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Early Educational Opportunities for Children of Hispanic Origins

by
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Abstract

This paper argues that young Hispanic (or Latina/o) children (ages 3 to 8 years) should be of particular interest to policymakers, practitioners, and researchers in education. Young Hispanic children constitute an urgent demographic imperative. Young Hispanic children are not only the largest racial/ethnic group in the U.S., but also the youngest and fastest-growing. Among racial/ethnic groups, Hispanics have a unique linguistic profile. Approximately three in four young Hispanic children lives in homes in which at least some Spanish is spoken regularly. Empirical evidence suggests that certain interventions during the early years are a wise investment to improving learning opportunities and outcomes for Hispanic children. Hispanics lag behind their white and Asian-American peers at all proficiency levels of reading and mathematics at the beginning and throughout PK-12 schooling. In order for young Hispanics to succeed in academic contexts, they need strong English skills. Recent research suggests academic benefits of bilingual over English-only programs, enough to close one-fifth to one-third of the overall Hispanic-White reading performance gap. Moreover, recent research shows young Hispanics are particularly positioned to benefit from prekindergarten participation even though they are less likely to attend compared to other racial/ethnic groups.

Our recommendations include that the **federal government:**

- underwrite tests of programs designed to produce large increases in the number of culturally knowledgeable
 preschool and early elementary teachers proficient in English and Spanish fund and experiment with teacher
 preparation programs to recruit more Spanish-speaking undergraduates and teachers who are trained in second
 language acquisition to work as language specialists
- continue to explore and expand dual-language (DL) programs through Head Start, Early Head Start, and other grant programs
- expand the scope of the national and international databases developed to assess student performance

(see Table 4 & 5 for additional recommendations on page 16)

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From the Editor

In this issue of Social Policy Report Eugene Garcia and Bryant Jensen discuss the needs of Hispanic/Latina/o children in this country. Hispanic children are the largest ethnic group as well as the youngest and fastest growing. Most live in homes where at least some Spanish is spoken, although there is usually a shift to English by the third generation following immigration. These facts alone merit policy attention from all levels of government. However Hispanic children also lag behind their white and Asian peers at all proficiency levels in reading and math from pre-K through high school.

Garcia and Jensen first make the case for attention to the situation of Hispanic children in this country. They then review a sizeable body of literature demonstrating that early interventions can improve the learning opportunities and educational outcomes of Hispanic children. They close with a long list of policy recommendations for federal, state and local governments, foundations, and Hispanic communities and organizations. Dr. Garcia served on the Obama transition team, so it is not surprising that he offers such a comprehensive list of policy recommendations. Particularly in light of the current economic situation, a next step is to prioritize these recommendations.

We are also pleased to have commentaries from Robert Crosnoe and James Griffin who bring different perspectives to the topic and illustrate the need for multidisciplinary attention to this topic.

This is an ideal topic for SPR. There is clear need and research offers considerable guidance for policy and intervention. It is easy to make the case that it is in the countrie's economic interest to attend to the issues discussed in this report. Hispanics are the largest and fastest growing minority in this country. We cannot afford to have this group grow up without adequate educational opportunities and achievement. However, it would also be nice if we could once institute policy because it is the right thing to do. In addition to issues of equity, Hispanic families immigrate to this country to receive improved opportunities. It is our responsibility to live up to this promise and give them the opportunities they seek. Finally, this country has always been characterized by diversity. Hispanic families bring a rich linguistic and cultural heritage to this country. Only by facilitating the healthy and successful development of Hispanic children can this richness carry a positive and lasting influence.

Unfortunately, targeted programs and policies have never been as popular with legislators as universal ones. However our increasing diversity demands targeted policies. It is rare that "one size fits all" in terms of needs or solutions. This diversity presents challenges, and we need theory and research on different means of using policy across the vast individual variability that characterizes our nation.

Brooke and I hope that this issue of SPR serves to direct attention to this needy and underserved population of America's children.

> Lonnie Sherrod, Ph.D., Editor SRCD Executive Director

Early Educational Opportunities for Children of Hispanic Origins

by Eugene Garcia and Bryant Jensen Arizona State University

Why Hispanic Children?

The under-education of racial and ethnic minorities in the United States is certainly not a new phenomenon, nor a novel concern to policymakers. The research literature is ripe with decades of data documenting the low academic performance and educational attainment (i.e., school completion rates) of children of African American, Native American, and Hispanic origins (Paik & Walberg, 2007). So what is it we can say that has not already been said? What new contributions can we offer policymakers concerned with the under-education of children from racial and ethnic minority groups in this country?

The value of this paper is found in its focus on a specific ethnic group during a specific age range: those of Hispanic origins ages 3 to 8 years. We argue that this group deserves special attention from policymakers for several reasons. In this first section we identify and explain these reasons. Then we propose what policymakers can do to improve the early educational opportunities for young Hispanic (or Latino) children. We share empirical evidence on the benefits of early programs and practices for these children and discuss additional research and development needs to see that such programs are expanded, implemented well, improved, and that new and innovative strategies are pursued. While a consensus has emerged concerning the economic returns (Heckman & Masterov, 2004) and cognitive benefits (Ramey & Ramey, 1998; Shonkoff & Phillips, 2000) of schooling interventions for children ages 3 to 8 years, in general; much is still unknown concerning the efficacy of instructional and curricular strategies across socioeconomic (SES) segments. But why should we differentiate Hispanic children from those of other racial/ethnic groups? What makes them different? Are their needs different? Below we offer answers to these questions.

First, young Hispanic children are of particular interest because they constitute an urgent demographic imperative. In January 2004, the U.S. Census Bureau reported that the Hispanic population overtook the African American population as the nation's largest minority group. Between the 1960s and 2000, the Hispanic population grew five-fold, growing from 6.9 to 35.3 million (see Table 1). By 2002, one in eight people in the United States were of Hispanic origin (Ramirez & de la Cruz, 2003). It is projected that there will be about 101 million Hispanics in the United States by 2050, who would constitute about one-quarter of the nation's population (Passel, 2003).

This unprecedented growth of a racial/ethnic group is particularly alarming given current socioeconomic trends. In 2003, Hispanics comprised 21.4 percent of the total population of children under 5 years old, yet they also accounted for nearly 34 percent of young children living poverty in the same census (Barrueco, Lopez & Miles, 2007). Young Latino children are not only the largest racial/ethnic population living in poverty, but they are virtually the same size as the

White, non-Hispanic population of young children living in poverty (Barrueco, Lopez & Miles, 2007).

Hispanics are also the youngest racial/ethnic population (Montemayor & Mendoza, 2004; see Table 2). In 2000, over 34% of Hispanics were under 18 years of age, compared to less than 23% of whites, not of Hispanic origin. Consistent with this pattern, the total fertility rate of Latinos is considerably higher than those of whites and most other groups. In 2001, the total fertility rate for Hispanics was 2.75 babies per Hispanic woman, while it was 1.84 babies for non-Hispanic whites, 2.10 babies for non-Hispanic blacks, 1.84 babies for Asians/Pacific Islanders, and 1.75 babies for American Indians (Ventura, Hamilton, & Sutton, 2003). A major source of the high total fertility rate among Hispanic women is the foreign-born segment. The latter have about 3.5 babies per woman, while the native-born Hispanics have about 2.2 babies per woman (Bean, Lee, Batalova, & Leach, 2004).

The role of immigration in the rapid growth of the Hispanic population in the United States can be seen in other statistics as well. In 2002, two-fifths of the Hispanic population in the United States was foreign-born. Moreover, over half of foreign-born Hispanics have arrived since 1990, and over three-quarters have arrived since 1980 (Ramirez & de la Cruz, 2003). Since 1980, at least 75 percent of the Hispanic population growth in the United States has been due to immigration, whether directly by new arrivals (43%) or by children born to immigrants (28%).

Reflecting the high percentage that Hispanics constitute of the immigrant population, about 62% of all children of immigrants in the United States were Hispanic in 2000. In contrast, a century earlier, during the last great wave of European immigration, only 2% of the children of immigrants were from Latin American immigrant families (Hernández, 2004).

It is important to recognize that most of the children in immigrant families are not themselves immigrants. Rather, about three-quarters of the children in immigrant families are American-born; and a large majority of these children are Hispanics (Conchas, 2001; Fix & Passel, 2003). Furthermore, recent demographic data indicate that 93% of young children (under 6) of immigrants are U.S.-born citizens (Capps, Fix, Ost, Reardon-Anderson, & Passel, 2004).

Because Mexico has long been the largest source of Hispanic immigrants to the United States, it is unsurprising that 39% of children in immigrant families in 2000 were of Mexican origin—over 1.2 million PK-12 grade students (Capps et al., 2005). No other country accounted for more than 4% of children from immigrant families, and over onehundred countries were represented. Children of Mexican origins demonstrate, on average, similar family background profiles as those from Central American countries. That is, compared to youngsters from families of other Latin American heritages, children from Central American and Mexican immigrant families are much more likely to live in crowded housing, to be living in poverty, to live in linguistically isolated homes, to not be covered by health insurance, and to not be enrolled in a pre-kindergarten program (Hernández, 2004). These circumstances are associated with the low education levels of Mexican immigrants and suggest that children of Mexican national origin are a particular source of concern to education policy-makers and practitioners.

While immigrant and Hispanic children in the U.S. have traditionally been concentrated in six states—California, New York, Texas, Florida, New Jersey, and Illinois (Fix and Passel, 2003; Hernandez, 2004; Passel and Fix, 2001; Schimdley, 2001; Suárez-Orozco, 2001)—these families are dispersing throughout the country. During the late 1990s, many newcomer and Latino families dispersed throughout the nation (Fix and Passel, 2003). States experiencing large increases in Hispanic immigrant populations were located principally across the middle of the country, including many from Rocky Mountain, Midwest, and Southeastern states. Arkansas and North Carolina experienced the largest proportional increase in immigrant families between 1990 and 2000—over 300% growth (Guzmán, 2001; Hernández, 2004).

Second, among racial/ethnic groups, Hispanics have a unique linguistic profile. Obviously, Hispanic children in the US are not a homogenous group. They come from diverse social, cultural, and linguistic backgrounds. Hispanic children represent, for example, long-term native born populations to the US along with various countries-of-origin, each of which is associated with a unique combination of histories, cultural practices, perspectives, and traditions.

Due to variation in nativity and national origin and related social factors, language development and language-use vary within the young Hispanic population. Some

young children acquire English as their first language and maintain monolingual proficiency throughout their lives. These children are more likely to have native (US-born) parents. Others speak Spanish as their first language, and learn English as they enter public schooling—children often referred to as "sequential" bilinguals. The proportional size of this subpopulation has been growing rapidly over the past few decades (August, 2006). A final (and smaller) subset of Hispanic children develops English and Spanish fluency simultaneously and at comparable levels in the home and in school. Differences in language development are most commonly attributable to variations of language practices in the home.

In an analysis of data from the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), Barrueco, Lopez, and Miles (2007) describe the home language environments of Hispanic 9-month-olds in the country. Representing a national sample of children born between December 2001 and January 2002, Barrueco and colleagues found that Hispanic infants (constituting 26% of the total infant population) resided in various sorts of home language environments. The largest group (34%) of Hispanic infants lived in a home in which Spanish was the primary language, with some English. Twenty-two percent lived in a home in which English was primarily spoken, with some Spanish; 21% in English-only

Table 1. Growth of the U.S., Hispanic population: 1960-2000 (in millions)

Year	U.S. population	Hispanic population	Hispanic percentage of U.S. population			
1960	179.3	6.9	3.9%			
1970	230.2	9.1	4.5%			
1980	226.5	14.6	6.4%			
1990	248.7	22.4	9.0%			
2000	281.4	35.3	12.5%			
2002	284.5	37.4	13.3%			

Sources: Bean, F., & Tienda, A. (1987). The Hispanic population of the United States. New York, NY: Russell Sage Foundation.; Ramirez, R.R., & de la Cruz, P.G. (June 2003). The Hispanic population in the United States: March 2002. U.S. Census Bureau, U.S. Department of Commerce, Economic and Statistics Administration. Washington, DC.; U.S. Census Bureau (1992). 1990 census of population: General population characteristics. U.S. Dept. of Commerce, Economics and Statistics Administration, Bureau of the Census; U.S. Census Bureau (2001). 2000 census of population: General population characteristics. U.S. Dept. of Commerce, Economics and Statistics Administration, Bureau of the Census.

Table 2. Population dispersal by age, Hispanic origin, and race, March 2002

Age					Race	
	Total		Hispanic		Non-Hispanic, White	
	Number	Percent	Number	Percent	Number	Percent
Total	282,082	100.0	37,438	100.0	194,822	100.0
Under 5 years	19,428	6.9	3,841	10.3	11,560	5.9
5 to 9 years	20,026	7.1	3,766	10.1	11,964	6.1
10 to 14 years	21,037	7.5	3,480	9.3	13,040	6.7
15 to 19 years	20,045	7.1	3,122	8.3	12,803	6.6
20 to 24 years	19,404	6.9	3,559	9.5	12,038	6.2
25 to 29 years	18,310	6.5	3,537	9.4	11,252	5.8
30 to 34 years	20,360	7.2	3,457	9.2	13,068	6.7
35 to 44 years	44,284	15.7	5,439	14.5	31,029	15.9
45 to 54 years	39,545	14.0	3,399	9.1	29,733	15.3
55 to 64 years	25,874	9.2	1,942	5.2	20,362	10.5
65 to 74 years	18,123	6.4	1,175	3.1	14,550	7.5
75 to 84 years	12,191	4.3	565	1.5	10,418	5.3
85 years and over	3,456	1.2	157	0.4	3,005	1.5
Under 18 years	72,628	25.7	12,888	34.4	44,378	22.8
18 years and over	209,454	74.3	24,550	65.6	150,443	77.2

homes; and 19% in Spanish only homes.

In another study, data from the US Census 2000 reveal that many parents of young Hispanic children have limited English proficiency (Hernandez, 2006). For example, nearly three-fourths of young Hispanic children in immigrant families (71%) live with at least one parent who is Limited English Proficient (LEP), not speaking English exclusively or very well, and one-half (49%) live with two such parents (Hernandez, 2006).

Table 3 displays the prevalence of LEP Hispanic children compared to other racial/ethnic groups. While one-third of all young Hispanic children (ages 5-8) are reported to be bilingual—proficient in both English and Spanish—Hispanics are more likely than other racial/ethnic groups to be LEP, and to have one or two parents who are also LEP. In 2000, over 50% of all Hispanic children ages 0-8 years old have either a mother or father whose primary language was Spanish. Moreover, Hispanic children, including those from native and immigrant families, are more likely than any other racial/ethnic group to live in linguistically isolated homes—households in which no one over the age of 13 speaks English exclusively or very well (Hernandez, 2006).

The quality and quantity of English- and Spanish-use in the home are associated with several demographic features. Associations have been found, for example, with national origin. Children of Mexican ancestry are less likely to be bilingual than those from other national origins (Hernandez, 2006). Furthermore, Hispanic children from Dominican, Mexican, and Central American backgrounds are more likely than Hispanics from others national origins to be LEP and to have one or two LEP parents. Bilingualism also varies by region. In 2000, the states with the highest relative proportion of bilingual Hispanic children were Florida and New Jersey; and the lowest relative proportion of bilingual Hispanic children was found in Colorado, Arizona, California, Illinois, and Texas had the highest relative proportions of young Hispanic children who were limited English proficient (Hernandez, 2006).

The language proficiencies of young Hispanics are also associated with household income (Hernandez, 2006). While young Hispanic children are more likely than their general body of same-age peers to live in poverty, the likelihood is increased for Hispanic children who live in homes in which little or no English is spoken. For those Hispanic homes in which the father is fluent in English, 14% live below the official poverty line, compared to 29% of those Hispanic homes in which the father is not fluent in English.

Not surprising, Hispanic children from native families (i.e., 3rd generation or more) are more likely to demonstrate English proficiency than children of immigrant families (i.e., children who have at least one foreign-born parent). On the other hand, Hispanic children born to immigrant families (1st or 2nd generation immigrant) are more likely to show bilingual proficiency between 5-8 years old compared to children in native-born families. Indeed, 40% of Hispanic children from immigrant families are proficient in English and Spanish compared to 18% of children from native families—a trend present in every country-of-origin subgroup (Hernandez, 2006).

This general decrease in bilingual proficiency of Hispanic children from immigrant to native families exemplifies a phenomenon linguists and bilingual researchers call

"language shift". It also typifies Lambert's (1974) notion of "subtractive" bilingualism. With empirical evidence as early as the mid 1970s (Lieberson, Dalto, & Johnston, 1975), the "language shift" occurs when a language minority group gradually changes its language use and preference from the minority language to the locally dominant language. For Hispanics, the trend has been to shift from Spanish to English preference by the third generation following international migration (Veltman, 1983), whereby the linguistic, social, and economic benefits of bilingualism are not realized (Gándara & Contreras, 2009; Valdés, 1997). In other words, competence in English has tended to come at the expense of Spanish proficiency (the heritage language) both within individuals and across generations.

Notwithstanding, some Hispanic children from native as well as immigrant homes manage to maintain proficiency in both languages. Indeed, 33% of all young Hispanic children ages 5-8 in 2000 had parents who reported their child spoke English and Spanish in the home—that they were bilingual (Hernandez, 2006). While impressive, this figure is to be interpreted cautiously. It is derived from Census data which consists of surveyed information—we do not know the actual quality and type of bilingual language proficiency these children possess. That is, the level and type of proficiency of bilingual children are quite varied. They differ in terms of balanced competence and the extent to which the child is exposed to each language. Concerning balanced competence, McLaughlin (1995) notes that there tends to be an ebb and flow to children's bilingualism, and that it is rare for both languages to be perfectly balanced. The amount of early exposure and opportunity to explore both languages also determines the type of bilingualism a child develops.

The second reason the Census figure is to be interpreted with caution is that no indication is provided as to whether bilingual proficiency of Hispanic children is intermediary or permanent—i.e., whether bilingualism will diminish or be sustained over time. It is often the case that young bilinguals in the US do not develop their native language beyond early conversational skills learned in the home. Many Hispanic children, as previously indicated, lose native language proficiency at the expense of developing English skills. Several studies have been conducted with young Hispanics and their families to explore the various factors that influence Spanish maintenance even as English skills are being developed (Hammer, Miccio, & Wagstaff, 2003; Lee & Samura, 2005; López, 2005; Pérez-Bazán, 2005). They found native language maintenance to be a result of interacting personal and family factors. While Hispanic children inevitably gain proficiency in English through interaction with the larger community, proficiency in Spanish was found to be associated with the quality and quantity of Spanish use in the home (Pérez-Bazán, 2005). Spanish maintenance was also found to be related with parent education levels, where higher levels were associated with greater bilingual and Spanish proficiency (López, 2005), opportunities for native language use (Lee & Samura, 2005), as well as attitudinal and motivational features (López, 2005).

Third, empirical evidence suggests that certain interventions during the early years are a wise investment to improving learning opportunities and outcomes for Hispanic children. A substantial body of reliable

knowledge shows that instructional programs, teaching strategies, and educational policies can improve literacy and academic development for young Hispanic children. Because a majority of young Hispanic children come from homes in which Spanish is used-and there are important associations between language development in Spanish and English and the development certain cognitive features (especially those needed to do well in school)—early educational programs for Hispanic children ought to be explicit and strategic concerning the integration of language and culture. This means instruction, curricular content, and schooling practices are developed and evaluated to account for their linguistic and sociocultural circumstances so as to leverage home resources and parental support, and to optimize student learning (Genesee, Geva, Dressler, & Kamil, 2006; Goldenberg, Gallimore, Reese, & Garnier, 2001; Goldenberg, Rueda, & August, 2006; Reese, Garnier, Gallimore, & Goldenberg, 2000; Scheffner Hammer & Midiccio, 2004; Shannon, 1995; National Task Force on Early Childhood Education for Hispanics, 2007).

Currently, Hispanics lag behind their white and Asian-

American peers at all proficiency levels of reading and mathematics (at least a half of a standard deviation) at the beginning and throughout K-12 schooling (Braswell, Daane, & Grigg, 2003; Garcia, Jensen, Miller, & Huerta, 2005; NCES, 2003; Reardon & Galindo, 2006). Educational achievement patterns of virtually all racial/ethnic groups are established during the early years of school and change little thereafter. Although some of the difference between racial/ethnic groups is accounted for by socioeconomic (SES) differences between groups (on average Hispanics have lower SES than whites and Asian-Americans), much of it is not (Reardon & Galindo, 2006). In an analysis of national math and reading outcomes from kindergarten through fifth grade, Reardon and Galindo found racial/ethnic differences within SES groups as well. Hispanic children scored significantly lower than whites in both subjects within each SES group, though in some cases the size of the gap decreased over time. In a separate analysis, Reardon (2003) found that racial/ethnic and SES achievement differences in early elementary education were attributable to processes within, between, and out-of school. In other words, processes in the home

Table 3. Limited English Proficiency of US Children Ages 0-8 by Race/Ethnicity

	Percent of Children								
	Bilingual Limited English Proficiency								
	Child English fluent & speaks other language at home	Child Limited English Proficient (LEP) ^a	Child LEP & father LEP ^a	Child LEP & mother LEP ^a	Father LEP	Mother LEP	Father or mother LEP	Both father & mother LEP	
Total	10.0	8.7	3.0	2.9	12.2	11.7	14.0	9.3	
Hispanic	32.8	32.7	11.7	11.2	45.0	41.8	49.5	35.2	
White	2.8	1.4	0.3	0.3	1.7	1.9	2.5	1.0	
Black	3.0	1.7	0.4	0.4	3.1	2.6	3.1	2.0	
Asian	33.1	25.3	8.0	8.7	33.5	39.2	43.5	28.5	
Native American	9.7	6.7	1.4	1.5	7.6	7.0	9.3	4.2	
Hawaiian, Other Pacific Islander	6.2	2.8	0.4	0.5	3.3	3.4	4.7	1.5	

^aFor children ages 5-8 years.

^bHouseholds in which no one over the age of 13 speaks English exclusively or very well. Calculated from Census 2000 5% microdata (IPUMS) by Donald J. Hernandez.

and school accounted for the differences (Garcia, Jensen, & Cuéllar, 2006).

Reardon and Galindo also found reading and mathematics achievement patterns from kindergarten through third grade to vary by home language environments. Hispanic children living in homes categorized as "primarily Spanish" or "Spanish only" lagged further behind white children than did Hispanics who lived in homes in which primarily English or English only was spoken. The impact of language background on achievement outcomes should not necessarily be surprising given the relationship of SES with

achievement, and the correlation between low SES and non-English home environments among Hispanics (Collier, 1987; Jensen, 2007; NCES, 1995).

Rather than pointing to one or two out-of school factors that account for the low achievement of young Hispanic children as a whole, it should be understood that early risk is due to a myriad of interrelated factors. Early risk factors include (but are not necessarily limited to)

parent education levels, family income, parent English language proficiency, mother's marital status at the time of birth, and single- versus dual-parent homes (NCES, 1995). The more risk factors the child is subject to, the lower the probability the child will do well in school in terms of school performance and attainment. Because Hispanic children, on average, exhibit more risk factors than whites, they are generally at greater risk for academic underachievement (Hernandez, Denton, & Macartney, 2007).

It is important, therefore, to clarify that risk is not due solely to non-English proficiency, but to a number of demographic conditions that correlate with Spanish-use in the home. In an analysis of national data, Jensen (2007) compared Spanish-speaking kindergarteners to their general education peers on a number of outcomes, including SES, parent education, and mathematics achievement (i.e., numeracy, shape/size recognition, and ordinality). He found that Spanish-speaking kindergartners, on average, scored four-fifths of a standard deviation lower than the general body of kindergartners in mathematics. They also fared an entire standard deviation below their peers in terms of SES and maternal educational attainment. Nearly half of the kindergarteners from Spanish-speaking homes had mothers who had not completed high school.

In a monumental research program developed to explore associations between social contexts (in the home) and early language development, Hart and Risley (1995, 1999; Risley & Hart, 2006) documented important differences between 42 families. In their analysis of over 1,200 hours of audio recordings and field notes, they found amount of family talk to account for children's vocabulary growth, expressive language, and related strongly to intellectual outcomes at ages 3 and 9 years-old, and that the amount of family talk was characteristic of social class. Welfare parents were taciturn, working-class parents varied greatly, and

parents with advanced, professional degrees were uniformly talkative. The difference between taciturn and talkative parents was found in the amount of "extra" talk rendered, which consisted of conversational chit chat, ongoing commentary, and gossip. The extra talk was dense with varied vocabulary, complex ideas, subtle guidance, and positive reinforcement—all ingredients considered important to intellectual and psychological development. While none of the children in this study were Hispanic, it highlighted ways in which poverty can influence early language and subsequent educational development.

Further research should continue to investigate how home practices influence early literacy development, and ways in which cultural ways of meaning-making interact with this development.

More specifically, socioeconomic conditions also have been shown to be related with the amount of mother-child bookreading during early childhood (Raikes et al., 2006). This finding is important as early bookreading is linked with school readiness (Bus, van Ijzendoorn, & Pellgrini, 1995; DeBaryshe, 1993; Sénéchal & Cornell, 1993; Sénéchal, LeFevre, Hudson, & Lawson, 1996; Snow & Goldfield, 1983). In a study evaluating bookreading

in a large sample (N = 2,581) of low-income mothers and children, Raikes et al. (2006) found that Spanish-speaking mothers read less frequently to their children than English-speaking mothers. In addition, Spanish-speaking Hispanic families had far fewer books in the home than did other families in the sample.

In another study assessing parental practices with their 9-month old infants, Barrueco, Lopez, and Miles (2007) documented racial/ethnic differences in parent-child linguistic engagement. Hispanic parents read, told stories, and sang songs to their infants less frequently than White and multi-racial families (all comparisons were statistically significant). Controlling for SES, group differences remained.

What remains unclear from these studies is how cultural mechanisms and/or the availability of books in Spanish influenced parent interaction patterns in Hispanic homes. Given the relationship between child-parent interactions, language development, and school readiness, the impact of home literacy practices on early learning is important to consider. Further research should continue to investigate how home practices influence early literacy development, and ways in which cultural ways of meaning-making interact with this development (Zentella, 2005).

In order for young Hispanics to succeed in academic contexts and perform well in comparison to their peers, they need strong English skills. For a majority of young Hispanic children, this means acquiring them in a second language. Rather than stipulating time limits for young Hispanic English language learners (ELLs) to attain English skills (Collier, 1989, 1995; Cummins, 1981; Mitchell, Destino, & Karam, 1997), education policy and practices should continue to identify and leverage children's abilities, and provide empirically sound instructional and curricular practices to help children academically succeed, understanding that the development of satisfactory English skills requires a number

of years. Historically, school districts and states have approached the language development and education of ELLs in very different ways—these approaches are typically not influenced by rigorous research, but politics and ideology (Jensen, 2008a).

Indeed, a review of the research literature shows that ways in which schools approach curriculum, instruction, and related policy for Hispanic children vary (sometimes greatly) (Genesee, 1999; Ovando, Collier, & Combs, 2006). For Hispanic children, a critical concern is how and whether to integrate the Spanish language. This has also

been a topic of empirical research and policy debate for several decades (Garcia, 2005). Here we discuss ways in which educational policy analysts have approached the issue, and a summary of their findings.

Education programs from kindergarten through 3rd grade for Hispanic children across the country differ in terms of their academic goals, the characteristics of students they intend to serve, intended

length of student participation, teacher characteristics, and instructional materials (Collins & Ribiero, 2004: Genesee, 1999). Debates regarding program types that best develop the academic skills of children whose native language is not English continue to cause tumult among practitioners, academics, and policymakers. A fundamental issue underlying this argument has been whether bilingual or English-only approaches are more effective in boosting and sustaining the academic achievement of ELLs. Early research surrounding this issue was inconclusive. Some, such as Baker and de Kanter (1981) and Baker and Pelavin (1984), asserted that the research evidence did not support the effectiveness of bilingual instruction, and that bilingual education simply does not work. Others, such as Willig (1985) refuted this argument and provided evidence to support the efficacy of bilingual programs.

More recent research—including syntheses, meta-analyses, and other reviews—offers clearer conclusions (August, Calderón, Carlo, & Nuttall, 2006). In a meta-analysis of 11 studies—which included standardized test scores of 2,719 elementary school students, 1,562 of whom were enrolled in bilingual programs, in 13 states—Greene (1998) found that bilingual programs overall produced .21 of standard deviation improvement on reading tests, and .12 of a standard deviation improvement on math tests measured in English. Moreover, the overall gain in Spanish test scores was .74 of a standard deviation. The author noted that while these data showed the general academic benefits of bilingual programs, a few critical programmatic concerns were left unclear. Namely, this study did not ascertain the ideal length of time students should be in bilingual programs, the ideal amount of native language used for instruction, and the age groups in which these techniques are most appropriate.

In a "best evidence synthesis" (Slavin, 1986), Slavin and Cheung (2005) compared bilingual and English-only

reading programs for ELLs. In their review, the authors employed a systematic literature search, quantification of outcomes as effect sizes, and a discussion of the individual studies (N = 17) that met inclusion criteria. Thirteen of the included studies focused on elementary school reading for Spanish-dominant students. Of these, 9 favored bilingual approaches on English reading measures and 4 found no significant differences, producing a median effect size of .45 in favor of bilingual approaches. Weighted by sample size, an effect size of .33 was calculated, in favor of programs with bilingual over English-only approaches. Authors rec-

ommended that further research comparing program types should incorporate longitudinal, randomized designs to produce satisfying answers to particular questions related to program effectiveness.

Rolstad, Mahoney, and Glass (2005) present another meta-analysis, including 17 studies conducted since 1985. Authors in this review decided to include as many studies as possible instead of excluding on the basis

of a priori criteria. Effect size of program effectiveness was computed by calculating mean outcome differences between new treatment and traditional treatment groups, and subsequently dividing by the standard deviation of the traditional treatment group (Glass, McGaw, & Smith, 1981). Using this method, authors found that bilingual approaches were consistently better than English-only approaches, yielding an average benefit of .23 of a standard deviation.

Finally, Borman, Hewes, Reilly, and Alvarado (2006) conducted a meta-analysis on the achievement effects of the nationally disseminated and externally developed school improvement programs known as "whole-school" or "comprehensive" reforms implemented in schools that predominately served Hispanic students. They also compared the specific achievement effects of the 12 most widely implement models of comprehensive school reform (CSR) for Hispanics. They found that the effects of CSR for schools serving mostly Hispanic students were somewhat limited, but that available evidence indicates that CSR programs showing academic benefits for Hispanic students were structured around valuing and teaching relevant culture and traditions, addressing language directly (Borman, Hewes, Reilly, & Alvarado, 2006).

Recent research, therefore, suggests academic benefits of bilingual over English-only programs—on average, an increase of .2 to .3 standard deviations in test performance. This is enough to close one-fifth to one-third of the overall Hispanic-White achievement gap in reading in the early years of schooling.

One of the problems with broad comparisons of program types is that there is not one "bilingual" program or approach (Garcia, 2005; García, Jensen, Miller, & Huerta, 2005) but several. As mentioned above, they differ in terms of required teacher qualifications, curriculum, the student population they are designed to serve, instructional ap-

Recent research [...] suggests academic benefits of bilingual over English-only programs—[...] enough to close one-fifth to one-third of the overall Hispanic-White achievement gap in reading in the early years of schooling.

proaches, variations of Spanish/English use, among other aspects.

Relatively new in the United States, Dual Language (DL) programs—also known as Two-Way Immersion (TWI)—offer a unique approach to bilingual education. Designed to teach English to ELL students and Spanish to native-English speakers through dual-language content and instruction in a shared classroom (i.e., English-plus-Spanish [EPS] approaches), available research suggests positive effects for young Hispanics as well as for language majority populations (García & Jensen, 2006). It is important to note that the implementation of these programs vary in terms of the amount of time they devote to each language (e.g., 50-50 vs. 90-10 models), the grade levels they intend to serve, language and curriculum division, and the populations they

intend to serve (Center for Applied Linguistics [CAL], 2005). On the other hand, DL programs are unified by common notions of learning (based heavily on Vygotskyan [or sociocultural] notions of social interaction and naturalistic learning), second language acquisition, the importance of teaching language through content, and the goal of producing bilingual students (Genesee, 1999).

...DL participants score as well or better on standardized achievement tests in English and Spanish than same-age peers educated in other programs.

Extant research shows that DL programs are able to promote bilingual oral and academic skills for young ELL Hispanics as well as for their language majority counterparts (Barnett, Yarosz, Thomas, & Blanco, 2006; Cazabon, Lambert, & Hall, 1999; Christian, 1994, 1997; Christian, Genesee, Lindholm-Leary & Howard, 2004; Cobb, Vega, & Kronauge, 2005; Figueroa, 2005; García & Jensen, 2006; Howard, Sugarman, & Christian, 2003; Lindholm, 1999; Sugarman & Howard, 2001). While the methodological rigor between studies vary from randomized trials controlling for student background, school environment quality, and the integrity of program implementation to measuring the academic progress of a small group of DL participants over time (Howard, Sugarman, & Christian, 2003), conclusions converge on comparisons between DL and other programs and comparisons between Hispanic ELLs and native English speakers.

Comparisons between programs for Hispanic ELLs and native English speakers show that DL participants score as well or better on standardized achievement tests in English and Spanish than same-age peers educated in other programs (Howard, Sugarman, & Christian, 2003). Indeed, studies document native Spanish speakers participating in DL programs to outperform other Spanish speakers enrolled in other programs in English reading and mathematics as well as Spanish pre-reading, reading, writing, and mathematics (Barnett, Yarosz, Thomas, & Blanco, 2006; Christian, 1994; Cobb, Vega, & Kronauge, 2005). Other studies have found no significant differences in outcomes for Hispanic ELL students (Cazabon, Lambert, & Hall, 1999; Howard, Sugarman, & Christian, 2003).

Studies measuring the academic benefits for native English speakers enrolled in DL programs also present a mixed picture. Some studies indicate benefits over and above other schooling programs, while others do not suggest significant differences (Cobb, Vega, & Kronauge, 2005; Howard, Sugarman, & Christian, 2003). Cobb, Vega and Kronauge (2005), for example, found the greatest academic benefits for native English speakers enrolled in DL programs to be in reading skills; yet in other areas they found no differences. It is important to note that native English speakers participating in DL programs have shown no achievement disadvantages.

A final topic regarding the schooling of young Hispanics concerns prekindergarten programs. In recent years access to state-funded prekindergarten programs has expanded in several states where Head Start and other initiatives have come short (Garcia & Jensen, 2007). The motivation in most cases to get children in school at age four (and often age three) concerns the economic (Heck-

man & Masterov, 2004) and cognitive (Ramey & Ramey, 1998; Shonkoff & Phillips, 2000) benefits of early education. Moreover recent research shows young Hispanics are particularly positioned to benefit from prekindergarten involvement (García & González, 2006; Gormley, Gayer, Phillips, & Dawson, 2005) even though, overall, they are less likely to be enrolled than their white, Asian, and African

American peers (Garcia & Jensen, 2007).

The general academic benefits of participation in prekindergarten programs have been documented repeatedly, yet the sizes of the effects vary across programs and between racial/ethnic groups. Indeed, an evaluation of the public prekindergarten program in Tulsa, Oklahoma found that while benefits for all racial/ethnic and SES groups were found, gains for Hispanic students in letter-word identification, spelling, and applied problem solving were each greater than for African American, Native American, and white children (Gormley, Gayer, Phillips, & Dawson, 2005). Yet no discussion was rendered concerning the curricular or instructional strategies that generated these results or their impact over time.

What are policymakers to do?

The below recommendations are offered to improve educational opportunities for young Hispanics in the U.S. In general terms, they highlight the need for federal and state education policies in early education (i.e., prekindergarten through grade 3[PK-3]) to directly address language development issues, and for curricular and instructional approaches to embrace principles of appropriateness and relevance in early education programs. While available evidence on schooling, language development, and related policy remains limited—particularly in the development and testing of classroom strategies for diverse segments of the Hispanic child population—current evidence suggests rich language environments, dual-language programs, universal prekindergarten programs, and high-quality teachers can improve learning opportunities and outcomes for these children (National Task Force on Early Childhood Education for Hispanics, 2007). Below we touch on each of these areas, offering specific recommendations to the federal, state, and local governments.

We conclude with some thoughts regarding future collaborations between researchers and policymakers to continue to explore and implement effective practices in early education programs. Because the design, testing, and evaluation of programs and strategies can take 10-15 years, we present these recommendations using a long-term (5-20 years) time frame. Ongoing research will entail impact evaluations, implementation evaluations, longitudinal considerations, and analyses of Hispanic subgroups (by parent education, national origin, immigrant generation status, primary language spoken in the home, and other related social factors). Moreover, the extent to which our recommendations are considered and successfully implemented will depend on the collaborative efforts between those who produce knowledge (i.e., researchers) and those

who enact legislation (i.e., policymakers) (Reimers & McGinn, 1997), as well as innovations in approaching research/policy col-

laborations.

The federal government. There are specific activities through which the federal government can improve generally classroom environments of young Hispanic children. These are concerned with implementing evidence-based practices at scale, as well as directed efforts to expand the available

knowledge base of best practices. Here we offer four related recommendations. First, we recommend the federal government underwrite tests of programs designed to produce large increases in the number of culturally knowledgeable preschool and early elementary teachers proficient in English and Spanish. The most fundamental element to the provision of rich language environments and high-quality, dual-language programs across the PK-3 spectrum is high-quality teachers. This means teachers are bilingual, proficient in both English and Spanish, and knowledgeable regarding the cultural and linguistic circumstances of Hispanic families, particularly the educational strengths and needs of their children. Indeed, research shows that the transfer of academic skills between languages is heightened and early achievement outcomes increased for young bilingual and emergent bilingual students when teachers use Spanish in the classroom. The most successful teachers are fluent in both languages, understand learning patterns associated with second language acquisition, have a mastery of appropriate instructional strategies (i.e., cooperative learning, sheltered instruction, differentiated instruction, and strategic teaching), and have strong organizational and communication skills.

Second, we recommend that the federal government fund and experiment with teacher preparation programs to recruit more Spanish-speaking undergraduates and teachers who are trained in second language acquisition to work as language specialists. The responsibility of "language specialists" is to help classroom teachers in schools and preschools with substantial numbers of ELL students to be responsive to their linguistic and academic needs. Language specialists serve as consultants to teachers and aides in the classroom to help ELL students learn and achieve, recognizing and leveraging existent strengths. Having a language specialist in the classroom can also help monolingual teachers make essential links with Spanishspeaking parents. Ongoing relationships with parents are an invaluable resource to connect educational practices between the home and school and thereby increase student engagement and learning (Banks et al., 2007).

Third, we recommend that the federal government (through Head Start, Early Head Start, and other grant programs) continue to explore and expand dual-language (DL) programs. Young Hispanic children should have access to high-quality DL programs (i.e., two-way immersion) which teach English and Spanish language skills through content. Integrating native English and Spanish speakers

> in the same classroom, thereby fostering linguistic and ethnic equity among students, DL programs have been shown to support literacy development in English for Hispanic students without comprising Spanish skills. Moreover, research shows that academic achievement levels of young Spanish-speaking Hispanics as well as their native English-speaking peers enrolled in DL programs are equivalent or, in many cases, superior to outcomes of students in main-

"...current evidence suggests rich language environments, duallanguage programs, universal prekindergarten programs, and high-quality teachers can improve learning opportunities and outcomes...

stream, monolingual classrooms.

The Center for Applied Linguistics (CAL, 2005) offers a set of recommendations to help school personnel establish and maintain high-quality DL programs: a) create and maintain an infrastructure that supports an accountability process; b) use curriculum which promotes and maintains the development of bilingual, biliterate, and multicultural competencies for all students; c) use student-centered instructional strategies derived from research-based principles of dual-language education; d) recruit and retain high quality dual language staff; e) have knowledgeable leadership who promote equity among groups and support the goals of additive bilingualism, biliteracy, and crosscultural competence; f) have a responsive infrastructure for positive, ongoing relations with students' families and the community; and g) be adequately funded and supported by school staff, families, and the community.

Finally, we recommend that the federal government expand the scope of the national and international databases developed to assess student performance. We recommend expanding national, longitudinal studies (e.g., ECLS-B, ECLS-K) to allow for more extensive analysis of Hispanics and other subgroups by national origin, SES (e.g., parent education), nativity, immigrant generation status, and primary language spoken in the home. Additionally, we recommend that U.S. participation in international assessments of student performance be expanded to allow for more detail in monitoring how segments of the Hispanic population compare to students in other nations, particularly Latin American countries of origin. In many cases this means sampling at the state level and oversampling for Hispanics.

Commentary

"Early Educational Opportunities for Children of Hispanic Origin" By Robert Crosnoe

The authors of this report have done a great service to the membership of SRCD by laying out an argument for the critical need to assess the life prospects of children in the growing Hispanic population of the U.S. in ways that inform policy. In sheer demographic terms, the time has definitely come for such children to take their place at the center of research and policy action. In this spirit, I want to expand on what Garcia and Jensen have written and give an additional push to readers.

First, the focus of this report on young Hispanic children is entirely appropriate for very practical reasons. The policy importance of this age range is rooted in the notions of critical periods of intervention and rates of return to investment. Put simply, my own work (2006) and those of others (Gormley, Gayer, Phillips, & Dawson, 2005) suggests that early educational and health disparities related to Hispanic (and Hispanic immigrant) status are more malleable than they will later be after the highly cumulative effects of social institutions, environmental conditions, and differential opportunity have taken hold. This pattern lines up with a growing consensus in psychology, economics, and other fields (e.g., Heckman, 2006) that efforts to support historically disadvantaged child groups have the biggest payoff when targeted at the young.

Second, I would add a fourth issue to the authors' list of reasons why Hispanic children are important to study: family socioeconomic status (SES) as a fundamental cause of race/ethnic disparities. Although, as the authors note, controlling for SES does not eliminate many of the disparities related to Hispanic status, it certainly reduces them. Indeed, in most population studies, SES provides as much explanatory power as language proficiency, if not more (Glick & White, 2003). At the very least, the two are highly conflated. Driving home the point that Hispanic children are the most socioeconomically disadvantaged group in the U.S., therefore, is one way to make the case for why studying them is so policy relevant, especially in times of economic crises such as these.

Third, in a similar vein, research in this area needs to keep the focus on the explicit ways that the outcomes of the child generation in this population are inextricably tied to the circumstances of the parent generation. Taking education as an example, how are the educational trajectories of parent and child connected to each other? Considering such questions illustrates why policy recommendations need not concern only interventions targeting children. Instead, we can also think of mechanisms though which improving parents' lives may help kids, keeping in mind, of course, the disproportionately low rates of engagement of Hispanic parents in public assistance and the exclusion of many Hispanic immigrants from such programs.

Fourth, the multidisciplinary nature of this enterprise cannot be overstated. As someone who travels between social demography and developmental psychology, I am always amazed at how adept demographers are at elucidating the details of the migration process of many Hispanic families and how good developmentalists (many in education) are at elucidating the processes of adaptation that newcomer Hispanic youth and parents undergo once here. These two literatures rarely speak to each other. As a result, the migration process is not tied to the developmental process, and that is a mistake. Put simply, the disconnect between population and developmental perspectives—which extends beyond the immigrant subset of the Hispanic population—undercuts our ability to craft policy to help.

Garcia and Jensen have started a valuable conversation here, and it is one to which SRCD members can contribute. The issue at hand could not be more timely.

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Commentary

"Early Educational Opportunities for Children of Hispanic Origin" By James A. Griffin*

Garcia and Jensen have outlined a cogent case for the "demographic imperative" that Hispanic children ages 3-8 years pose for the American educational system, including but not limited to their diverse immigration histories and linguistic profiles. The authors make it clear that these children are not a homogenous group, and that research, policy and practice must address the multi-faceted opportunities and challenges that characterize this demographic group. However, when it comes to the youngest segment of this group, Garcia and Jensen have not gone far enough in terms of documenting the needs of these children, the paucity of research on effective interventions, and the implications for research, policy and practice.

First, findings from the Early Childhood Longitudinal Study - Birth cohort (ECLS-B) suggest that disparities between White and Hispanic children emerge by 24 months of age (Hillemeier, Farkas, Morgan, Martin, & Maczuga, in press), and that they persist through 48 months (Chernoff, Flanagan, McPhee, & Park, 2007). Some of this gap may be attributable to being children of immigrants (Nord & Griffin, 1999), but nonetheless bodes poorly for later academic achievement.

Second, Hispanic children are under-represented in both the Head Start program and center-based child care, and are much more likely to have no regular non-parental care arrangement (27.2%) than are other ethnic groups (Chernoff et al., 2007). This makes it less likely that they will receive explicit help with the development of school readiness skills, and may limit their exposure to languages other than Spanish.

Third, although Garcia and Jensen document the extensive body of research conducted with English Language Learners (ELL), and at least some of these educational interventions meet stringent methodological standards (http://ies.ed.gov/ncee/wwc/reports/english_lang/topic/), few of these studies included preschool-age Hispanic children (August & Shanahan, 2006). Both the Early Head Start and Head Start impact studies conducted subgroup analyses by ethnicity and found that both programs demonstrated small to no impacts for Hispanic children (Administration for Children & Families, 2002; 2005). There is evidence that center-based child care may improve the school readiness skills of Hispanic children, but this effect is limited to those who are English proficient (Loeb, Bridges, Bassok, Fuller, and Rumberger, 2007). Finally, at least one carefully controlled study has failed to find a difference between a dual language two-way immersion and an English immersion preschool education program (Barnett, Yarosz, Thomas, Jung & Blanco, 2007).

Fourth, with the notable exception of the Development of English Language Literacy in Spanish Speaking children (DELLSS) research consortium funded in 2000 by the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) and the U.S. Department of Education (ED) (http://www.cal.org/delss/), few major research initiatives have targeted this population, and Hispanic ELL children were often systematically excluded from early childhood surveys and research studies. There are multiple reasons for this exclusion, including lack of equivalent measures in the child's home language and difficulty in recruiting bilingual research staff to do parent interviews and child assessments. In order to begin addressing this need, NICHD, in partnership with the Administration for Children and Families (ACF), is funding a multi-site research consortium to conduct experimental efficacy trials on integrative early childhood preschool programs that promote school readiness for children ages 3-5 who are English Language Learners (ELL) and at-risk for later school difficulties.

Garcia and Jensen have sounded a call to action to researchers, policy makers and practitioners to address the early educational opportunities of children of Hispanic origin. As this commentary makes clear, it is critically important to add to their call that those opportunities must start early. A great deal of basic, translational and applied research is needed to provide an evidence base to guide policy decisions and inform educational practices, and this need is especially great for preschool age Hispanic children.

*The opinions and assertions herein are those of the author and should not be construed as representing the policies of the NICHD, the National Institutes of Health, or the U.S. Department of Health and Human Services.

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State governments. Our recommendations to state governments are also concerned primarily with improving the delivery of early education practices, yet improved data collection efforts are also needed to evaluate the successful implementation of early education programs and practices. In most cases the sort of work needed from state governments necessitates meaningful collaborations with school districts and other community-based organizations. First, we recommend state governments collaborate with local communities to offer high-quality educational experiences with a variety of schedule options. Young Hispanic children ages 3 and 4 years should be given access to free, state-funded preschool whose enrollment is done on a volunteer basis. Evidence suggests that high-quality prekindergarten programs improve school readiness for

young Hispanic children and decrease achievement differences between racial/ethnic groups at kindergarten entry. As mentioned, these programs should have bilingual and culturally competent staff to effectively engage students and to develop sustainable relationships with family members. As Hispanic enrollment in preschool programs remains low compared to other racial/

Young Hispanic children ages 3 and 4 years should be given access to free, state-funded preschool whose enrollment is done on a volunteer basis.

ethnic groups, state governments would be particularly wise to work alongside Hispanic organizations and other local institutions to provide information to parents on these programs, and encourage meaningful collaborations between the home and school.

In states where access to state-funded prekindergarten is not yet universal—i.e., available to all children—policy-makers and program administrators should expand definitions of eligibility to include children with limited English proficiency (LEP). This should be an intermediate step, intended to increase Hispanic enrollments and serve more at-risk children until the larger goal of universal access is attained. Where possible, summer programs should be developed and instituted.

Second, we recommend state governments provide pay and benefits to qualified preschool teachers that are equal to those of public school teachers. This would provide the economic incentive to recruit and maintain a well-educated, reasonably stable group of preschool professionals. Again, high-quality teachers to young Hispanic children are fluent in both languages, understand learning patterns associated with second language acquisition, have a mastery of appropriate instructional strategies, and have strong organizational and communication skills. With these skills, teachers are able to interact with Hispanic parents appropriately and encourage them to engage in literacy-related activities with their children in the home. Moreover, bilingual teachers are better able to find out details concerning students' language and educational backgrounds, and, therefore, to develop creative and accurate assessments of Hispanics children's linguistic ability and progress.

Third, along with the federal government, we recommend that state governments continue to fund and

experiment with teacher preparation programs to recruit more Spanish-speaking undergraduates and teachers who are trained in second language acquisition to work as language specialists. As mentioned previously, the responsibility of language specialists is to help classroom teachers in schools and preschools with substantial numbers of ELL students to be responsive to their linguistic and academic needs.

Fourth, we recommend that state governments establish information systems to be used by school districts and state education departments to disaggregate their students into subpopulations defined simultaneously in terms of race/ethnicity, parent education level, family income, immigrant generation status, national origin, and primary language spoken in the home. With this informa-

tion states could monitor the academic progress of student subpopulations more effectively. Moreover, longitudinal data can assist evaluation efforts of program (and policy) effectiveness over time, and determine importance differences across mentioned student background variables.

Local governments. As Hispanic enrollment in preschool programs remains low compared

to other racial/ethnic groups, and there is a substantial gap between what we currently know to be best educational practices for young Hispanics and what is actually implemented in schools throughout the country; local governments (including school districts and other community organizations) should serve as liaisons between families and state governments. To this end, we offer three recommendations. First, we recommend that local governments collaborate with state governments and the federal government to provide information to parents on PK, Head Start, and Early Head Start programs in order to increase Hispanic enrollments. Continuing to increase preschool enrollment remains important considering available evidence demonstrating improvements in school readiness for young Hispanic children, and decreases in achievement differences between racial/ethnic groups at kindergarten entry.

Second, local government should propose plans to governments on particular strategies to develop the workforce needs. Suggestions from the community to improve teacher recruitment, for example, could serve as a means to engage the families and local institutions on ways state governments might increase the number of high-qualified teachers and language specialists. The mere engagement between families, schools, local, and state governments is meaningful.

Concluding comments—A word on innovation

We hope that the data shared, interpretations rendered, and the stated recommendations provide sufficient impetus for the federal, state, and local governments to give serious consideration to the educational well-being of young Hispanic children in this country. With our best efforts, improvements occur incrementally. The design, testing, and evaluation of programs and strategies require calculated investment and time. Moreover, successful implementation

of programs and practices are facilitated as research and policy initiatives are pursued jointly. We remain optimistic that innovative collaborations can expedite improved academic performance among young Hispanic children and, therefore, the "intergenerational mobility" of the largest racial/ethnic minority group in the country. We conclude by offering some recommendations for innovative research, including activities in which non-governmental actors (i.e., private foundations, Hispanic organizations, and education researchers) might involve themselves.

In addition to the recommended research agenda to the federal government at state governments, we recommend private foundations fund long-term efforts to design, test, and evaluate language and academic development strategies for Hispanic children in preschool through 3rd

grade from all SES groups (particularly across levels of parent education and immigrant status). These include systematic, value-added studies to explore, develop, and determine the efficacy and scalability of instructional and curricular approaches. In order to maximize the chances of determining if the strategies are able to contribute to improvements in school readiness at scale, formal grant

programs should be designed to provide ten or more years of support for promising approaches. Additionally, private foundations should seriously consider creating two or three new foundations specialized in funding these areas, thereby ensuring that sustained investments in strategy development are made in the long term. These new foundations would be chartered to support strategy development for other groups that continue to lag academically, in addition to Hispanic children.

Hispanic organizations (and other community-based organizations) should assist all levels of government and private foundations to carry out the stated objectives. A major contribution of these organizations will continue to be their function as a liaison between families and institutions, including research bodies, government departments, and schools. They should shine as leaders in providing literacy development information, materials, and other support to parents and families of all SES segments. Moreover, assuming their near connection with the concerns and needs of families, they should be intimately involved in the process of program design, testing, and evaluation. Contributions from Hispanic organizations could be especially beneficial in exploring proposals to increase the number of highly-qualified teachers to serve Hispanic children.

In many ways, educational researchers should be at the cutting edge of innovation. While funding structures and program implementation fall on the shoulders of policymakers and practitioners, the production of new knowledge and new approaches which provide opportunities for continued improvements is a task typically afforded to researchers. Their role in carrying out the aforementioned recommendations is indispensable. Researchers are to propose specific combinations of tests of curricular and instructional approaches (English-plus-Spanish) to improve

learning opportunities for different segments of the Hispanic population. Moreover, they are to propose tools and methods to evaluate the use of language specialists in the classroom and to evaluate the scalability of recommended strategies once developed and determined effective and replicable.

In conjunction with methodological and empirical advances, a robust sociocultural framework is desperately needed to explain differences in student engagement and learning while providing straight-forward implications for teaching (Nasir & Hand, 2006). This work requires greater collaboration across academic disciplines, to understand how, for example, family background information (e.g., migration history) is associated with learning and adaptation processes of Hispanic children and families. Without interdisciplinary work, and robust theoretical frameworks

to make these sorts of connections, our ability to craft helpful policies is limited. A sound sociocultural framework, moreover, has the capacity to strengthen research-practice networks. That is, a systematic understanding of educational practices in the home can lead to improved fit between home and school prac-

tices, which can animate meaningful parental participation and increase student learning.

As mentioned in the body of this paper, children of Mexican origins represent the largest group of Hispanic children nationwide. Performance measures show Mexican-American children learn less than other Hispanics (Crosnoe, 2006), except those of Central American origins who demonstrate similar achievement patterns.

An approach of growing interest to develop improved educational practices and student learning opportunities during the early years of schooling (and across the PK-12 spectrum) is through binational collaborations between researchers, practitioners, and policymakers in the U.S. and Mexico (Jensen, 2008b). To date, the Foreign Affairs Office of the Mexican government has launched a number of programs (including teacher exchange, online courses, community plazas, the "transfer document", among others) to enhance educational opportunities for Mexicans living in the United States (Gándara, 2008). A preliminary study of these programs found they have a great deal of potential to serve Mexican American children and families (not to mention the expansion of binational cooperation in education), but are constrained by low visibility, inadequate funding, poor integration with U.S. institutions (particularly the schools), and limited research and evaluation (Gándara, 2008). Ongoing study of programs like these, in addition to other binational initiatives, provide opportunities to explore, develop, and determine effective and scalable strategies to increase school engagement and learning for Mexican-American children, and is an example of the sort of innovation needed to enhance early educational opportunities for at-risk subgroups of Hispanic children in this country.

Table 4. Recommendations

We recommend that state governments:

- collaborate with local communities to offer high-quality educational experiences with a variety of schedule options
- provide pay and benefits to qualified preschool teachers that are equal to those of public school teachers
- continue to fund and experiment with teacher preparation programs to recruit more Spanish-speaking undergraduates and teachers who are trained in second language acquisition to work as language specialists.
- establish information systems to be used by school districts and state education departments to disaggregate their students into subpopulations defined simultaneously in terms of race/ethnicity, parent education level, family income, immigrant generation status, national origin, and primary language spoken in the home

We recommend that local governments:

- collaborate with state governments and the federal government to provide information to parents on PK, Head Start, and Early Head Start programs in order to increase Hispanic enrollments
- propose plans to governments on particular strategies to develop the workforce needs

We recommend that Hispanic and community organizations:

- assist all levels of government and private foundations to carry out the stated objectives
- function as a liaison between families and institutions, including research bodies, government departments, and schools.

Table 5. Recommendations

We recommend that private foundations:

- fund long-term efforts to design, test, and evaluate language and academic development strategies for Hispanic children in preschool through 3rd grade for Hispanic children from all SES groups (particularly across levels of parent education and immigrant status)
- design formal grant programs to provide ten or more years of support for promising strategy development
- seriously consider creating two or three new foundations specialized in funding these areas.
 These new foundations would be chartered to support strategy development for other groups that continue to lag academically, in addition to Hispanic children

Finally, we recommend that educational researchers:

- propose specific combinations of tests of curricular and instructional approaches to improve learning opportunities for different segments of the Hispanic population
- propose tools and methods to evaluate the use of language specialists in the classroom
- evaluate the scalability of recommended strategies once developed and determined effective and replicable
- develop a robust sociocultural framework is to explain differences in student engagement and learning while providing straight-forward implications for teaching
- continue to explore innovations such as binational initiatives

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