## Good Start, Grow Smart <br> 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

| Panel Inclusion/Notes | Participants | Synthesis Question(s) | Research Approach | Measures | Findings |
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| Andrews, S.R., Blumenthal, J.B., Johnson, D.L., Kahn, A.J., Ferguson, C.J., Lasater, T.M., et al. (1982). The skills of mothering: A study of parent child development centers. Monographs of the Society for Research in Child Development, 47(6, Serial No. 198). <br> Johnson, D.L. \& Walker, T. (1991). A follow-up evaluation of the Houston parent-child development center: School performance. Journal of Early Intervention, 15(3), 226-236. |  |  |  |  |  |
| NELP <br> These studies were combined because the same sample of children was used. The original study included children from 12 months to 36 months of age. The follow-up study to assess program effects occurred when the children were in second through fifth grades (ages $8-11$ ). | 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 3hour sessions for mothers four mornings a week for eight months and both parents attended evening meetings twice a month. | Child measures only: <br> Original study <br> - Bayley Scales of Infant Development <br> - Standford-Binet <br> - Concept Familiarity Index <br> Follow-up study <br> - Math, reading, language and spelling grades <br> - Iowa Test of Basic Skills (ITBS) <br> - Classroom Behavior Inventory (CBI) | Results from the original study indicated there was no differential effectiveness of the program treatment between the two cohorts. <br> 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 |

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|  |  |  |  |  | the control group were rated as being more hostile than those in the program group. There were no significant differences for retention in grade or referral to special resources. In addition, significantly fewer program children were reported to be attending bilingual classes. |
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| Araujo, L. (2002). The literacy development of kindergarten English-language learners. Journal of Research in Childhood Education, 16(2), 232-247. |  |  |  |  |  |
| 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 <br> - Interviews <br> - Audio/video tapes <br> - Children's samples <br> - 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. |


| Baker, A.J.L., Piotrkowski, C.S., \& Brooks-Gunn, J. (1998). The effects of the Home Instruction Program for Preschool Youngsters (HIPPY) on children's school performance at the end of the program and one year later. Early Childhood Research Quarterly, 13(4), 571-588. |  |  |  |  |  |
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| NELP | Two cohort randomized assignment of families with prekindergartners 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 | Child pretest measure: <br> - Cooperative Preschool Inventory <br> Post test measures: <br> - Cooperative Preschool Inventory <br> - 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) |

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|  | their primary language. |  | language skills, sensory and perceptual discrimination skills, motor skills, and problem-solving skills. | kindergarten <br> - Metropolitan Achievement Test-first grade <br> - 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. <br> Despite the promising findings from Cohort I, conclusions regarding HIPPY effectiveness must be tempered, as these findings were not replicated in Cohort II |
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| Chiappe, P., Siegel, L.S., \& Gottardo, A. (2002). Reading-related skills of kindergartners from diverse linguistic backgrounds. Applied Psycholinguistics, 23, 95116. |  |  |  |  |  |
| 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 | - Reading subtest of the Wide Range Achievement Test-3 (WRAT-3) | The ESL and bilingual children showed performance and growth comparable to native English speakers on measures of letter |


|  | 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. |  | children from different linguistic backgrounds. Thus, the literacy, phonological, and language skills of children with different linguistic backgrounds were examined. Children were assessed in two sessions; one in November and the other in May. <br> 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. | - Letter identification task <br> - Spelling task <br> - Environmental print task <br> - Sound mimicry subtest of the GFW Sound Symbol Test <br> - Rhyme Detection Task from the Phonological Awareness Test <br> - Syllable and Phoneme Identification tasks from the Phonological Awareness Test <br> - Phoneme Deletion task from the Phonological Awareness Test <br> - Word retrieval using a variation of the RAN task <br> - Oral cloze task <br> - Memory for Sentences subtest of the Stanford Binet | identification, spelling, and word recognition, as measured by the WRAT3 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. <br> 1) Children's language backgrounds influenced their proficiency in manipulating and remembering English. <br> 2) For all three groups, phonemic awareness was correlated with literacy skills by the end of kindergarten. <br> 3) Although the language group contrasts were not predictive of performance on any of the literacy measures, alphabetic |
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|  |  |  |  |  | knowledge and phonological awareness were important <br> predictors of literacy performance for all children. <br> 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. |
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| Chiappe, P., Siegel, L.S., \& Wade-Woolley, L. (2002). Linguistic diversity of the development of reading skills: A longitudinal study. Scientific Studies of Reading, 6(4), 369-400. |  |  |  |  |  |
| 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: <br> - Reading subtest of the Wide Range Achievement Test-3 (WRAT-3) <br> - Letter Recognition task <br> - 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 |

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|  |  |  | the NS children. | Mastery Test <br> - Spelling real words <br> - Spelling pseudowords <br> - Pseudoword repetition <br> - Phoneme Deletion task of the Phonological Awareness Test <br> - Items selected from Levels F, G , and H of the Auditory-Motor Skills Training <br> - Word retrieval using the RAN task <br> - Oral cloze task modified from kindergarten <br> - Memory for Sentences subtest of the Stanford Binet | pseudowords with the same accuracy as native English speakers, they were not as fluent as native speakers in manipulating and interpreting English oral language. <br> - 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. <br> - 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 |
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|  |  |  |  |  | strongly related to world reading in English for all children. |
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| Clark, E.R. (1995). "How did you learn to write in English when you haven't been taught in English?: The language experience approach in a dual language program. The Bilingual Research Journal, 19(3\&4), 611-627. |  |  |  |  |  |
| 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. <br> 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. | - Classroom observations <br> - Interviews <br> - Student work samples | This case study indicated that students were learning English in a natural way. |
| Goldenberg, C., Reese, L., \& Gallimore, R. (1992). Effects of literacy materials from school on Latino children's home experiences and early reading achievement. American Journal of Education, 100, 497-536. |  |  |  |  |  |
| LMP NELP rejected because case study | Letters were sent to parents of Spanishspeaking 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 | - Home observations once to twice monthly for a total of approximately | Attending school seems to have had a very substantial effect on the frequency and the amount of time children experienced literacy |


|  | (two classrooms per school). 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 studies. The families live in a small, urban predominantly Latino community within the Los Angeles metropolitan area. |  | development. 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. | 12 visits (range 7-14) <br> - Interviews with parents <br> - Bilingual Syntax Measure (BSM)—used to establish initial equivalency of two groups <br> Early Spanish <br> literacy measures at post test: <br> - Identification of letter names and sounds <br> - 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 | events at home. The <br> 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 printmeaning 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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|  |  |  |  |  | literacy achievement. |
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| Hancock, D.R. (2002). The effects of native language books on the pre-literacy skill development of language minority kindergartners. Journal of Research in Childhood Education, 17(1), 62-68. |  |  |  |  |  |
| LMP <br> NELP rejected because about type of language | Participants were 77 children enrolled in 10 different kindergarten classes at two middleclass 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. |  | 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. Twentysix of the 52 native Spanishspeaking kindergartners were randomly assigned to a treatment group that would be exposed to FRED books written in Spanish. The other 26 native Spanishspeaking students served as the control group that would be exposed to FRED books written in English. | - Test of Early Reading Ability-second edition (TERA2) | 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 Spanishspeaking children exposed to FRED books in Spanish did not differ significantly from the scores of native English speakers exposed to FRED books in English. |
| Hastings-Góngora, B. (1993). The effects of reading aloud on vocabulary development. Bilingual Research Journal, 17(1\&2), 135-138. |  |  |  |  |  |
| LMP | Eleven 5- \& 6-yearolds 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 | Domain 2 and 5 | 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 | - Test de Vocabulario en Imágenes Peabody Adaptación Hispanoamerica na (Peabody Picture Vocabulary Test-HispanicAmerican Adaptation) | 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 |


|  | years. 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. |  | impacted positively. |
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| Hoffman, J.V., Roser, N.L., \& Farest, C. (1988). Literature-sharing strategies in classrooms serving students from economically disadvantaged and language different home environments. National Reading Conference Yearbook, 37, 331-337. |  |  |  |  |  |
| LMP | 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. <br> 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 | Domain 4 | 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 languagedifferent 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. <br> 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. <br> 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 pretraining 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. |  | After Reading Phase. |
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| Hsia, S. (1992). Developmental knowledge of inter- and intraword boundaries: Evidence from American and Mandarin Chinese speaking beginning readers. Applied Psycholinguistics, 13, 341-372. |  |  |  |  |  |
| $\begin{aligned} & \hline \text { LMP } \\ & \text { NELP } \end{aligned}$ | 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 | $\begin{aligned} & \text { Domain } 2 \\ & \text { RQ1 } \end{aligned}$ | 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 nativespeaker American children learning to read only in English. | Study 1: <br> - Sentence segmentation task <br> - Invented spellings <br> - GatesMacGinitie Reading Readiness Skills <br> - MandarinChinese phoneme segmentation task <br> Study 2: <br> - Sentence segmentation task | Study 1: Partial findings form the study suggest tht 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 let to the ability to segment interword boundaries. <br> Study 2: Overall, American monolingual children showed |

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|  | older than Group CHi (mean age=5.0) attending Chineselanguage 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. |
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| Hurry, J., Sylva, K., \& Riley, J. (1999). Evaluation of a focused literacy teaching programme in reception and year 1 classes: child outcomes. British Education Research Journal, 25(5), 637-649. |  |  |  |  |  |
| 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 nonprogramme 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: <br> - British Picture Vocabulary Test (BPVS) <br> - The British Ability Scale Word Reading Test <br> - Letter Identification <br> - Concepts About Print <br> Post test measures <br> - BPVS <br> - Word Reading <br> - Letter Identification <br> - Concepts About | 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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|  | schools; 45=control schools) |  |  | Print <br> - Book level <br> - Dictation <br> - Stuart Non-word Reading |  |
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| Hus, Y. (2001). Early reading for low-SES minority language children: An attempt to ‘Catch them before they fall.' Folia Phoniatrica et Logopaedica, 53, 173182. |  |  |  |  |  |
| LMP | 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. | Domains 1 and 4 | 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, usinjg 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. <br> - Initial sound identification <br> - Final sound identification <br> - Non-word decoding <br> - Phonological memory <br> - Letter sound correspondence <br> - Letter name corresspondence | The kindergarten students in all four classes made significant gains in phonological processing, including phonological memory and decoding skills in nine weeks. |



|  | knowledge and experience with the culture because of her longer service at the school. |  |  |  |  |
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| Margolese, S.K. \& Kline, R.B. (1999). Prediction of basic reading skills among young children with diverse linguistic backgrounds. Canadian Journal of Behavioural Science, 31(4), 209-216. |  |  |  |  |  |
| NELP | Parents of kindergarten children attending one of two schools within the same Englishlanguage 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. <br> 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. | - Test of Phonological ProcessingKindergarten <br> - Test for Auditory Comprehension of LanguageRevised (TACLR) <br> - Short version of the Developmental Test of VisualMotor IntegrationThird Revision <br> - Two subtests of the Kaufman Assessment Battery for Children to estimate cognitive ability <br> First grade measures: <br> - Letter identification, word identification, and the word | 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. Englishspeaking 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. |

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|  | 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. |  |  | attack subtests of the Woodcock Reading Mastery Tests--Revised |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| McEvoy, R.E. \& Johnson, D.L. (1989). Comparison of an intelligence test and a screening battery as predictors of reading ability in low income, Mexican American children. Hispanic Journal of Behavioral Sciences, 11(3), 274-282. |  |  |  |  |  |
| NELP | Children for this study were drawn from the Houston Parent-Child Development Center (PCDC). Participants were Mexican <br> 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 FKSB acts as a better assessment tool for accounting for variance in the child's reading ability than the WPPSI. <br> 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 FKSB. At age six and nine, numbers ranged from 34 to 46 . | Age five measures: <br> - Weschler Preschool and Primary Scalr of Intelligence (WPPSI) <br> - Florida Kindergarten Screening Batter (FKSB) <br> First through fourth grade measures: <br> - Final reading grade received that year <br> - Reading scores from the Iowa Test of Basic Skills (ITBS) | The WPPSI and FKSB similarly predict reading performance. The WPPSI Full Scale score and the total FKSB score are both significantly correlated with school reading grades, but not significantly different. <br> 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 FKSB were able to account for a significant amount of variation in school reading grades, most of the variance was shared with the WPPSI. <br> Variance accounted for by the FKSB over and |

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|  |  |  |  |  | above that of the WPPSI was not significant. <br> 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. <br> 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. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mulhern, M.M. (1997). Doing his own thing: A Mexican-American kindergartner becomes literate at home and school. Language Arts, 74(6), 468-476. |  |  |  |  |  |
| LMP | Study participant | Domains 1, 3, and | This case study examined a | - Participant | One of Ruben's |

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|  | included a male Mexican American kindergartner (Ruben) who is bilingual (Spanish dominant). He lived in a poor neighborhood with a large concentration of immigrants from Mexico. The child attended preschool. | 4 | child's stance toward becoming literate in Spanish at home and at school. | Observation | strategies for becoming literate was to find meaning and wholeness when he engaged with print. He found ways to add meaning to teacherdirected skill lessons by associating syllables to works that were meaningful to him. <br> Ruben followed similar strategies at home to become literate. <br> Ruben's case suggests ways in which the connection between home and school literacy experiences can be encouraged. <br> Ruben's love of books and his ongoing crusade to obtain them suggest the need to increase children's access to books. |
| :---: | :---: | :---: | :---: | :---: | :---: |

O’Toole, S., Aubeeluck, A., Cozens, R., \& Cline, T. (2001). Development of reading proficiency in English by bilingual children and their monolingual peers. Psychological Reports, 89, 279-282.

| LMP | There were 94 children <br> ages 5-11 years who <br> participated in the <br> study (39 monolingual <br> English speaking and <br> 55 bilingual children <br> who spoke Sylhetti and <br> English). The children <br> were from a Bengali | Domain 1 | This study employed miscue <br> analysis to investigate the <br> development of reading <br> proficiency in English by <br> bilingual children and their <br> 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, selfcorrections, or words reversed. In addition, no significant differences

|  | 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. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Restrepo, M.A. (1998). Identifiers of predominantly Spanish-speaking children with language impairment. Journal of Speech, Language, and Hearing Research, 41(6), 1398-1411. |  |  |  |  |  |
| 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 | Domain 5 | 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. | - Developmental Assessment of Spanish Grammar <br> - Mean length of T-Unit (MLTU) <br> - Ratio of Grammatical Errors per Total Number of TUnits (NETU) <br> - Spanish Structured Photographic Expressive Language Test (SSPELT-II) <br> - Novel Vocabulary Learning <br> - Novel Bound Morpheme Generalization (NBMG) <br> - Parent Interview | 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. |

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|  | 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 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Roberts, T.A. (2003). Effects of alphabet-letter instruction on young children's word recognition. Journal of Educational Psychology, 95(1), 41-51. |  |  |  |  |  |
| NELP | Thirty three preschoolers from lowsocioeconomic families whose primary language was Hmong ( $\mathrm{n}=20$ ), Spanish ( $\mathrm{n}=9$ ), or English ( $\mathrm{n}=4$ ) 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. | RQ2 Category 1 | 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. | - English oral language proficiency: PreIdea Proficiency Test <br> - Letter recognition <br> - Rhyming <br> - Book vocabulary <br> - Word sets for paired-associate learning | 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. |
| Rodríguez, J.L., Díaz, R.M., \& Espinoza, L. (1995). The impact of bilingual preschool education on the language development of Spanish-speaking chil Early Childhood Research Quarterly, 10, 475-490. <br> Winsler, A., Díaz, R.M., Espinosa, L., \& Rodríquez, J.L. (1999). When learning a second language does not mean losing the first: Bilingual language development in low-income, Spanish-speaking children attending bilingual preschool. Child Development, 70(2), 349-362. |  |  |  |  |  |

## 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.

Original study ( $\mathrm{n}=50$ ) (Rodríguez et al., 1995) and follow up study ( $\mathrm{n}=44$ ) (Winzler, 1999) included Spanish-speaking children from three to five years of age. The experimental group $(\mathrm{n}=30)$ attended a statesubsidized child development program for low-income families while the control group ( $\mathrm{n}=20$ ) 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.

Original Study and Follow up (Study 2): Children in the experimental group attended a full day, week-long, statesubsidized 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.
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

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

|  |  |  |  | number of verbs in the target language produced by the child and the average number of words per verb phrase used in narrative reproductions. | sentences as they got older, and 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. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Sattler, J.M. \& Altes, L.M. (1984). Performance of bilingual and monolingual Hispanic children on the Peabody Picture Vocabulary Test-Revised and the McCarthy Perceptual Performance Scale. Psychology in the Schools, 21, 313-316. |  |  |  |  |  |
| LMP | Thirty one Mexican American children from Head Start programs in San Diego County formed two groups: a monolingual | 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 | - Peabody Picture Vocabulary Test-Revised (PPVT-R) <br> - McCarthy Perceptual | Monolingual Group: <br> - PPVT-R scores were significantly lower than those of the PPVT-R norm group <br> - McCarthy Perceptual |

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$\left.\begin{array}{|l|l|l|l|}\hline & \begin{array}{l}\text { (Spanish) group and a } \\ \text { bilingual } \\ \text { (Spanish/English) } \\ \text { group. The } \\ \text { monolingual group } \\ \text { included 20 children } \\ \text { (13 girls and 7 boys) } \\ \text { who ranged in age } \\ \text { from 45 to 65 months } \\ \text { (mean age = 55.15 } \\ \text { months). The bilingual } \\ \text { group consisted of 11 } \\ \text { children (8 girls and 3 } \\ \text { boys) who ranged in } \\ \text { age from 45 to 64 } \\ \text { months (mean age }\end{array} \\ 57.00 \text { months). }\end{array} \quad \begin{array}{l}\text { children. } \\ \text { The children in the monolingual } \\ \text { group were given either Form L } \\ \text { or M of the Spanish PPVT-R, } \\ \text { plus the McCarthy Perceptual } \\ \text { Performance Scale subtests with } \\ \text { Spanish directions. The children } \\ \text { in the bilingual group were given } \\ \text { the two PPVT-R forms, one in } \\ \text { Spanish and one in English, and } \\ \text { the McCarthy Perceptual } \\ \text { Performance Scale. The bilingual } \\ \text { children were also given } \\ \text { directions in Spanish on the } \\ \text { McCarthy Scale in order to keep } \\ \text { the procedure consistent with that } \\ \text { of the monolingual group. }\end{array}\right\}$

| Performance | Performance Scale <br> scale <br> scores were also <br> significantly lower <br> than those of the <br> standardization group |
| :--- | :--- |
|  | Sp |

- 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

|  |  |  |  |  | more difficult than the McCarthy Perceptual Performance Scale <br> - The correlations between the Spanish PPVT-R, the English PPVT-R and the McCarthy Perceptual Performance Scale were not significant <br> Comparison of Monolingual and Bilingual: <br> - The monolingual children obtained significantly lower scores than did the bilingual children on the Spanish PPVT-R and on the McCarthy Perceptual Performance Scale |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Scruggs, T.E., Mastroipieri, M.A., \& Argulewicz, E.N. (1983). Stability of performance on the PPVT-R for three ethnic groups attending a bilingual kindergarten. Psychology in the Schools, 20, 433-435. |  |  |  |  |  |
| LMP | 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 | Domain 5 | 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. <br> Children were individually administered the PPVT-R, Form L during September and May of the school year. | - Peabody Picture Vocabulary Test -Revised (PPVT-R) | 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 ( $\mathrm{p}<.001$ ); correlations between the two administrations were |

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|  |  |  |  | early literacy experience <br> - Teacher ratings (nine months after initial assessment) <br> - Mazes and Picture Completion subtests of the Wechsler PreSchool and Primary Scales of Intelligence <br> Post test measures: <br> - Neale Analysis of Reading Ability <br> - 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. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Speece, D.L., Roth, F.P., Cooper, D.H., \& De La Paz, S. (1999). The relevance of oral language skills to early literacy: A multivariate analysis. Applied Psycholinguistics, 20, 167-190. |  |  |  |  |  |
| 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 twoyear, 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: <br> Oral language measures: <br> - PPVT-R <br> - Oral vocabulary subtest of the TOLD-P2 <br> - 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 |



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|  |  |  |  | (adapted from the San Felipe-Del Rio Listening Comprehension Test <br> - Invented spelling measures (classroom journal activity and dictated spelling) <br> Teacher judgments (classification of children into obtained subtypes) <br> A reduced battery of tests were administered in the winter and spring of first grade and included: <br> - Letter/word Identification, Word Attack and Passage Comprehension subtests of the WJR <br> - Spelling measures (journal writing and dictation) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Volk, D. \& De Acosta, M. (2001). 'Many differing ladders, many ways to climb...': Literacy events in the bilingual classroom, homes, and community of three Puerto Rican kindergartners. Journal of Early Childhood Literacy, 1(2), 193-224. |  |  |  |  |  |
| LMP | Three Spanishdominant, mainland Puerto Rican kindergartners who were beginning readers | Domain 3 | 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 | - Observations twice per month in the classroom and once per month in the | Similarities and differences were found between literacy experiences in children's homes and community |

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|  | 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. | home and church. <br> - Audio-taped observations <br> - Interviews with parents and Sunday school teachers <br> - Children's work samples <br> - Fall and spring developmental assessments conducted by the classroom teacher | with those in school. 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. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Xu, H. (1999). Reexamining continuities and discontinuities: Language-minority children's home and school literacy experiences. National Reading Conference Yearbook, 48, 224-237. |  |  |  |  |  |
| 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 <br> - Weekly classroom observations <br> - Interviews with parents and teacher <br> - Informal telephone conversations with parents <br> - 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 |

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|  | classroom. |  |  | and parents <br> literacy activities where <br> at home students could <br> choose, but at school the <br> teacher decided. The <br> author concludes that <br> given a classroom culture <br> that enhances what <br> children accomplish in <br> home experiences, <br> language minority <br> children, may do better at <br> school. |
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