantic cues that monolingual and bilingual children used when they were making substitution errors. All of the children made significantly more graphophonic substitutions than syntactic or semantic substitutions.


<table>
<thead>
<tr>
<th>Domain 5</th>
<th>The purpose of this study was to identify a set of measures that would discriminate 31 predominantly Spanish-speaking children with normal language form 31 children with language impairment.</th>
</tr>
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</table>
| LMP | Sixty two children were selected from preschool, kindergarten, and first grade classes in which the primary language of instruction was Spanish (42 boys, 20 girls). Thirty one children (mean age =6.1 years) had a diagnosis of moderate to severe language impairment (LI) and a comparison group of 31 children (mean age = 6.2 years) were identified as having no language impairment (NL). Children were matched by age and gender. In all but one case, children were also matched for school and whenever possible, teachers.

A stepwise discriminant analysis indicated that four of eight measures accounted for 79% of variance in the model and successfully discriminated between the groups. The measures were parental report of their child’s speech and language problems, family history of speech and language problems, mean length of T-Unit, and number of errors per T-Unit.

- Developmental Assessment of Spanish Grammar
- Mean length of T-Unit (MLTU)
- Ratio of Grammatical Errors per Total Number of T-Units (NETU)
- Spanish Structured Photographic Expressive Language Test (SSPELT-II)
- Novel Vocabulary Learning
- Novel Bound Morpheme Generalization (NBMG)
- Parent Interview
possible for classroom. All but two of the children were from low income families. All children were Mexican American.

which included family history of educational, speech and language problems and a report of the child’s educational, speech or language problems


Thirty three preschoolers from low-socioeconomic families whose primary language was Hmong (n=20), Spanish (n=9), or English (n=4) were included and classified as non-English speaking according to a mean English oral proficiency score. Mean age of the children was 52.82 months and included 3 three–year-old children and 30 four-year-old children. Children were randomly assigned to either a letter-rhyme or comprehension treatment.

This study examined the effects of letter-name knowledge associated with instruction on beginning phonetic word recognition. An explicit instruction model was utilized for 16 weeks for either letter-rhyme or comprehension-focused instruction. The instructional program was implemented with three 20-25 minute lessons each week in groups of 10-11 children in their classrooms.

Children who received letter name instruction learned phonetically spelled with letters included in instruction significantly better than other words. Children receiving comprehension instruction performed significantly better on visually distinct word spellings. Results demonstrate the beneficial effects of alphabet letter instruction on beginning phonetic word recognition.


These studies were combined because the same sample of children was used in Rodríguez et al. (1995) and Study 2 in Winzler et al. (1999). Study 2 was a one-year follow up of the children in the original study during and after they spent another year at home or in preschool. Study 1 was a replication of Rodríguez et al. with a new sample of children.

<table>
<thead>
<tr>
<th>RQ2 Category 4</th>
<th>Original Study and Follow up (Study 2): Children in the experimental group attended a full day, week-long, state-subsidized child development program for low-income families of three-to-five year olds implemented at three school sites in six separate classrooms. The community was an urban setting in the San Francisco Bay area, with a rapidly growing Latino population. The curriculum was modeled after High Scope and all staff received in-service education on the principles and practices of child-initiated learning. During half of the day the primary language of instruction was Spanish with English the language of instruction the other half of the day. The nonprogram/control group children stayed at home during the day. The replication (Study 1) was implemented with the same design as the original study with a new sample of children. However, children in this sample also participated in a wider community intervention initiative known as the Family Focus for School Success which included a home visitation program and family resource centers. All measures were the same for the original study and the replication.</th>
<th>Original and Follow Up: Both groups of children made significant gains in English receptive language abilities over the course of the 2 years. Both groups of children made significant improvement in their productive English skills. Trends for the preschool group to show greater English expressive abilities compared to the control group emerged for both measures. For language complexity there were significant increases for both groups over time. Both groups of children made parallel and significant gains in their Spanish receptive abilities. Both groups of children made parallel and significant gains in Spanish expression. The level of language complexity in Spanish for both groups increased over time on the number of verbs produced in the stories. Replication Study: Children from both groups understood significantly more English words and</th>
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</table>
| Original study (n=50) (Rodríguez et al., 1995) and follow up study (n=44) (Winzler, 1999) included Spanish-speaking children from three to five years of age. The experimental group (n=30) attended a state-subsidized child development program for low-income families while the control group (n=20) from the same community stayed at home during the day. The replication study involved a new sample of 26 children of Mexican descent (M age = 44.3 months) who attended bilingual preschool for one year and 20 control children (40.6 months) who remained at home. | Receptive Language:  
- Peabody Picture Vocabulary Test-Revised (PPVT-R) (English and Spanish)  
- Sentence comprehension subtest of the Language Assessment Scales (LAS) (English and Spanish)  
Productive Language:  
- Lexical subtests of LAS (English and Spanish)  
- Story-retelling task (English and Spanish)—number of words in target language reproduced by the child  
Language Complexity:  
- Story-retelling (English and Spanish)—calculated the |  
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number of verbs in the target language produced by the child and the average number of words per verb phrase used in narrative reproductions. The preschool group showed more receptive English language ability at both pretest and post test. All children improved over time in their English word production skills. Children who attended preschool made greater gains over time in their lexical production skills than children in the control group. English language complexity increased for both groups of children. There were no group differences or group by time interactions for children’s receptive Spanish skills. In addition, no group differences or interactions emerged on measures of Spanish production. Both groups of children’s Spanish language use become more complex over time.


| LMP | Thirty one Mexican American children from Head Start programs in San Diego County formed two groups: a monolingual and bilingual Spanish/English speaking group. | Domains 1 and 5 | This study evaluated the receptive vocabulary ability and nonverbal cognitive ability of monolingual Spanish-speaking children and bilingual Spanish/English speaking children. | • Peabody Picture Vocabulary Test—Revised (PPVT-R) | • McCarthy Perceptual Performance Scale | Monolingual Group: • PPVT-R scores were significantly lower than those of the PPVT-R norm group | McCarthy Perceptual Performance Scale |
(Spanish) group and a bilingual (Spanish/English) group. The monolingual group included 20 children (13 girls and 7 boys) who ranged in age from 45 to 65 months (mean age = 55.15 months). The bilingual group consisted of 11 children (8 girls and 3 boys) who ranged in age from 45 to 64 months (mean age = 57.00 months).

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<tr>
<th>Performance Scale</th>
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<tr>
<td>English PPVT-R was significantly more difficult than the Spanish PPVT-R, and both PPVT versions were significantly</td>
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The children in the monolingual group were given either Form L or M of the Spanish PPVT-R, plus the McCarthy Perceptual Performance Scale subtests with Spanish directions. The children in the bilingual group were given the two PPVT-R forms, one in Spanish and one in English, and the McCarthy Perceptual Performance Scale. The bilingual children were also given directions in Spanish on the McCarthy Scale in order to keep the procedure consistent with that of the monolingual group.

- Spanish PPVT-R scores were significantly lower than the McCarthy Perceptual Performance Scale scores
- Boys and girls did not differ significantly

Bilingual Group:
- PPVT-R Spanish scores were significantly lower than those of the PPVT-R norm group
- English PPVT-R scores were also significantly lower than those of the norming group
- McCarthy Perceptual Performance Scale scores were not significantly different from those of the McCarthy standardization group
- English PPVT-R was significantly more difficult than the Spanish PPVT-R, and both PPVT versions were significantly
The correlations between the Spanish PPVT-R, the English PPVT-R and the McCarthy Perceptual Performance Scale were not significant.

**Comparison of Monolingual and Bilingual:**
- The monolingual children obtained significantly lower scores than did the bilingual children on the Spanish PPVT-R and on the McCarthy Perceptual Performance Scale.


<table>
<thead>
<tr>
<th>LMP</th>
<th>Domain 5</th>
<th>The purpose of this study was to investigate the degree of temporal stability of the PPVT-R for groups of Anglo American, Mexican American and Native American children. Children were individually administered the PPVT-R, Form L during September and May of the school year.</th>
<th>The mean for the Anglo American children was seen to be descriptively higher than that for the Mexican American children which in turn was higher than for the Native American group. The stability coefficient for all subjects over the 8-month period was .90 (p&lt; .001); correlations between the two administrations were</th>
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<tr>
<td>A total of 56 kindergarten children (7 were Anglo American, 22 were Mexican American, 27 were Native American) attending a bilingual school in a working class school attendance area. Students were categorized by their home language (13 spoke English, 5 spoke both English and Mexican).</td>
<td></td>
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<td>more difficult than the McCarthy Perceptual Performance Scale</td>
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Spanish, and 38 spoke Spanish). The students ranged in age from 4.11 to 6.11 years (mean age = 5.7 years). The correlations were .91 (p<.001) for Mexican Americans, .74 (p<.001) for Native Americans, and .71 (p<.07) for Anglo Americans. For home language groups, the correlations were .77 (p<.0001) for Spanish speaking; .90 (p<.03) for English and Spanish; and .77 (p<.002) for English speaking students. No significant differences (p<.05) were found for any of the comparisons. The PPVT-R was shown to have a strong temporal stability over an eight month period for the total sample of students attending a bilingual kindergarten.


| NELP | A total of 161 children participated in the study selected at random from a class list from one of seven schools in Calcutta. There were 66 boys and 95 girls (mean age = 5.3 years at the beginning of the study). Seventeen months later, 149 of the 161 children were reassessed. |
| RQ1 | There was a positive association between the scores on the two items from the WPPSI and reading attainment at the end of nursery school. There were positive associations between income and reading attainment at the end of nursery school and there was continuing association of home background factors with reading progress 17 months later. There was |
| Pretest measures: | |
| • Concepts about Print | |
| • Letter naming | |
| • Letter and word association | |
| • Word matching | |
| • Word reading | |
| • Copying a sentence | |
| • Listening comprehension task | |
| • Parent survey on home background and | |

Compiled by the National Center for Family Literacy, April 2008.
| NELP       | A metropolitan public elementary school with as diverse population in the mid-Atlantic states that received Title I funds. All kindergarten children in the school were invited to participate in the study and the final sample included 88 children. Of this sample, 25 children were included for RQ1. This study examined relationships between oral language and literacy in a two-year, multivariate design. The purpose was to describe the variation of oral language skill by broadening the assessment of these skills in a single sample and to determine if variation in oral language competence in kindergarten was related to differential reading performance in both kindergarten and first grade. In addition to mapping the | Kindergarten testing took place in the spring of the year and included the following measures: Oral language measures: • PPVT-R • Oral vocabulary subtest of the TOLD-P2 • Test of Auditory Comprehension of Four oral language subtypes were identified based on measures of semantics, syntax, metalinguistics, and oral narration. The subtypes represented high average, low average, high narrative, and low overall patterns of oral language skill. The high average subtype | early literacy experience • Teacher ratings (nine months after initial assessment) • Mazes and Picture Completion subtests of the Wechsler PreSchool and Primary Scales of Intelligence Post test measures: • Neale Analysis of Reading Ability • Word reading subtest of the British Ability Scales | a strong positive association between word recognition at the end of nursery school and reading 17 months later. At follow-up assessment there were low scores in comprehension in comparison to generally high word recognition scores. |

whom English was not their first language but understood test directions and only 3 children received ESOL services.

normal variation of language skills, a working model was developed of the relationships among the oral language and literacy measures to guide interpretation of the subtypes and to develop hypotheses on the differences between subtypes on literacy measures. The focus was on the metalinguistic skill of phonemic awareness and the discourse skill of oral narration.

Language—Revised (TALC-R)
• Formulated Sentences subtest of the Clinical Evaluation of Language Fundamentals—Revised (CELF-R)
• Torgesen’s blending and elision tasks
• Ambiguous Sentences and Figurative Language subtests of the Test of Language Competence—Expanded (TLC-E)
• Novel and familiar story production

Reading measures:
• Test of Early Reading Ability (TERA-2)
• Letter/word Identification and Word Attack subtests of the Woodcock-Johnson Psychoeducational Battery—Revised (WJ-R)
• Literal and inferential text comprehension

received the most consistent evidence for validation. The pattern of validation results indicated that the relationship between oral language and literacy is not uniform and suggests a modification of the assumption that oral language skills have a direct role in reading acquisition.
(adapted from the San Felipe—Del Rio Listening Comprehension Test

- Invented spelling measures (classroom journal activity and dictated spelling)

Teacher judgments (classification of children into obtained subtypes)

A reduced battery of tests were administered in the winter and spring of first grade and included:
- Letter/word Identification, Word Attack and Passage Comprehension subtests of the WJ-R
- Spelling measures (journal writing and dictation)


<table>
<thead>
<tr>
<th>LMP</th>
<th>Three Spanish-dominant, mainland Puerto Rican kindergartners who were beginning readers</th>
<th>Domain 3</th>
<th>An ethnographic study beginning in January until the end of the school year that investigated literacy as a social and cultural practice in the children’s</th>
<th>Observations twice per month in the classroom and once per month in the community</th>
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<td>Similarities and differences were found between literacy experiences in children’s homes and community</td>
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</table>
at the time of the study. Two girls and one boy; all three with older siblings; all three from families belonging to Protestant churches. bilingual classroom, homes and churches. The purpose was to describe the people who supported the children’s developing literacy, their beliefs about literacy, and the characteristics of literacy events that the children co-constructed with them.

The authors found that most parents believed that literacy means learning the letters and how to combine them, a belief informed by the parents’ previous literacy experiences in Puerto Rican schools. The parents also believed that the meaning of text is inherent and not open to negotiation. In contrast, the teacher summarized the literacy events in the classroom as holistic and constructivist, so that meaning could be interpreted and constructed in different ways.


| LMP | Two Chinese kindergartners selected as a subsample from a larger study of 10 students. The children were of Chinese ethnicity and Cantonese was their home language. At the time of the study, Ling, a girl, was 5.6 years and Lan, a boy, was 5.11 years. Both were in the same kindergarten | Domains 3 and 5 | This case study explored the continuities and discontinuities over six months between language-minority children’s home and school literacy experiences to identify the relationship between such continuities and discontinuities and the impact on children’s literacy learning. | • Home visits observations  
• Weekly classroom observations  
• Interviews with parents and teacher  
• Informal telephone conversations with parents  
• Informal conversations with the teacher | Books and writing supplies were equally accessible at school and home and independent reading occurred in both places. Ling experienced greater continuity between home and school than Yan. Salient discontinuities included Cantonese use and discordant home and school cultures. Subtle discontinuities involved student choices in |
classroom. and parents literacy activities where at home students could choose, but at school the teacher decided. The author concludes that given a classroom culture that enhances what children accomplish in home experiences, language minority children, may do better at school.