C

hildren from non-English-speaking households, often referred to as linguistic minorities (LM), comprise an increasing proportion of the student population nationally and in many states like California. Consequently, the educational progress of these students is critical to the overall success of the educational system in preparing future citizens and workers. Drawing on data from the Early Childhood Longitudinal Study (ECLS), a national study of kindergartners, this brief examines the educational progress of linguistic minorities during elementary school: from the fall of 1998 when they entered kindergarten, to the spring of 2004 when most were enrolled in the fifth grade. We compare their progress with students from English-only backgrounds, both in California and in the U.S. Based on their level of English proficiency, linguistic minorities are often identified as either English learners or fluent English proficient (FEP). But the procedures for identification (and hence the composition) of these two populations can vary greatly by state and district, by grade level, and over time. In contrast, the population of linguistic minorities—based on language background—is stable over time, and hence provides a more accurate picture of their educational progress in school. Linguistic Minority Kindergartners Linguistic minority kindergartners in the ECLS study were identified (using a parent questionnaire) as residing in households where a language other than English was spoken on a regular basis. Parents were also asked to identify the dominant language in the household. According to these data, in the fall of 1998 more than half of all California kindergartners were linguistic minorities, compared to 16 percent in the rest of the nation (see Table 1). About a third of linguistic minorities in California came from households where English was the dominant language, and more than half came from households where Spanish was the dominant language, with the remaining linguistic minorities coming from households with another dominant language (such as Korean or Cantonese). The profile of the linguistic minority population nationwide is somewhat different, with about half of linguistic minorities coming from households where English is the dominant language, and with a somewhat smaller percentage of linguistic minorities coming from households where Spanish is the dominant language.

Table 1—Linguistic minority kindergartners in fall of 1998, California and United States (percent distribution)

<table>
<thead>
<tr>
<th>Language background</th>
<th>California</th>
<th>Rest of the U.S.</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English only</td>
<td>47.8</td>
<td>83.9</td>
<td>80.0</td>
</tr>
<tr>
<td>Linguistic minorities</td>
<td>52.2</td>
<td>16.1</td>
<td>19.0</td>
</tr>
<tr>
<td>English dominant</td>
<td>18.0</td>
<td>8.7</td>
<td>9.7</td>
</tr>
<tr>
<td>Spanish dominant</td>
<td>29.2</td>
<td>5.6</td>
<td>8.2</td>
</tr>
<tr>
<td>Other language dominant</td>
<td>5.0</td>
<td>1.8</td>
<td>2.2</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

SOURCE: Analysis of weighted data from the Early Childhood Longitudinal Study of the Kindergarten Class of 1998 (N=9,796)

School Readiness It is useful to examine differences in students’ backgrounds and readiness when they first begin school in order to better understand differences in their educational performance. That is, the educational performance of students later in school is partly a function of how well prepared they are when they begin school. In this analysis, these differences are expressed in standard deviation (SD) units, a measure of dispersion from a national mean of zero, which is a useful way of making comparisons among groups and across different measures by using a common metric.

Table 2— Indicators of Family Background and School Readiness in California and the U.S. by Language Background, 1998–99 Kindergartners

<table>
<thead>
<tr>
<th>Indicator</th>
<th>California</th>
<th>Rest of the U.S.</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socioeconomic status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All students</td>
<td>0.12</td>
<td>0.08</td>
<td>0.28</td>
</tr>
<tr>
<td>White</td>
<td>0.28</td>
<td>0.08</td>
<td>0.13</td>
</tr>
<tr>
<td>African American</td>
<td>0.47</td>
<td>0.13</td>
<td>0.21</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.47</td>
<td>0.13</td>
<td>0.21</td>
</tr>
<tr>
<td>Other</td>
<td>0.47</td>
<td>0.13</td>
<td>0.21</td>
</tr>
<tr>
<td>Language minority</td>
<td>0.47</td>
<td>0.13</td>
<td>0.21</td>
</tr>
<tr>
<td>English only</td>
<td>0.47</td>
<td>0.13</td>
<td>0.21</td>
</tr>
<tr>
<td>Spanish</td>
<td>0.47</td>
<td>0.13</td>
<td>0.21</td>
</tr>
<tr>
<td>Other language dominant</td>
<td>0.47</td>
<td>0.13</td>
<td>0.21</td>
</tr>
</tbody>
</table>

SOURCE: Analysis of weighted data from the Early Childhood Longitudinal Study of the Kindergarten Class of 1998 (N=9,796)

NOTE: Means are expressed in standard deviations from normalized national mean of zero.

*The math achievement test was only administered in English and Spanish, so students from other-language-dominant households who were not proficient in English were not tested.
First we compared language skills assessed by teachers in the fall of kindergarten with a direct assessment of reading achievement in the spring of fifth grade. Although these two assessments are not strictly comparable, they were administered to a larger and more representative group of linguistic minorities.

In California, achievement improved relative to the national average for all language groups except Spanish-dominant students (Table 3). For example, the mean achievement for English-only students improved from .10 SD above the national mean in the fall of kindergarten, to .21 SD above the national mean in the spring of grade 5. The mean reading achievement of English-dominant and other-language-dominant students increased even more. But the mean achievement of Spanish-dominant students decreased slightly, from .71 SD below the national mean in the fall of kindergarten, to .75 SD below the national mean in the spring of grade 5. As a consequence, the achievement gap between English-only and Spanish-dominant students actually increased during the first six years of school: from .82 SD to .96 SD (science achievement [not shown] has an identical gap of .96 SD). Because the majority of linguistic minority students in California come from Spanish-dominant households, the achievement gap between English-only and all linguistic minority students in California also worsened.

Table 3.—Language skills (in SD units) in Fall Kindergarten and Reading Achievement in Grade 5 in California and the U.S. by Language Background, 1998-99 Kindergartners

<table>
<thead>
<tr>
<th></th>
<th>All students</th>
<th>English only</th>
<th>Language minority</th>
<th>English dominant</th>
<th>Spanish dominant</th>
<th>Other language dominant</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>Fall kindergarten</td>
<td>.02</td>
<td>.03</td>
<td>-.05</td>
<td>.00</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Spring grade 5</td>
<td>.00</td>
<td>.02</td>
<td>-.05</td>
<td>.00</td>
<td>.02</td>
</tr>
<tr>
<td>U.S.</td>
<td>Fall kindergarten</td>
<td>.01</td>
<td>.03</td>
<td>-.05</td>
<td>.00</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Spring grade 5</td>
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<td>-.05</td>
<td>.00</td>
<td>.02</td>
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NOTE: Means are expressed in standard deviations from normalized national mean of zero.
*The math achievement test was only administered in English and Spanish, so students from other-language-dominant households who were not proficient in English were not tested.

This was not the case nationally. For the nation as a whole, the mean achievement of all language groups improved, except for English-only students, where achievement was relatively unchanged. As a consequence, the achievement gap between English-only and Spanish-dominant students decreased from .87 SD to .65 SD (.77 SD in science), and the achievement gap between English-only and all linguistic minority students decreased from .48 SD to .29 SD.

Language minority students made more substantial gains in mathematics, both in California and nationally (Table 4). In California, the mean math achievement for linguistic minority students was .10 SD above the national mean, whereas the mean SES of Spanish-dominant linguistic minority kindergartners in the country as a whole was .94 SD below the national mean. The achievement gap of .91 SD found in the U.S. as a whole was .10 SD above the national mean, whereas the mean SES of English-only students nationwide was .48 SD versus .48 SD. The achievement gap was larger in California, in part, because English-only students come from more advantaged backgrounds (mean SES = .28 SD) than English-only students nationwide (mean SES = .08 SD).

SES varies greatly among linguistic minorities. In California, the mean SES of English-dominant linguistic minorities was .15 SD above the national mean, whereas the mean SES of Spanish-dominant linguistic minorities was .94 SD below the national mean. This means the average gap in SES between English-only and Spanish-dominant linguistic minority kindergartners in the beginning of kindergarten was 1.22 SD in California; bigger than the gap of .91 SD found in the U.S. as a whole.

Language skills at kindergarten entry show similar disparities. Teachers in the ECLS study assessed the listening, speaking, reading, and writing skills of kindergarten students in their classrooms, regardless of the language in which students were literate. This provides a more robust measure of language skills than tests of oral language proficiency typically given to students upon entry to kindergarten.

In California, the mean language skills of English-only students was .10 SD above the national mean, whereas the mean language skills of linguistic minority kindergartners was .50 SD below the national mean. This means the achievement gap in language skills between English-only and linguistic minority students was .60 SD at the beginning of kindergarten, which can be considered moderate. The achievement gap between English-only and linguistic minority students in California was larger than the achievement gap nationwide (.60 SD versus .48 SD). The achievement gap in language skills between English-only students and Spanish-dominant students in California was .77 SD—twice as large as the gap of .39 SD between English-only and linguistic minority kindergartners in the country as a whole. The gap was larger in California, in part, because English-only students come from more advantaged backgrounds (mean SES = .28 SD) than English-only students nationwide (mean SES = .08 SD).

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<th>Language minority</th>
<th>English dominant</th>
<th>Spanish dominant</th>
<th>Other language dominant</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>Fall kindergarten</td>
<td>.02</td>
<td>.03</td>
<td>-.05</td>
<td>.00</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Spring grade 5</td>
<td>.00</td>
<td>.02</td>
<td>-.05</td>
<td>.00</td>
<td>.02</td>
</tr>
<tr>
<td>U.S.</td>
<td>Fall kindergarten</td>
<td>.01</td>
<td>.03</td>
<td>-.05</td>
<td>.00</td>
<td>.02</td>
</tr>
<tr>
<td></td>
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<td>.02</td>
<td>-.05</td>
<td>.00</td>
<td>.02</td>
</tr>
</tbody>
</table>

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UC LMRI NewsPage 3 Winter 2007

UC LMRI is launching an affiliated project, the California Dropout Research Project. A series of recent reports suggests that less than 70 percent of ninth graders in California graduate from high school, and the percentage in some districts is less than 50 percent. Moreover, English learners have much higher dropout rates than the state average. The social and economic welfare of the state depends on finding a solution to this educational crisis.

The purpose of this project is to synthesize existing research and undertake new research to inform policymakers and the larger public about the nature of—and potential solutions to—the dropout problem in California.

The project will produce a series of reports and policy briefs addressing four facets of the issue: (1) the measurement and incidence of dropping out; (2) the educational, social, and economic costs of dropouts for individuals and the state; (3) the short-term and long-term causes of dropping out; and (4) proven interventions. The reports will be written by leading experts in California and nationwide who will draw on their previous research or who will undertake new research for this project. Drawing on this information, a Policy Committee composed of researchers, policymakers, and educators will then draft a state policy agenda aimed at improving California’s high school graduation rate.

Members of the Policy Committee are:
- State Senator Darrell Steinberg, Democrat, Senate District 6 (Sacramento), who is also chairing a Select Committee on High School Graduation
- Assemblywoman Jean Fuller, Republican, Assembly District 32, who previously served as District Superintendent of Bakersfield Unified School District
- David W. Gordon, Sacramento County Superintendent of Schools and former superintendent of Elk Grove Unified School District
- Rowena Lagrossa, Superintendent, Moreno Valley Unified School District and former Superintendent of LAUSD Local District 5
- Gary Orfield, Professor of Education and co-Director of the Civil Rights Project/El Proyecto de CRP at UCLA
- Lorraine McDonnell, Professor of Political Science at UC Santa Barbara
- Marqupeece Harris-Dawson, Executive Director, Community Coalition, Los Angeles

The project will also have a website (http://www.lmri.ucsb.edu/dropouts/) that will disseminate project information, as well as information on outside activities and publications that focus on dropsouts.

The California Dropout Research Project is being funded by several foundations, including the Irvine Foundation and the Walter S. Johnson Foundation, and will run for 14 months beginning December 1, 2006. The project is directed by Russell W. Rumberger, Professor of Education, UC Santa Barbara.

### Biliteracy Research Initiative

#### 4th Annual Biliteracy Development Research Forum

On January 19-20, 2007, UC LMRI hosted the fourth annual Biliteracy Development Research Forum in Santa Barbara, CA. The Forum was initiated by the UC LMRI Faculty Steering Committee in 2004 as part of its Biliteracy Research Initiative to further longitudinal research on biliteracy development. The forum brings together researchers who are actively engaged in ongoing longitudinal studies of biliteracy development to share ideas, methods, and results of their studies.

This year’s forum was attended by 17 researchers, including two graduate students and two post-doctoral scholars, from 11 universities in the U.S. and Canada. The following research studies were presented and discussed:

- **Studying Biliteracy Development through Teacher Research**
  - Barbara Merino, UC Davis

- **Learning to Read and Spell in a Bilingual Country**
  - Alexandra Gottardo, Wilfrid Laurier University and Victor van Dael, University of Stavanger

- **Reading Fluency: A Prelude to Reading Comprehension? A Longitudinal, Growth Curve Study of Text Reading Fluency in ELL and ELL Children**
  - Fatenah Farna and Esther Geva, University of Toronto

- **Modeling Oral Language Development in Spanish and English**
  - Leslie Reese, CSU Long Beach and Russell Rumberger, UC Santa Barbara

- **Two Intervention Studies for Improving Language Skills of EL Students**
  - Emily Solari, Lehigh University and Carola Materia, UC Santa Barbara

- **Measuring ELLs’ Language Proficiency and Content Knowledge Using Large-scale Assessments**
  - Nonie Lesaux, Michael Kieffer, Harvard University, and David Francis, University of Houston

### Table 4—Math Achievement (in SD units) in Fall Kindergarten and Grade 5 for California and the U.S. by Language Background, 1998-99 Kindergartners

<table>
<thead>
<tr>
<th></th>
<th>California</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full kindergarten</td>
<td>Spring grade 5</td>
<td>Full kindergarten</td>
</tr>
<tr>
<td>All students</td>
<td>0.13</td>
<td>0.05</td>
</tr>
<tr>
<td>English-only</td>
<td>0.11</td>
<td>0.06</td>
</tr>
<tr>
<td>Language minority</td>
<td>0.42</td>
<td>0.24</td>
</tr>
<tr>
<td>English-dominant</td>
<td>0.26</td>
<td>0.13</td>
</tr>
<tr>
<td>Spanish-dominant</td>
<td>-0.11</td>
<td>-0.17</td>
</tr>
<tr>
<td>Other language dominant</td>
<td>0.14</td>
<td>0.12</td>
</tr>
</tbody>
</table>


This study aims to contribute to an understanding of how English learners can access the discourses of power. A methodological emphasis on engaging the focal students in writing, talking, and reflecting on their daily language experiences may help students gain a metacognitive awareness of their language use in a variety of discourse settings. The findings may have implications for re-conceptualizing second language development, curriculum, and supporting classroom practices and informing educational policy.

#### Computer-Supported Vocabulary Enrichment in Two-Way Immersion Programs

PI: Francisco J. Herrera, Jr., UCLA

**Dissertation Grant #07-07Cy-03DG-D**

Funded February 2007 ($13,000)

With greater emphasis being placed on standardized assessment of academic ability and English proficiency since the passage of the No Child Left Behind Act of 2001, vocabulary development has become even more crucial for academic success. In fact research has demonstrated that teachers often gauge a students’ general intelligence or knowledge in a particular domain based on their vocabulary ability (Corson, 1997). This can have severe consequences for English language learners who are still developing their vocabulary, not only in their primary language but also in the second language. This study will examine the effects of using computer-supported vocabulary enrichment (CSVE) to introduce specialized academic vocabulary through web pages. These web pages will serve to build on content students receive in class and provide additional vocabulary explanations, examples, video, audio, pictures and definitions in clarifying concepts with the focus of highlighting specific vocabulary terms.
Ethnic Identity, Language Use, and Academic Achievement in Transnational Childhoods: A Study of the Children of Japanese Expatriates in Los Angeles

PI: Masaaki Nukaga, UCLA
DISSECTON GRANT 07-OVCY-01DG-LA
FUNDED: FEBRUARY 2007 ($15,000)

Based on extensive multi-sited fieldwork at an American and Japanese supplementary schools in an upper-middle class Japanese transnational community in Los Angeles, California, this study aims to understand the developmental pathways which pre-adolescent children of Japanese expatriates (ages 9-12) experience, looking in particular at how transnational contexts in Los Angeles affect children’s reinterpretation of their ‘Japaneseness’ and identity work in their everyday lives. It also explores the impact of such ethnic identity formation process on their academic aspiration and performance. In asking these questions, I focus on the crucial role that language plays in children’s identity formation. Language in this study is treated as a symbolic tool with which individuals do “identity work” in everyday interaction. The findings from this study will inform educational policies and practices by suggesting how the practice and organization of school, family, and community can help migrant children to negotiate and reconcile the values from two or more worlds and provide them with opportunities to speak, write, and read both languages in their everyday lives for flexible ethnic identification and successful academic achievement.

**Understanding English Learners’ Identities and Literacy Learning through the Multimodal Literacy Practices of Digital Storytelling**

PI: Althea Scott Nixon, UCLA
DISSECTON GRANT 07-OVCY-08DG-LA
FUNDED: FEBRUARY 2007 ($15,000)

This dissertation study focuses on English Learners’ self-expression using digital storytelling—a literacy practice in which youth use different media, including digital pictures, music, and text, to help them tell a story about an important aspect of their lives: who they are, who they might become, and how they view their social worlds. This dissertation study examines the identities English Learners construct, and the development of their literacy practices. It also illuminates the varied and sometimes contradictory ways in which these students’ identities and school experiences are mediated by institutional practices. This study informs both policy and practice by deepening our understanding of how state and district language policies are implemented at the local level. Recommendations for policy and practice from this study include: addressing language-related labels and their implications for students; clarifying federal and state language policies for use in local settings; and addressing demographics of urban schools in relation to English language development programs.

**Hypermedia Authoring as a Vehicle for Vocabulary Development in Middle School ESL Classrooms**

PI: Richard Durán, UC SANTA BARBARA
CO-PI: Susan O'Hara and Bob Pitchcari, CALIFORNIA STATE UNIVERSITY, ESSEXBROOK
DISSECTON GRANT 06-40HCY-05DG-SB
FUNDED: MARCH 2007 ($20,000)

This study investigated the impact of authoring hypermedia projects on the science vocabulary development of Spanish-speaking ESL 6th and 7th grade students. The study found that students participating in hypermedia projects, as opposed to a traditional science biography or social science curriculum, were better able to understand science concept terms. Interviews of students revealed that students found projects particularly worthwhile because the projects allowed them to personalize their learning and accomplishments. Future research will address the particular strategies for teaching science vocabulary used by students to construct multimedia projects and the role of the first and second language in picking and implementing strategies.
Ethnic Identity, Language Use, and Academic Achievement in Transnational Childhoods: A Study of the Children of Japanese Expatriates in Los Angeles

PI: MISAKO NUKAGA, UCLA
DISSEMINATION GRANT 007-0/CV-02DG-IA
FUNDED: FEBRUARY 2007 ($15,000)

Based on intensive multi-sited fieldwork at an American and Japanese supplementary schools in an upper-middle class Japanese transnational community in Los Angeles, California, this study aims to understand the developmental pathways which pre-adolescent children of Japanese expatriates (ages 9-12) experience, looking in particular at how transnational contexts in Los Angeles affect children’s reinterpretation of their ‘Japaneseess’ and identity work in their everyday lives. It also explores the impact of such ethnic identity formation process on their academic aspiration and performance. In asking these questions, I focus on the crucial role that language plays in children’s identity formation. Language in this study is treated as a symbolic tool with which individuals do “identity work” in everyday interaction. The findings from this study will inform educational policies and practices by suggesting how the practice and organization of school, family, and community can help migrant children to negotiate and reconcile the values from two or more worlds and provide them with opportunities to speak, write, and read both languages in their everyday lives for flexible ethnic identification and successful academic achievement.

Language and Cognitive Characteristics of Spanish-Speaking Bilingual Word Callers (Poor Comprehenders)

PI: KELLY ROSTON, UC RIVERSIDE
DISSEMINATION GRANT 007-0/CV-02DG-R
FUNDED: FEBRUARY 2007 ($15,000)

The purpose of this study is to identify some of the language and cognitive processes that underlie the discrepancy between Spanish-speaking bilingual readers’ relatively high word recognition/decoding abilities and their weak reading comprehension.

Some researchers have identified these children as “word callers” (Berts, 1957; Hamilton & Sibley, 2003; Johnson-Glenberg, 2000; Stanovich, 1986; Luftig, 1989), whereas others have suggested these difficulties fall on a continuum referred to as hyperlexia (Nation, 1999). Although hyperlexia is rare in Spanish-speaking bilingual children, low comprehension with relatively high word identification is not (Lesaux, Lipka, & Siegel, 2006; Nation & Snowling, 2000).

In contrast to previous studies, this study intends to extend the previous literature (e.g., Lesaux et al. 2006) by focusing on “word callers” in the upper elementary grades among children who have had the chance to master academic language proficiency.

Understanding English Learners’ Identities and Literacy Learning through the Multimodal Literacy Practices of Digital Storytelling

PI: ALTHEA SCOTT NIXON, UCLA
DISSEMINATION GRANT 007-0/CV-02DG-LA
FUNDED: FEBRUARY 2007 ($15,000)

This dissertation study focuses on English Learners’ self-expression using digital storytelling—a literacy practice in which youth use different media, including digital pictures, music, and text, to help them tell a story about an important aspect of their lives: who they are, who they might become, and how they view their social worlds. This dissertation study examines the identities English Learners construct, and the development of their literacy learning through these digital storytelling activities. The results of this study will provide insights on the affordances of multi-modal, technologies used in digital storytelling on English Learners’ identity development and literacy learning in biliterate/bilingual learning environments, where students’ home language functions as an unmarked, legitimate language, as well as a tool to build new literacy practices. This study will show the kind of literacy learning and identity development that are possible when English Learners are allowed access to their full linguistic toolkit to make meaning of their lives, future selves, and the world around them.

Individual Grant Award

The Diverse Adolescent Literacies Project: Exploring the Academic Literacies of Latino and Anglo Adolescents

PI: KERRY EMBRIGHT VILLANUA, UC DAVIS
INDIVIDUAL GRANT 007-0/CV-03DG-D
FUNDED: FEBRUARY 2007 ($25,000)

The “Diverse Adolescent Literacies Project” described in this proposal will investigate the literacies of bilingual and monolingual California adolescents in response to the following descriptive and interpretive research questions: (1) In what types of literacy events do bilingual Latino students and native English speakers actually engage throughout the school day in various school program types (e.g. honors classes, middle-track college-prep classes, “sheltered” programs of instruction)? (2) What types of literacy events (broadly construed) are accessible to low-income students in their classes at a linguistically diverse California high school? (3) How might students’ understandings of and engagement in these school literacy events be influenced by their prior home language socialization and former schooling? The Diverse Adolescent Literacies Project has potential to inform teaching practices and policies for California’s linguistically diverse high school classrooms. Policy implications involve new understandings of the literacy impact of placing students in particular programs.

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The Diverse Adolescent Literacies Project: Exploring the Academic Literacies of Latino and Anglo Adolescents

PI: KERRY EMBRIGHT VILLANUA, UC DAVIS
INDIVIDUAL GRANT 007-0/CV-03DG-D
FUNDED: FEBRUARY 2007 ($25,000)

The “Diverse Adolescent Literacies Project” described in this proposal will investigate the literacies of bilingual and monolingual California adolescents in response to the following descriptive and interpretive research questions: (1) In what types of literacy events do bilingual Latino students and native English speakers actually engage throughout the school day in various school program types (e.g. honors classes, middle-track college-prep classes, “sheltered” programs of instruction)? (2) What types of literacy events (broadly construed) are accessible to low-income students in their classes at a linguistically diverse California high school? (3) How might students’ understandings of and engagement in these school literacy events be influenced by their prior home language socialization and former schooling? The Diverse Adolescent Literacies Project has potential to inform teaching practices and policies for California’s linguistically diverse high school classrooms. Policy implications involve new understandings of the literacy impact of placing students in particular programs.

Research Grants Completed

Following are edited abstracts from UC LMRI Research Grants completed since October 2006. Visit the UC LMRI web site to see complete database listings for all UC LMRI-funded grants.

**Final Grant Report Abstracts**

“*I’ll See You One Spanish Girl, Raise You One Mien Boy*: Labeling and Sorting Mechanisms at Work in an Urban Elementary School

PI: KRISTEN HULL CORTEZ, UC BERKELEY
DISSEMINATION GRANT 007-04/CV-04DG-B
COMPLETED: JANUARY 2007

Using a sociocultural and institutional framework, this study investigates formal and informal processes for assigning students to classrooms, and related processes of student labeling at a large urban elementary school. The research reveals ways in which a range of differences—such as language background and ability, racial-ethnicity, gender, and age—are marked, muted, or made salient by institutional practices. It also illuminates the varied and sometimes contradictory sorting processes that help shape students’ identities and school experiences. This study informs both policy and practice by deepening our understanding of how state and district language policies are implemented at the local level. Recommendations for policy and practice from this study include: addressing language-related labels and their implications for students; clarifying federal and state language policies for use in local settings; and addressing demographics of urban schools in relation to English language development programs.

Hypermmedia Authoring as a Vehicle for Vocabulary Development in Middle School ESL Classrooms

PI: RICHARD DURÁN, UC SANTA BARBARA
Co-PIs: SUSAN O’HARA and BOB PRITCHARD, CALIFORNIA STATE UNIVERSITY, ERCHEMISTED CALIFORNIA GRANT 007-04/CV-04DG-SB
COMPLETED: JANUARY 2007

This study investigated the impact of authoring hypermedia projects on the science vocabulary development of Spanish-speaking ESL 6th and 7th grade students. The study found that students participating in hypermedia projects, as opposed to a traditional science biology or social science curriculum, were better able to understand science concept terms. Interviews of students revealed that students found projects particularly worthwhile because the projects allowed them to personalize their learning and accomplishments. Future research will address the particular strategies for learning science vocabulary used by students to construct multimedia projects and the role of the first and second language in picking and implementing strategies.

Research Reports Database Unveiled

A new tool is now available to visitors of the UC LMRI web site: a searchable database of research reports published by outside sources and related to issues affecting linguistic minorities. The database features a wide variety of reports sent out to subscribers on LMRI’s popular InResearch email list. Searches can be conducted by title, author, publisher, date and keywords. UC LMRI makes these reports available in accordance with its mission to disseminate research findings to researchers, practitioners, and policymakers.
UC LMRI Announces Affiliated Project

UC LMRI is launching an affiliated project, the California Dropout Research Project. A series of recent reports suggest that less than 70 percent of ninth graders in California graduate from high school, and the percentage in some districts is less than 50 percent. Moreover, English learners have much higher dropout rates than the state average. The social and economic welfare of the state depends on finding a solution to this educational crisis.

The purpose of this project is to synthesize existing research and undertake new research to inform policymakers and the larger public about the nature of—and potential solutions to—the dropout problem in California.

The project will produce a series of reports and policy briefs addressing four facets of the issue: (1) the measurement and incidence of dropping out; (2) the educational, social, and economic costs of dropouts for individuals and the state; (3) the short-term and long-term consequences of dropping out; and (4) proven interventions. The reports will be written by leading experts in California and nationwide who will draw on their previous research or who will undertake new research for this project. Drawing on this information, a Policy Committee composed of researchers, policymakers, and educators will then draft a state policy agenda aimed at improving California’s high school graduation rate.

Members of the Policy Committee are:

- Senator Darrell Steinberg, Democrat, Senate District 6 (Sacramento), who is also chairing a Select Committee on High School Graduation
- Assemblywoman Jean Fuller, Republican, Assembly District 32, who previously served as District Superintendent of Bakersfield Unified School District
- David W. Gordon, Sacramento County Superintendent of Schools and former superintendent of Elk Grove Unified School District
- Rowena Lagrosa, Superintendent, Moreno Valley Unified School District and former Superintendent of LAUSD
- William Langlois, Professor of Education at UC Santa Barbara
- Marquese Harris-Dawson, Executive Director, Community Coalition, Los Angeles
- Barbara Merino, UC Davis
- Daniel Yamagata-Lynch, Professor of Education at UC Berkeley
- Leslie Reese, CSU Long Beach and Russell Rumberger, UC Santa Barbara
- Emily Solari, Santa Barbara
- Nonie Lesaux, Michael Kieffer, and Victor V. Soto, Harvard University
- Leslie Reese, CSU Long Beach and Russell Rumberger, UC Santa Barbara
- Emily Solari, Santa Barbara
- Nonie Lesaux, Michael Kieffer, Harvard University, and David Francis, University of Houston

The California Dropout Research Project is being funded by several foundations, including the Irvine Foundation and the Walter S. Johnson Foundation, and will run for 14 months beginning December 1, 2006. The project is directed by Russell Rumberger, Professor of Education, UC Santa Barbara.

BILITERACY RESEARCH INITIATIVE

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BILITERACY RESEARCH INITIATIVE

4th Annual Biliteracy Development Research Forum

On January 19-20, 2007, UC LMRI hosted the fourth annual Biliteracy Development Research Forum in Santa Barbara, CA. The Forum was initiated by the UC LMRI Faculty Steering Committee in 2004 as part of its Biliteracy Research Initiative to further longitudinal research on biliteracy development. The forum brings together researchers who are actively engaged in ongoing longitudinal studies of biliteracy development to share ideas, methods, and results of their studies.

This year’s forum was attended by 17 researchers, including two graduate students and two post-doctoral scholars, from 11 universities in the U.S. and Canada. The following research studies were presented and discussed:

- **Studying Biliteracy Development through Teacher Research**
  - Barbara Merino, UC Davis
- **Learning to Read and Spell in a Bilingual Country**
  - Alexandra Gottardo, Wilfried Laurier University and Victor van Dael, University of Stavanger
- **Reading Fluency: A Prelude to Reading Comprehension? A Longitudinal, Growth Curve Study of Text Reading Fluency in ELL and ELL Children**
  - Fatenah Farnia and Esther Geva, University of Toronto
- **Modeling Oral Language Development in Spanish and English**
  - Leslie Reese, CSU Long Beach and Russell Rumberger, UC Santa Barbara
- **Two Intervention Studies for Improving Language Skills of ELL Students**
  - Emily Solari, Lehigh University and Carola Matura, UC Santa Barbara
- **Measuring ELLs’ Language Proficiency and Content Knowledge Using Large-scale Assessments**
  - Nonie Lesaux, Michael Kieffer, Harvard University, and David Francis, University of Houston

The forum will also have a website (http://www.lmri.ucsb.edu/dropsout) that will disseminate project information, as well as information on outside activities and publications that focus on students who begun from .62 SD below the national mean to .28 SD below the national mean, a reduction of more than 50 percent. A similar reduction occurred for Spanish-dominant linguistic minority students, who saw their mean math achievement go from 1.00 SD below the national mean to .57 SD below the national mean. Improvements nationwide were similarly impressive.

Table 4—Math Achievement (in SD units) in Fall Kindergarten and Grade 5 for California and the U.S. by Language Background, 1998-99 Kindergartners

<table>
<thead>
<tr>
<th></th>
<th>California</th>
<th>EA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full kindergarten</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spanish dominant</td>
<td>-1.01</td>
<td>-.57</td>
</tr>
<tr>
<td>Other language</td>
<td>-1.11</td>
<td>-.57</td>
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<tr>
<td>English dominant</td>
<td>-0.16</td>
<td>0.12</td>
</tr>
<tr>
<td>English only</td>
<td>0.13</td>
<td>0.17</td>
</tr>
</tbody>
</table>

**SOURCE:** Analysis of weighted data from the Early Childhood Longitudinal Study of the Kindergarten Class of 1998 (N=9,796)

**NOTE:** Means are expressed in standard deviations from normalized national mean of zero.

*The mean achievement test was only administered in English and Spanish, so students from other-language-dominant households who were not proficient in English were not tested.

What Does It All Mean?

These data show that linguistic minority students, especially those from Spanish-dominant households, begin school at a considerable disadvantage relative to English-only students. Yet over time, the educational performance of linguistic minority students improves relative to those from English-only backgrounds but not uniformly. The greatest improvement is in mathematics, where the achievement gap between Spanish-dominant linguistic minority students and English-only students, both nationally and in California, was cut in half over the first six years of school. In reading, there was a more modest improvement at the national level, but no improvement in California.

As a result, Spanish-speaking linguistic minority students in California not only lag behind English-only students in the state; they also lag behind their counterparts in the rest of the U.S. This finding is consistent with an earlier analysis of data from the National Assessment of Educational Progress that showed a greater reduction in the achievement gap between English learners and other students nationally than in California (UC LMRI NewsLetter, V.13, No.1). The results also call into question California’s current efforts to educate the state’s growing linguistic minority population—especially Spanish-speaking students—and to close the sizeable achievement gap with other students.

---Russell W. Rumberger

Research Grants Awarded

The February 2007 Call for Proposals generated 15 submissions that were reviewed by the UC LMRI Faculty Steering Committee at their February meeting in Los Angeles. The Committee selected six proposals for funding, and two for revision and possible re-submission. Below are the edited abstracts for this call’s grant award recipients.

**Dissertation Grant Awards**

“Mee-t for me it’s an honor…” Opportunities to use English: In, Outside, and Beyond High School

PI: Kimberly Ferrando, UC Davis

**Dissertation Grant #007-005/007-D**

Funded: February 2007 ($15,000)

The goal of this study is to investigate the relationships among power, identity and language learning in the daily experiences of Spanish speaking English learners in the California high school context.

This study aims to contribute to an understanding of ways English learners can access the discourses of power. A methodological emphasis on engaging the focal students in writing, talking and reflecting on their daily language experiences may help students gain a metacognitive awareness of their language use in a variety of discourse settings. The findings may have implications for re-conceptualization of second language development, curriculum, and support for empowering classroom practices and for informing educational policy.

**Computer-Supported Vocabulary Enrichment in Two-Way Immersion Programs**

PI: Francisco J. Herrera, Jr., UCLA

**Dissertation Grant #007-005/007-D**

Funded: February 2007 ($15,000)

With greater emphasis being placed on standardized assessment of academic ability and English proficiency since the passage of the No Child Left Behind Act of 2001, vocabulary development has become even more crucial for academic success. In fact research has demonstrated that teachers often gauge a students’ general intelligence or knowledge in a particular domain based on their vocabulary ability (Corson, 1997). This can have severe consequences for English language learners who are still developing their vocabulary, not only in their primary language but also in the second language.

This study will examine the effects of using computer-supported vocabulary enrichment (CVSE) to introduce specialized academic vocabulary through web pages. These web pages will serve to build on content students receive in class and provide additional word explanations, examples, videos, audio, pictures and definitions in clarifying concepts with the focus of highlighting specific vocabulary terms.
One important indicator of students’ backgrounds is the socioeconomic status (SES) of their families. Family SES measures family income, parental education, and parental occupational status, which together provide a useful indicator of family resources and a powerful predictor of subsequent student achievement.

The SES of linguistic minorities at the beginning of school was substantially lower than English-only students (Table 2). In California, the mean SES of English-only kindergarteners in the fall of 1998 was .28 SD above the national mean, whereas the mean SES of linguistic minority kindergarteners was .49 SD below the national mean. Thus, the mean gap in SES between English-only and linguistic minority kindergartners in California was .77 SD—twice as large as the gap of .39 SD between English-only and linguistic minority kindergartners in the country as a whole. The gap was larger in California, in part, because English-only students come from more advantaged backgrounds (mean SES = .28 SD) than English-only students nationwide (mean SES = .08 SD).

SES varies greatly among linguistic minorities. In California, the mean SES of English-dominant linguistic minorities was .15 SD above the national mean, whereas the mean SES of Spanish-dominant linguistic minorities was .94 SD below the national mean. This means the average gap in SES between English-only and Spanish-dominant linguistic minority kindergartners in the beginning of kindergarten was 1.22 SD in California; bigger than, the gap of .91 SD found in the U.S. as a whole.

Language skills at kindergarten entry show similar disparities. Teachers in the ECLS study assessed the listening, speaking, reading, and writing skills of kindergarten students in their classrooms, regardless of the language in which students were literate. This provides a more robust measure of language skills than tests of oral language proficiency typically given to students upon entry to kindergarten.

In California, the mean language skills of English-only students was .10 SD above the national mean, whereas the mean language skills of linguistic minority kindergartners was .50 SD below the national mean. This means the achievement gap in language skills between English-only and linguistic minority students was .60 SD at the beginning of kindergarten, which can be considered moderate. The achievement gap between English-only and linguistic minority students in California was larger than the achievement gap nationwide (.60 SD versus .48 SD). The achievement gap in language skills between English-only students and Spanish-dominant students was even larger: .81 SD in California and .87 SD nationwide.

Disparities in math skills, which were assessed individually by trained assessors in English or Spanish, were even larger. For example, the achievement gap in math skills between English-only kindergartners and Spanish-dominant kindergartners was .50 SD in California and .92 SD nationally.

Changes in Achievement
How did these disparities in achievement change over time? Disparities in achievement between English-only and linguistic minority students generally decreased during elementary school, but not uniformly.

First we compared language skills assessed by teachers in the fall of kindergarten with a direct assessment of reading achievement in the spring of fifth grade. Although these two assessments are not strictly comparable, they were administered to a larger and more representative group of linguistic minorities.

In California, achievement improved relative to the national average for all language groups except Spanish-dominant students (Table 3). For example, the mean achievement for English-only students improved from .10 SD above the national mean in the fall of kindergarten, to .21 SD above the national mean in the spring of grade 5. The mean reading achievement of English-dominant and other-language-dominant students increased even more. But the mean achievement of Spanish-dominant students decreased slightly, from .71 SD below the national mean in the fall of kindergarten, to .75 SD below the national mean in the spring of grade 5. As a consequence, the achievement gap between English-only and Spanish-dominant students actually increased during the first six years of school: from .82 SD to .96 SD (science achievement [not shown] has an identical gap of .96 SD). Because the majority of linguistic minority students in California come from Spanish-dominant households, the achievement gap between English-only and all linguistic minority students in California also worsened.

Table 3.—Language skills (in SD units) in Fall Kindergarten and Reading Achievement in Grade 5 in California and the U.S. by Language Background, 1998-99 Kindergartners

<table>
<thead>
<tr>
<th></th>
<th>California</th>
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<th>California</th>
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<tbody>
<tr>
<td></td>
<td>Fall kindergarten</td>
<td>Spring grade 5</td>
<td>Fall kindergarten</td>
<td>Spring grade 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All students</td>
<td>0.11</td>
<td>0.12</td>
<td>0.08</td>
<td>0.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English-only</td>
<td>0.10</td>
<td>0.13</td>
<td>0.13</td>
<td>0.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language minority</td>
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<tr>
<td>English-dominant</td>
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<td>-0.35</td>
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<td></td>
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<tr>
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<td>-0.71</td>
<td>-0.71</td>
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<td></td>
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<tr>
<td>Other language dominant</td>
<td>-0.34</td>
<td>-0.57</td>
<td>-0.10</td>
<td>-0.30</td>
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<td></td>
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</tbody>
</table>

SOURCE: Analysis of weighted data from the Early Childhood Longitudinal Study of the Kindergarten Class of 1998 (N=9,796) NOTE: Means are expressed in standard deviations from normalized national mean of zero.

This was not the case nationally. For the nation as a whole, the mean achievement of all language groups improved, except for English-only students, where achievement was relatively unchanged. As a consequence, the achievement gap between English-only and Spanish-dominant students decreased from .87 SD to .65 SD (.77 SD in science), and the achievement gap between English-only and all linguistic minority students decreased from .48 SD to .29 SD.

Language minority students made more substantial gains in mathematics, both in California and nationally (Table 4). In California, the mean math achievement for linguistic minority

### Table 3

<table>
<thead>
<tr>
<th></th>
<th>California</th>
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<th>California</th>
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<tr>
<td></td>
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<tr>
<td>English-only</td>
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<tr>
<td>Language minority</td>
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<tr>
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<td>-0.46</td>
<td>-0.35</td>
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<tr>
<td>Spanish-dominant</td>
<td>-0.71</td>
<td>-0.71</td>
<td>-0.71</td>
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<td></td>
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<tr>
<td>Other language dominant</td>
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<td>-0.57</td>
<td>-0.10</td>
<td>-0.30</td>
<td></td>
<td></td>
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</tbody>
</table>

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**Note:** Means are expressed in standard deviations from normalized national mean of zero.
### Lagging Behind: Linguistic Minorities’ Educational Progress During Elementary School

Children from non-English-speaking households, often referred to as linguistic minorities (LM), comprise an increasing proportion of the student population nationally and in many states like California. Consequently, the educational progress of these students is critical to the overall success of the educational system in preparing future citizens and workers.

Drawing on data from the Early Childhood Longitudinal Study (ECLS), a national study of kindergartners, this brief examines the educational progress of linguistic minorities during elementary school: from the fall of 1998 when they entered kindergarten, to the spring of 2004 when most were enrolled in the fifth grade. We compare their progress with students from English-only backgrounds, both in California and in the U.S.

Based on their level of English proficiency, linguistic minorities are often identified as either English learners or fluent English proficient (FEP). But the procedures for identification (and hence the composition) of these two populations can vary greatly by state and district, by grade level, and over time. In contrast, the population of linguistic minorities—based on language background—is stable over time, and hence provides a more accurate picture of their educational progress in school.

#### Linguistic Minority Kindergarten Students

Linguistic minority kindergartners in the ECLS study were identified (using a parent questionnaire) as residing in households where a language other than English was spoken on a regular basis. Parents were also asked to identify the dominant language in the household.

According to these data, in the fall of 1998 more than half of all California kindergartners were linguistic minorities, compared to 16 percent in the rest of the nation (see Table 1). About a third of linguistic minorities in California came from households where English was the dominant language, and more than half came from households where Spanish was the dominant language, with the remaining linguistic minorities coming from households with another dominant language (such as Korean or Cantonese).

The profile of the linguistic minority population nationwide is somewhat different, with about half of linguistic minorities coming from households where English is the dominant language, and with a somewhat smaller percentage of linguistic minorities coming from households where Spanish was the dominant language.

<table>
<thead>
<tr>
<th></th>
<th>California</th>
<th>Rest of the U.S.</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English only</td>
<td>47.8</td>
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<td>80.0</td>
</tr>
<tr>
<td>Linguistic minorities</td>
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<td>20.0</td>
</tr>
<tr>
<td>English dominant</td>
<td>18.0</td>
<td>8.7</td>
<td>9.7</td>
</tr>
<tr>
<td>Spanish dominant</td>
<td>29.2</td>
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</tr>
<tr>
<td>Other language dominant</td>
<td>5.0</td>
<td>1.8</td>
<td>2.2</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

SOURCE: Analysis of weighted data from the Early Childhood Longitudinal Study of the Kindergarten Class of 1998 (N=97,796)

#### School Readiness

It is useful to examine differences in students’ backgrounds and readiness when they first begin school in order to better understand differences in their educational performance. That is, the educational performance of students later in school is partially a function of how well prepared they are when they begin school. In this analysis, these differences are expressed in standard deviation (SD) units, a measure of dispersion from a national mean of zero, which is a useful way of making comparisons among groups and across different measures by using a common metric.

<table>
<thead>
<tr>
<th></th>
<th>California</th>
<th>U.S.</th>
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<tbody>
<tr>
<td>Academic readiness</td>
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<td>0.24</td>
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<tr>
<td>Reading</td>
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<td>0.16</td>
</tr>
<tr>
<td>Math</td>
<td>0.09</td>
<td>0.14</td>
</tr>
<tr>
<td>Language proficiency</td>
<td>0.04</td>
<td>0.06</td>
</tr>
<tr>
<td>Spanish</td>
<td>0.12</td>
<td>0.25</td>
</tr>
</tbody>
</table>

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NOTE: Means are expressed in standard deviations from normalized national mean of zero.

*The math achievement test was only administered in English and Spanish, so students from other-language-dominant households who were not proficient in English were not tested.*