# MAKING EDUCATION WORK FOR LATINAS IN THE U.S.



Patricia Gándara, UCLA with Leticia Oseguera, Lindsay Pérez Huber, Angela Locks, Jongyeon Ee and Daniel Molina

Commissioned by the Eva Longoria Foundation
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This study examines the existing knowledge base about promoting Latina educational success, defined as completing high school and then going on to secure a college degree. It also adds to the existing research by examining two large data sets, one national, and one California-based, for predictors of successful educational outcomes for representative samples of Latina youth who have recently been in high school and college. Finally, after identifying important predictors of success from the existing literature and the examination of current data, the study incorporates case studies of seven young Latinas who illustrate the pathways of women who are finding their way to educational success through high school, community college, and four year universities. Their stories provide a deeper understanding of the challenges that young Latinas encounter in our culture, as well as the promise they represent.

In doing the study we confirmed many things that we thought we knew, or that were true for other groups, but we did not know if they had an equivalent impact on Latinas, such as holding a strong personal belief in graduating high school and going to college and being involved in extracurricular activities in high school. Both predict for positive outcomes for this population. While studies have suggested that some kinds of extracurricular activities in high school probably increase the chances of graduating and going on to college for non-Hispanic white students, involvement in extracurriculars turned out to be especially powerful for all of the women we interviewed. This appears to be related to developing a sense of "belonging" at school, something we found to be missing for many Latinas, and which confirmed earlier studies we have done.

We also found some surprises: having Latino/a teachers/counselors predicts for going on to college for Latinas (but not necessarily for Latino males), having good math scores in elementary school, and being bilingual are also both predictors of college going.

#### I. INTRODUCTION

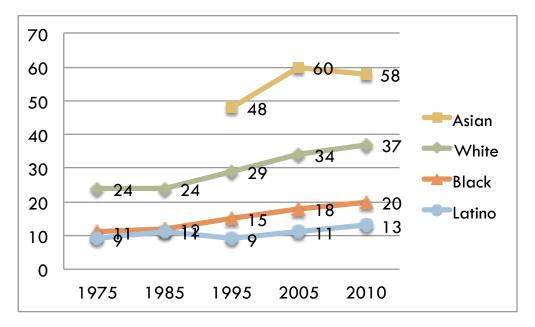
The future of the United States is intimately bound up with the welfare of the Latina/o¹ population. Now the nation's largest "minority" group, Latinas/os are the majority of all students in California, Texas, and New Mexico, and in 17 states more than 16% of the youth population is now Latino/a (EPE, 2012). The economies of those states, and increasingly the nation as a whole, are dependent on how well we are able to educate these youth (Belfield & Levin, 2007). And to date, the news has not been good. On average, Latina/o children begin school significantly behind their white and Asian peers, and the gaps in achievement continue to mount across the grades (Gándara & Contreras, 2009). Although Latina/os graduate high school at somewhat higher rates than Native Americans or Blacks, their college completion rates remain significantly lower (EPE, 2012; Gándara & Contreras, 2009).

In spite of a numeric increase in college enrollment nationally, there is actually a decline in the percentage of Latina/o students who enroll in college as a proportion of their population (Harris & Tienda, 2012). Moreover, when Latina/os do go to college, they tend to enroll in colleges that are less selective than those they actually qualify to attend, and where they would be more likely to actually complete a degree (Fry, 2004).

<sup>&</sup>lt;sup>1</sup> We generally use the term Latina/o to refer to both men and women. We use the term Latinos to refer to men and the term Latinas to refer to women. We rarely use the terms Chicana or Hispanic except where doing so clarifies the populations of interest in summaries of an author(s) work.

The more selective the college, the greater is the probability that students will complete college and earn a degree, even when controlling for measures of academic qualifications (Bowen, Chingos & McPherson, 2009; Meguizo, 2008; Alon & Tienda, 2005). Nonetheless, Latina/os are most likely to enroll in non-selective two-year colleges where the chances of transferring and gaining a degree are remote (Gándara et al, 2011). Unfortunately, many Latina/os have little knowledge of the differences among institutions and often consider community colleges as equivalent to highly selective universities with respect to the opportunities they offer. This lack of information and understanding is dangerous: college completion rates have been nearly stagnant among Latina/os over the last four decades. In spite of dramatic growth in the Latina/o population, only about 13% of Latinos had achieved a BA degree by age 29 in 2010 while the comparison percentage for Asians was 58% and for Whites was 37%. African Americans also lag seriously behind in college degrees, but their trajectory has been consistently upward, reaching 20% in 2010; this has not been the case for Latina/os, who have barely increased BA completion by 4 percentage points since 1975.

Percent 25-29 year olds with BA or More by Race and Ethnicity



# Why focus on Latinas?

Latinas now tend to graduate both high school and college at somewhat higher rates than their male counterparts— a recent report found that a third (34%) of Latinas did not graduate with their class, while 42% of Latinos failed to do so (EPE, 2012). Also, when examined by gender, Latinas actually enroll in college at higher rates than Latinos as well (Zarate & Burciaga, 2010). If Latinas are faring better than their male counterparts, why focus on Latinas? The simple answer is that although they perform somewhat better than Latinos academically (females now perform better across all ethnic groups), Latinas are faring much more poorly than their white and Asian counterparts and their progress has been extremely slow. It is also true that Latinas are the linchpin of the next generation — how a child fares in school is highly correlated with mother's education. If the cycle of under-education is to be broken for the Latino 5

population, it is highly dependent on changing the fortunes of young women. We also know that young women in Latino families face different challenges than young men, and interventions to improve the academic outcomes for Latinas must pay attention to these gender differences.

In traditional Latina/o culture, young women were not afforded equal opportunities to get an education; if the family's limited resources did not allow all of the children to pursue an education beyond the minimum, males were given preference. Moreover, young women's roles in the home as childcare providers and "homemakers in training" frequently precluded attending school through high school graduation (Becerra, 1998; NWLC, 2009). Even when young women excelled in school, families were reluctant to allow their daughters to go away to college, thus dampening their aspirations and providing less of a reason to focus on schooling (Ginorio & Huston, 2001). More recently, however, traditional norms have been shifting with increases in urbanization and roles for women outside of the home (Becerra, 1998). Such gender roles for Latinas have changed as even many immigrant Latinas/os have adapted to U.S. educational norms and expectations and opportunities for young men and young women are more equalized (Becerra, 1998). Nonetheless, Latinas/os in general do maintain very strong family ties and obligations, and the needs of family often interfere with pursuing education. The fact that two-thirds of Mexican origin youth live in lowincome families (EPE, 2012) and at least one-third exist below the poverty line means that many must sacrifice their own ambitions for the welfare of the family. Young men often feel an obligation to forgo school to earn a paycheck, while for young women this

may mean staying home from school to look after siblings, do housework and prepare meals while parents work. It may also mean missing school to serve as translator for parents who cannot communicate with doctors and official entities. But this is only part of the equation. Broader societal constructions of Latinos, and Latinas in particular, also affect young women's success in school. Stereotypes of Latinas as passive underachievers still abound (NWLC, 2009), and this can contribute to a feeling of "not belonging" at school (Gándara, O'Hara & Gutiérrez, 2004).

### **Heterogeneity in the Latina/o Population**

It is important to note the diversity existing within the Latina/o population of the U.S., as individuals subsumed under this pan-ethnic term represent different countries of origin, diverse religious, economic, and political orientations, and various periods of immigration to the U.S., as well as some language and other cultural variances (Oboler, 1995). Nonetheless, while significant differences exist among Latino subgroups, most Latinos come from just two major groups. The largest Latino subgroup is Mexican origin, representing two-thirds (64.9%) of the total Hispanic category, followed by Puerto Ricans with 9.2% of the total (Gándara & Contreras, 2009). Thus nearly three-quarters of the Hispanic or Latino population comes from one of these two groups, which tend to be the groups with the lowest socio-economic status. For example, nearly 70% of Mexican immigrant mothers and nearly one quarter (23.7%) of Puerto Rican mothers did not have a high school education in 2000, compared to just 20% of Cuban or South American mothers (Hernandez, Denton & McCartney, 2009). These differences in parental education have enormous consequences for how children fare in school,

regardless of parents' educational aspirations for their children, which in fact, tend to be very high. A poll taken in 2010 of a nationally representative group<sup>2</sup> of Hispanic parents indicated that 94 percent expected their children to attend college (NORC, 2010). Yet poverty and lack of experience with the U.S. school system take a heavy toll on these aspirations.

Most Latino youth (about 77%) are native born American citizens, but a very large portion (about 6 in 10) has immigrant parents (Passel, 2011), and those students with immigrant parents are very likely to speak Spanish as their first language when they arrive at school. These students can face significant educational challenges in a country that provides few opportunities to learn in any language other than English (Gándara & Hopkins, 2011). English learners (ELs) fare more poorly in school than any other category of students (except special education students) and have even lower rates of high school graduation and college attendance than Latinos generally (Gándara & Hopkins, 2011). There does, however, exist a phenomenon referred to as "the immigrant paradox" (Suárez-Orozco, Suárez-Orozco & Todorova, 2010; Kao & Tienda, 1995), in which many immigrant students tend to perform better in school than their native born counterparts in spite of the significant challenges these immigrant students face. Some researchers explain this phenomenon by noting that immigrant families tend to be more optimistic than minority families mired in poverty in the U.S. for generations. Immigrant children are often given the message their parents have suffered tremendous

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<sup>&</sup>lt;sup>2</sup> Poll conducted by the National Opinion Research Center (NORC) at the University of Chicago from March 11 to June 3, 2010 and included 1,521 adults who identified as Hispanic.

hardships to relocate the family because there are more opportunities here than in the parents' country of origin, thus reinforcing their achievement drive. There is also evidence that children of immigrants are more influenced by the traditional culture of their parents, and as a consequence are more likely to adhere to the restrictions their parents place on their behavior, which include staying out of trouble and "making their parents proud" (Suárez-Orozco & Suárez-Orozco, 2005).

# II. WHAT DOES RESEARCH TELL US ABOUT LATINA EDUCATIONAL SUCCESS?

Because most of the enormous body of research conducted on factors associated with school achievement has not focused on—or even included—Latinoa/s, it is important to first briefly review what is known about positive educational outcomes for all students, then ascertain which of these factors appear to be also predictive of educational success for Latina/o students, and finally examine evidence for Latinas in particular, which is a much smaller set of studies. It is also important to separate the factors that lead to successful high school completion from those that lead to college going, as these factors can, and do, differ in some cases.

#### High school graduation

Rumberger and Lim (2008) provide a comprehensive review of the past 25 years of research on high school completion. They argue that the literature converges on two types of factors that are associated with completing high school: 1) student background characteristics as well as individual or student-level characteristics, such as educational

performance, values, and beliefs; and 2) institutional characteristics, specifically aspects of the schools that students attend as well as the communities they grow up in.

#### Student characteristics

With respect to students' background and characteristics, research consistently finds an extremely strong relationship between parents' income and education (usually referred to as socio-economic status or SES) and student educational outcomes. For example, students from middle class backgrounds are more likely to complete high school than are students from poverty backgrounds, even controlling for high school grades (NCES, 2007; Rumberger, 2001) and this holds for Latina/os as well (Rumberger & Rodriguez, 2011). Poverty is a major factor in high school completion, as economic hardship in the home can be related to increased health problems that lead to school absence and falling behind academically (Berliner, 2006), which is a major reason that students give for dropping out (Rumberger, 2011). A host of other problems ensue from poverty such as lacking vision correction or appropriate clothing, or socializing experiences that other children take for granted (such as vacation travel), thus marginalizing many poor students and making them feel that they don't "belong" in school (Osterman, 2000). Gándara, O'Hara and Gutiérrez (2004), in a study of students' aspirations in urban and rural schools, found that the lack of a sense of belonging was especially acute for Latinas, where up to one-third reported feeling that they "did not belong" at their school.

Researchers have found a relationship between extracurricular involvement, a sense of belonging, and academic outcomes. High school students who are involved in 10

extracurricular activities are more likely to remain in school (Davalos, Chavez & Guardiola, 1999; Mahoney & Cairns, 1997), develop stronger bonds with their teachers (Fletcher & Brown, 1998), identify with school (Marsh & Kleitman, 2002), and have more positive academic trajectories (Brown & Theobald, 1998; Eccles & Barber, 1999). Additionally, participation in sports and clubs is correlated positively with higher grades, higher aspirations, higher levels of self-esteem, and improved race relations (Brown & Theobald, 1999; Holland & Andre, 1987; O'Brien & Rollefson, 1995). It has been argued that participation in these extracurricular activities leads students to acquire comparatively greater human and social capital (Flores-Gonzalez, 2002; Quiroz, Flores-Gonzalez & Frank, 1996), and that low-income students appear to benefit from these activities even more than their middle class peers (Marsh & Kleitman, 2002). But there is also evidence that low-income students (Eckart, 1989; McNeal, 1998), as well as Latina/os (Ream & Rumberger, 2008) are less likely to participate in such activities. The reasons for their lower rates of participation include lack of discretionary time and money, as well as transportation problems and family needs, but not feeling included is also an important reason given. For example, in our research we have heard complaints from Latina/o students that school activities are organized around white students' preferences and so big rallies are held for football games, but hardly anyone goes to the soccer games (where the Latino/a students are the stars), or dances include music that the white students prefer, but don't consider what kind of music the Latina/o – especially immigrant—students would like (Gándara, O'Hara & Gutiérrez, 2004).

Broh (2002), however, notes that there is scant literature on the effects of extracurricular engagement on academic outcomes for different subgroups, such as Latina/os:

"Overall . . . there have been few strong theoretical and empirical examinations of participation and its educational consequences for students from different economic, racial, and gender groups, thus warranting further examination of how students' characteristics moderate the experiences of participating in sports and other high school activities (p. 87)."

Yet others have found at least a tentative relationship between extracurricular involvement in sports in high school and decreased chances of dropping out for both non-Latino white and Mexican American students, though they do not examine gender differences (Ream & Rumberger, 2008). Ream and Rumberger (2008) argue that the reason extracurricular activities tend to reduce drop out is because these activities provide friendship groups that are more oriented to school, and having friends with higher educational aspirations reduces dropping out. There remains a lack of strong findings, however, for the effect of arts activities (e.g., band, orchestra, theater) on academic outcomes. We speculate that this is because effects may vary considerably among different types of arts and that the data sets examined may lack sufficient specificity and sample size to pick up these differences.

For Latina/os, language may also be a factor in completing high school. A study by Rumberger and Larson (1998) followed the educational trajectories of "at risk" Latina/o middle school students, and found that low-income Latina/o students who spoke both Spanish and English were more likely to be on a trajectory for high school

completion than Latina/o students that spoke only English. The researchers related this finding to the immigrant paradox explanation mentioned earlier, since most students who were bilingual were from immigrant households. Other researchers have also found an advantage in high school graduation, and college going, among Latina/o students who are bilingual. Feliciano's (2005) study of immigrant students across ethnic subgroups found that bilingual students are less likely to leave high school compared to students who live in English-only homes or those in limited English-only homes. Lutz (2004; 2007) has found this same advantage for Latina/os specifically.

Students' own values are also strong predictors of educational success and high school completion. Students who believe it is important to finish high school are more likely to do so. Using data from the National Survey of Children, South, Baumer, and Lutz (2003) found that even low SES students with high expectations for themselves complete high school at higher rates than those students with lower expectations.

These high expectations are also associated with earning higher grades for all students, and for Latina/os more specifically (Caldwell, Wiebe, & Cleveland, 2006; Waxman, Padron, & Garcia, 2007). It may be that students who experience success in school, as evidenced by higher grades, also have a stronger sense of self-efficacy and control of their environment, which in turn can promote the idea that college is a viable option for them. Ou & Reynolds (2008) found that students' expectations of attending college also predict high school completion.

A serious impediment to high school graduation within the Latino community is adolescent pregnancy. Teen pregnancy is higher among Latinas than any other ethnic 13

group (Hamilton, Martin, & Ventura, 2007; Ventura, Abma, Mosher, & Henshaw, 2007). Ryan, Franzetta, and Manlove (2005) found that Latinas are twice as likely to have a child during adolescence compared to non-Latina females, and only half of these young mothers earn a high school diploma by their early 20s (Perper, Peterson, & Manlove, 2010). Driscoll (2005) found that supporting and raising the college aspirations of Latinas can help to delay childbearing, as those with higher aspirations are less likely to give birth while in high school. Additionally, Latinas (and others) who have post-secondary aspirations are less likely to have an early pregnancy than those young women who do not hold such aspirations (Beutel, 2000). Studies also show that having a child during adolescence diminishes young women's confidence about completing high school as well as lowering their aspirations to attend college (Young, Turner, Denny, & Young, 2004).

In a survey of Latina/os in new immigrant arrival states conducted by Behnke and colleagues (2010), gender differences emerged with respect to the reasons students provided for why they did not complete high school. More girls than boys perceived personal problems such as pregnancy (81% versus 68%) and not feeling a part of the school (46% versus 18%). Girls were slightly less likely to cite academic problems than boys (50% versus 58%). A slight majority (51%) of both girls and boys selected "discrimination/racism from other students" as the major problem they faced at school followed by "violence/drugs/gangs" (42%). Of course, this study took place in areas where Latino immigration is new, and so the students' experiences may differ in kind or quantity from areas of the country with established Latino populations. Nonetheless,

the gender differences in responses remain instructive, and consistent with other studies.

Mother-daughter programs appear to be one effective response to raising the aspirations of young Latinas and increasing their chances of completing high school and going to college. (And these programs can be equally powerful for the mothers who participate and sometimes decide to go back to school themselves.) A model program has been set up at the University of Texas at El Paso that has shown promising results (Tinajero, 1992). Sixth grade girls are paired with their mothers in a year-long program in which they are exposed to many options to help the young women begin to identify educational and career goals *before* they have made unhealthy choices about their schooling and personal lives.

#### Institutional characteristics

With respect to institutional characteristics, perhaps the most consistent finding in the research literature is that school composition—peers in the school—has the most powerful effect on student outcomes (Rumberger, 2011; Coleman et al, 1966). Research shows that youth with friends who have dropped out of school are much more likely to drop out themselves (Ellenbogen & Chamberland, 1997; Rumberger & Thomas, 2000) and this extends to Latina/o youth as well (Hess, 2000; Velez & Saenz, 2001). Peers not only have a direct influence on each other through day-to-day interactions, but they represent the resources and social capital of their families, which have indirect effects on the quality of the schools by dictating the standards held by the school and

determining the kinds and amount of additional resources that families may be able to contribute to the school.

Several studies have also found a strong relationship between institutional resources and high school completion for low-income students (Rumberger, 2011); schools with less qualified teachers and those that offer fewer rigorous courses tend to have lower graduation rates, as do those with lower income peers (Rumberger, 2011; Orfield & Lee, 2005). Schools that serve low-income students also tend to have high faculty and administrator turnover (Orfield & Lee, 2005). In one recent study (Zárate & Zaragoza-Petty, 2013) interviews with young Latinas suggested how such turnover affects the possibility of developing any relationship with teachers: "[S]everal described chronically absent teachers or a string or substitutes . . . "My sophomore year . . . I never had a teacher in World History. . . . We would have security watch us or we would get substitutes that would show us a movie (p. 25)."

Highly segregated schools also tend to have lower graduation rates than schools that offer a diverse mix of students (Balfanz & Legters, 2004). And, students who live in high poverty neighborhoods are less likely to complete their secondary education than their counterparts who grow up in a higher mean income neighborhood, even after controlling for family structure, income, and parents' education level (Harding, 2003). This is partly due to a higher incidence of residential and school mobility among these youth (Rumberger & Larson, 1998; Swanson & Schneider, 1999), but is also related to the "distractions" found in such neighborhoods, which have been referred to as "high

risk settings" (National Research Council, 1993). There is no evidence that Latina/o students are immune from these effects.

Catholic schools tend to have higher levels of high school completion even after controlling for student socioeconomic characteristics (Altonji, Edler, & Taber, 2005; Bryk, Lee, & Holland, 1993). While there is considerable debate about the factors associated with Catholic school attendance that cannot be controlled for, such as parental commitment to students' education, Rumberger (2011) argues that the Catholic school advantage may stem from a "stronger and more egalitarian academic program and their stronger sense of community" (p. 196). One way that community is built in these schools is through the heavy emphasis on extracurricular activities for all students and the requirement that teachers also direct these activities so that students interact with their teachers outside of the classroom (Aldana, 2012; Bryk, Lee & Holland, 1993). Catholic schools have also played an important role in the educational success of Latina/o and other minority students, though there is little in the literature about the specific effects on Latinas (Evans & Schwab, 1995).

Perceptions of ethnic discrimination appear to also play a role in Latino/a students' high school graduation. Research indicates that experiences of discrimination influence Latina/o students' academic motivation, grades, school engagement, school stress, and likelihood of graduating (Alfaro, Umana-Taylor, Gonzales-Backen, Bamaca, & Zeiders, 2009; DeGarmo & Martinez, 2006; Stone & Han, 2005; Szalacha et al., 2003). Increased perceptions of discrimination also have been associated with perceptions of lower school belonging and less supportive teaching environments (Stone & Han, 2005).

Moreover, a large body of research shows conclusively that stereotype threat, the belief that based on racial or ethnic stereotypes, others' may think one is less intelligent, can lead to lowered academic performance among African Americans and Latinos (Steele, Spencer & Aronson, 2002; Aronson & Salinas, 2001). Thus, perceived discrimination or stereotyping can result in lower performance, which, in turn, can affect schooling outcomes. Moreover, poor perceptions of school climate are related to lower academic performance, school persistence, and school engagement for Latina/o youth (Benner & Graham, 2011; Eamon, 2005; Gloria, Castellanos, Lopez, & Rosales, 2005; Martinez, DeGarmo & Eddy, 2004; Stone & Han, 2005).

In sum, many of the factors that contribute to high school drop out are typical of the schools that most Latina/os attend. Latinas/os are, by and large, educated in the lowest performing, and lowest resourced schools in the nation. These schools consistently have less qualified and less experienced teachers and administrators, fewer college preparatory and advanced placement courses, and they are extremely segregated. In the West, 60 percent of urban Latinas/os attend schools that are 90 to 100 percent minority, usually virtually all Latino (Orfield & Lee, 2006; IDEA, 2009). These same schools enroll highly disproportionate numbers of children from low income and poor families. They also tend to be highly segregated by language, with large percentages of students coming to school not speaking English well enough to profit from classes provided only in English. This triple segregation results in schools that under-prepare students for college and even to graduate from high school (Gándara, 2010).

### College-going

#### Student characteristics

There is a large body of research on college-going and the kinds of student and institutional characteristics that promote it. As with high school graduation, SES is a strong predictor of college-going across all ethnic groups. In fact, studies show that even when students have similar grades and test scores, those from upper-income families are significantly more likely to go to college than those from low-income families (Haveman & Smeeding, 2006; Terinzini, Bernal & Cabrera, 2001). Moreover, college entrance examination scores, such as the SAT, are highly related to SES, and these test scores can have powerful effects on students' higher education opportunities and outcomes. SAT scores have been shown to be related to Latina/os' academic confidence and ability to obtain scholarship funds, as well as their likelihood of getting into selective programs and colleges where their chances of graduation are much higher (Gándara & López, 1998; Alon & Tienda, 2007).

As with high school graduation, parental encouragement is also related to college going (Horn & Chen, 1998), and many studies show that most Latino parents are supportive of their children's education and expect them to go to college (NORC, 2009), but Latino parents can also worry about encouraging their children to go to college if they think they cannot afford it (Fry, 2004).

Robert Crosnoe (2006) examined the academic trajectories of Latino students using the Early Childhood Longitudinal Study (ECLS) and found that math achievement was the best predictor of long-term academic outcomes for Latina/o students; it is

effectively a gatekeeper to higher-level curriculum as students move through school. However, Latino students are frequently not offered access to strong math instruction. Modeling math achievement trajectories by racial groups and parental education levels, Lee (2012) found that while Asian and White students were on track for completing a four-year college degree as early as elementary school, Latino/as were on track for a four-year degree only through the third grade. In other words, Latino/a students, as a group, begin elementary school with the potential to succeed in math curricula, but they quickly lose this advantage. Also based on ECLS data, Walston and McCarroll (2010) showed that algebra coursework in the eighth grade is primarily accessed by Asian, white, and high-SES students, as well as private school students. Students enrolled in advanced mathematics courses through the end of high school continue to be disproportionately Asian or white, and from high-SES homes (Bozick & Ingels, 2008). Thus, while math aptitude may be critically important in providing a gateway to college preparatory curriculum, Latina/os appear to be disadvantaged in accessing the instruction that would foster this talent. And, when it is offered in the schools that many Latina/os attend, it may not be of the same quality as that offered in schools with teachers who have the training and experience to instruct it well. Zarate and Zaragoza-Petty (2013) conducted an interesting longitudinal study in which they found that about half of the Latinas who did not do well in mathematics (low math scores and no math past algebra I) nonetheless went on to college, while half did not. However, those who went on viewed math as a challenge to be overcome while those who did not go on to college had very emotional reactions to math and felt that their failures in the subject 20

reflected on their own lack of intelligence. The Latinas who had done well in math (high scores and taken at least Algebra II) very disproportionately went on to college.

Bilingualism also appears to be associated with higher levels of college going.

Two studies highlight the advantage experienced by bilingual students. Portes and Rumbaut (2006) examine the difference between fluent and limited bilingualism in a large data set they collected on students from both U.S. coasts and find that fluent bilingual students have higher college aspirations, professional/executive aspirations, and self-esteem. A recent study by Santibañez and Zarate (in preparation) examined the educational outcomes for students in the large national Educational Longitudinal Survey (ELS) conducted by the National Center for Education Statistics (NCES) and found that Latino students who spoke Spanish in the home at least half of the time had a significantly greater chance of enrolling in college than those who did not.

callahan (2008) studied predictors of college enrollment for Latina students by examining the Adolescent Health (AKA Add Health) data set and found that the predictors of college enrollment for these young women were social ties made specifically through extracurricular activities or religious communities, echoing other studies that have found extracurricular involvement to be a strong predictor of college going for all students. The strength of these predictors, however, varied by women's generation in the U.S., with first-generation students less likely to attend religious services, extracurricular activities, and college. It must be mentioned, however, that all large-scale studies of Latina/o students that purport to include representative samples of students by generation in the U.S. should be considered with caution. School

personnel can exercise judgment in who they include or eliminate from these samples, so it is possible that significant biases in the characteristics of students may enter into the selection process. For example, teachers or other school personnel may be reluctant to include students who they think may not be strong in English or who have more recently enrolled in school (characteristics of immigrant and first-generation students), and such students may not be located in the same classrooms as students selected for participation. Where first-generation immigrant students are included in data collection, they *may* not be typical of their group.

#### *Institutional characteristics*

Perhaps the single factor predicting college going, that has gained the greatest consensus among researchers, is taking rigorous, college preparatory courses (Adelman, 1999; Long, Conger, and latarola, 2012). Unfortunately, because Latins/o students begin school significantly behind their peers and continue to fall behind academically thereafter (Gándara & Contreras, 2009) they are typically not offered access to such rigorous curriculum, nor invited into Gifted and Talented (GATE) programs that track students into the college preparatory curriculum (Gándara & Contreras, 2009). Thus the process of tracking Latina/o students from the early years of school into groups with lower level curriculum is highly predictive of poor preparation for college because they are never given the opportunity to catch up with peers who have moved ahead at a faster pace and with superior instruction (Barr & Dreeben, 1985).

Second only to the strength of the curriculum, but also related to it, is the effects of peers on achievement for all students, and particularly for Latinas. Our research has 22

shown that many Latinas have higher aspirations than they believe their friends have, so they are embarrassed to share these goals and as a consequence find little overt support for them among friends (Gándara et al., 2004). The segregation of Latinas in low-performing schools also means that they typically have few peers who have clear ideas about how to succeed in school, and few models of very high achievement. It is impossible to emulate what you cannot see and do not know. Peer effects are enormous in highly segregated, low-income schools because students do not have many adult models of high achievement and high aspirations to follow (Gándara & Gibson, 2004). Moreover, because Latino students are often tracked into non-college preparatory courses (Oakes, 2005), even in desegregated schools, they may not have the opportunity to interact with college-bound students, and certainly if such students are rare on a campus, the chances are even less.

Yet, when Latinas are provided the opportunity to attend more diverse schools where they come in contact with more knowledgeable and advantaged peers, this can have powerful effects. In a study of Latina high achievers from very low socio-economic backgrounds, Gándara (1995) found that the information garnered from peers was often the difference between going to college or not. One young Latina who happened to sit next to a white student in band explained:

"It was in the band. As a result of being with the white students, having to sit next to them . . . so I learned a lot about the academic situation and how I wasn't reading Steinbeck, how I wasn't reading novels, and how I wasn't taking the same courses that my peers were taking. And consequently that was real instructive to me, figuring out how I had to take chemistry, so I did take that on my own . . . I would say that had the biggest impact, being in the band seeing what I wasn't getting from school" (Gándara, 1995, p. 102).

Cabrera and LaNasa (2001) examined the National Educational Longitudinal Study (NELS 88) data to determine which factors were most associated with collegegoing. They found that the factors most influential in applying for college include maintaining high educational expectations, quality of the academic curriculum that the student has taken, and securing information on financial aid. Those students less likely to apply for college report less parental support, more at-risk factors, and attend schools with lower school resources. There has also developed a consensus in the literature on college-going that a "college going culture" in the high school is critically important for low-income and minority students in choosing to go to college. A *college-going school culture* is where teachers, administrators, parents, and students expect all students to have access to experiences that will enable high achievement. "These high expectations are coupled with specific interventions and information that emphasize to students that college preparation is a normal part of their childhood and youth" (Oakes, Mendoza, & Silver, 2006, p. 29).

Nuñez and Bowers (2011) examined ELS data to identify high school characteristics that predicted college-going to Hispanic serving institutions—at either a two- or four-year institutions. They found that the number of Hispanic teachers and number of minority students at the high school both predicted for college-going. However, for students at public high schools, higher minority student enrollment was positively associated with attending a two-year campus and a negative predictor of attending a four-year college or university.

Experiencing ethnic discrimination also appears to influence college-going for Latina/o students. Taggart and Crisp (2011) establish that perception of non-belonging and discrimination in high school deter students from college enrollment. In examining a nationally representative sample of Latina/o students, they further find that not only do perceptions of discrimination against themselves have negative effects, but also exposure to discrimination directed at other members of similarly marginalized groups during high school reduces the likelihood that a Latina/o student will enroll in a four-year college.

During the middle 1990's, in response to the significant under-representation of Latinos in the University of California, the UC Office of the President set up a task force to determine what could be done. The task force published five reports, but perhaps the most important finding of the task force was that parents of Latino students lacked adequate information to help their children prepare for, or apply to the university, and this lack of information included, very importantly, a complete lack of understanding of how the family might pay for college (Latino Eligibility Task Force, 1997). Since that time, many other studies have continued to find that Latino parents, especially those who have little experience with the U.S. schooling system, lack the fundamental information to help their children get to college, in spite of extremely high expectations that they will go (Cooper, 2002; Chrispeels & Rivero, 2001; Garcia, 2001).

Although large-scale studies that focus specifically on Latinas and academic attainment are in short supply, Gándara (1995) studied 40 very low-income Latinas in two different age cohorts who had managed to vault "over the ivy walls" of academe.

They not only successfully graduated high school, but they also went on to extremely high academic achievement at elite institutions. She concluded that while social mores changed over the two different time periods (1960-80s and 1990s) during which these women had gone through college, some things remained common among them. Strong mothers who fostered and supported their aspirations, college counselors and recruiters who believed in and supported them, mentors who guided them, desegregated schools with peers who shared critical information and aspirations to succeed, and the knowledge and availability of financial aid that allowed them to see college as a realistic goal, all factored into their success. Reviewing the research on Latino education, it becomes evident that many of these factors simply do not exist for most Latinas, who live in economically constrained circumstances with little exposure to knowledgeable or high aspiring peers, and attend segregated, drop out factory schools with few resources to support them.

#### **Undocumented Students**

Although most Latino students are native born, and most children of immigrants are also native born citizens, there is a growing phenomenon of Latino students who came to the U.S. at young ages and are undocumented, sometimes without even realizing this themselves. Most recent estimates are that about 65,000 undocumented students graduate from U.S. high schools each year (Passel, 2011). A poignant study reported by González (2011) included interviews of 150 of these undocumented young adults, half who had pursued higher education and half who had dropped out of school. Of the 150, only 28% knew of their undocumented status as children, the rest found out later when they tried to work or apply to college or for financial aid. All commented on the frustration, confusion and sadness they felt upon learning of their status, and for many it was the reason to give up on their studies. For those that persisted, there was the constant worry of "being found out" by their peers and the need to hide the reasons why they could not drive, or leave the country for study abroad, or engage in many of the activities that were considered normal by their classmates. Oropesa & Landale, (2009) also studied a sample of undocumented high school students and found that many saw school as a means to gaining basic skills to enter the workforce, and once obtaining these skills, the students were likely to opt out of U.S. education. This explanation is wholly consistent with the 49% drop out rate estimated by Passel (2011).

Research on undocumented students is in its earliest stages and the bulk of studies are small and institution specific. However they tend to reveal that undocumented status often limits aspirations and students' view of social mobility (Abrego, 2006, 2008; Menjivar, 2008). For those who do persist to college, however, some factors influencing the college-going decisions include students' state of residence, and eligibility for state grants and in-state resident tuition (ISRT) (Flores, 2010). In a report supporting an in-state tuition policy for undocumented immigrants in Illinois, Mehta and Ali (2003) found that 64 percent of undocumented high school students in the state would be qualified to enter college. An examination of mean GPA's and ACT scores among undocumented students revealed that their achievement was not significantly different from legal immigrants, second generation, or native born students (Mehta & Ali, 2003). Taken together these findings support the research of

Feliciano (2005; 2012), which finds that undocumented immigration actually selects for healthier and more able individuals than those who stay behind. More research is needed on how being undocumented specifically affects Latinas' high school experiences, college choice process, and how they navigate enrolling and paying for college.

#### Summary

Although there is relatively little research that focuses specifically on Latinas, as opposed to Latinos generally or all students, it is possible to briefly summarize the existing research on the student and institutional characteristics likely associated with successful educational outcomes for Latinas. Aside from having parents who are not poor and who have higher levels of education, things that are out of the control of both students and schools, early school aptitude (which can be fostered both in preschool and by parents), including success in mathematics, can lead to placement in GATE and other programs for high achievers, and ultimately result in being tracked in college preparatory curricula. A strong belief in one's ability to succeed (self-efficacy), and early, high expectations to complete high school and go to college are powerful predictors of those outcomes, and can also be fostered in the home or by significant adults in a student's life. It also appears that being bilingual may hold an advantage for Latinas with respect to college-going as does developing a level of comfort both Latino and mainstream cultures. This is often the result of attending desegregated schools, or otherwise having significant contact with the mainstream of society. A major impediment to high school completion and college going for Latinas, in particular, is the 28

very high rate of teenage pregnancy among these young women. There is little agreement in the literature about how best to reduce this, though many different program interventions have been tried. There is, however, general agreement that young women with clear goals to go to college are less likely to become pregnant than those without such goals.

Among the key institutional characteristics that can support positive educational outcomes are, first of all, peers who are strong students and are college bound.

Attending better-resourced schools that offer these young women rigorous college preparatory coursework is also a critical factor. Providing rigorous curriculum is dependent on having highly qualified and experienced teachers. There also appears to be a negative effect of experiencing ethnic discrimination at school. Some have speculated that attending all Latino schools can help to obviate this problem, but minority segregated schools are also highly associated with low achievement and drop out. It is possible that the greatest institutional barrier to attending college is lack of qualified personnel, most commonly counselors, to impart knowledge to Latino students and their parents about how and even why to apply to college, and how to finance a postsecondary education.

#### III. LOOKING FOR CLUES IN LARGE SCALE DATA SETS

In order to extend the knowledge base and see if we might be able to find additional predictors of school success for Latinas in particular –since so little research has focused exclusively on this group—we decided to analyze two large data sets: the

Educational Longitudinal Study and the California Healthy Kids Survey. The strategy we employed was to list the factors we had found in the literature that were significant for other groups, or where there were hints that a particular factor might be important for Latinas, and then to analyze these two data sets to see if we could find evidence for the importance of these factors with our target group: Latinas. In appendix 1 we detail the kinds of statistical analyses that we undertook; below we discuss the nature of these data and the findings that resulted from our analyses.

### **Education Longitudinal Study of 2002 (ELS: 2002)**

ELS data, whose collection is overseen and funded by the National Center for Education Statistics, were first collected in 2002 with more than 15,000 10<sup>th</sup> graders randomly selected from 750 high schools across the nation. The students were sampled to be proportionate to their representation in the population with respect to gender and ethnicity, though Asians were oversampled because of their smaller numbers. ELS includes data collected from students and their parents, teachers, school librarians, and high school administrators as well as from existing school records, such as high school transcripts, about the high school experience. The students were contacted again in 2004, when they were in the 12<sup>th</sup> grade, and in 2006, two years after high school. ELS is the largest and most recent national data collected on students moving through high school and it includes a large number of Latinas and Latinos, which allows us to generalize findings. Because it includes high school and a two-year post high school follow up, it provides us with recent data on how these students fared in terms of post high school outcomes. Did they graduate successfully? Did they go on to college? The

data also allow us to examine these questions by gender.

# **Findings**

There were 2217 Latinos ("Hispanics") in the ELS data at the 2006 follow up, with roughly equal numbers of males and females. There was no difference in the sample between males and females with respect to high school completion, so analyses of predictors of high school graduation were not possible. However, Latinas were significantly more likely than their male counterparts to have gone on to postsecondary education. The lack of difference between males and females in high school completion reported in the ELS raises questions about the sampling. Recent data compiled from U.S. Department of Education statistics show an 8 percentage-point difference in favor of Latinas completing high school compared to their male counterparts (66% vs 58%; EPE, 2012).

We did, however, find important differences that favored Latino/as going on to college compared to those who did not, including: attending a Catholic school or other private school, having teachers who were Hispanic (for females), having high math scores (for both Latinos and Latinas), and participating in extracurricular activities (for Latinas). The differences between genders in these findings, however, must be interpreted with caution because of sampling size and possible bias. Interestingly, attending a high school that had special programs for pregnant students predicted negatively for college going.

Other studies that looked at the effects of attending Catholic, and sometimes private, schools on academic outcomes have consistently found that these schools 31

produce more high school graduates and college-goers than the average public schools. A primary reason for this can be the difference in the background characteristics of the students who attend private and Catholic schools, compared to those who attend public schools. And, even when controlling for background characteristics, it is impossible to control for the differences in parents who are motivated to send, and have the ability to transport their children to schools outside the neighborhood. Thus, this finding is not surprising, nor is it necessarily a fair comparison. However, there is also significant literature about individuals from minority communities that are advantaged by attending these schools, and by programs that are designed to provide opportunities for talented students of color to attend exceptional schools (see, for example, Prep for Prep, www.prepforprep.org; and A Better Chance, www.abetterchance.org).

Perhaps the most interesting findings are those associated with math performance and Hispanic teachers. The findings on mathematics echo Crosnoe's (2006) comments about the importance of mathematics for setting Latino students on a positive trajectory in school. He found that elementary school math scores were the best predictors of future academic success for young Latinos. Unfortunately, Latina/os also often tend to shy away from mathematics. These analyses suggest that more focus on math could be an important precursor to academic success for many Latinas.

Having had a Latina/o teacher was also associated with more positive academic outcomes for Latina students, and this has not been widely reported in the literature. In fact, several older studies have suggested that there is really no effect for same race/ethnicity teachers, but this study finds such an effect for Latinas (but not for

Latinos). It is probable that Hispanic teachers stand as models of college graduates for many Latina students who know no other person who has gone to college. It is also possible that Latina/o teachers are more encouraging and understanding of the challenges that Latina students face, and more likely to engage them in conversation about college going. Hopkins (2012) found that bilingual teachers (who are often Latino) were certainly more likely to reach out to parents of their students than monolingual English-speaking teachers. Of course, from these data set we cannot know why exactly having a Latina/o teacher would make a difference, but we will explore this more in the next section in which we profile a number of young Latinas who are beating the odds and succeeding academically.

Our sample of Latina/os who were engaged in different extracurricular activities was too small, and the data not sufficiently detailed to make distinctions among the various types of activities that were likely to lead to superior academic outcomes, but other studies suggest that being in an honor club or in a musical group, such as orchestra or band, as well as participating with sports teams are likely the kinds of school activities that are most associated with college going. Our own study of developing a sense of belonging at school conducted several years ago also suggested that any kind of extracurricular activity that served to integrate students in school and connect them to other students was likely to support high school persistence and graduation (Gibson, Gándara & Koyama, 2004). Nonetheless, these analyses were able to show that the more time spent in extracurricular activities of whatever kind led to increased chances of going to college (though not high school completion) for Latina

students. We will also explore this issue in greater depth in the interviews reported in the next section.

Finally, the finding that attending a school with programs that support pregnant students is associated with lower rates of college going may at first seem counter-intuitive. However, on reflection this is not difficult to explain. School districts often cluster these programs in particular schools, especially where there is higher incidence of teen pregnancy (usually poorer neighborhoods) and so these schools may differ in many ways from a "typical" high school, including that they are likely to have relatively large numbers of pregnant teens attending, and have a less academic culture than other schools. Statistically, the young women attending these schools are more likely to be pregnant themselves, a major negative factor in completing high school and going on to college.

#### California Healthy Kids Survey (CHKS)

The CHKS is a unique and highly under-utilized data set that samples thousands of students in schools and districts from across the state of California on a broad range of key learning and health-related indicators. Students are sampled at 9<sup>th</sup> and 11<sup>th</sup> grade. Although the data are confined to California, this one state accounts for about one-third of all Latina/o students in the nation, and thus is generalizable to other Latina/os, especially those of Mexican origin. There were more than 90,000 students from seven different subgroups (African American, white, Asian, Hawaiian-Pacific Islander, American Indian, Mixed, and Latino) included in the surveys we analyzed that

were completed between fall 2006 and spring 2008. The single largest subgroup was Latina/o with more than 40,000 of the respondents. Slightly more than half of these were Latinas. The primary statistical analyses we utilized were chi square tests of difference and ordered logistic regression, given that the data were largely categorical, with most survey responses provided on a 4-point Likert scale.

# **Findings**

Latinas, as a group, report having lower grades than all other groups of young women except African Americans and this is consistent with other data collected by the U.S. Department of Education. While we could not analyze data for individual students, we were able to investigate factors in the schools of Latina (and Asian, African American, Hawaiian and Pacific Islander, and white) students as well as differences between males and females. Although, consistent with other studies, Latinas often reported more positive attitudes and outcomes than their Latino counterparts, we found the comparisons between Latinas and other female students to be the most interesting and the most consistent in these data. Analyses of the data show that Latinas were significantly less likely to feel safe or happy at their schools and to have less of a sense of belonging than others. They were also less likely to report having a teacher whom they felt cared about them and less likely to engage in "interesting activities" at school. Overall, the picture is one of Latinas feeling more marginalized, less happy, and lacking a sense of belonging at school than other young women.

Latinas feel less safe at school than white and Asian young women, but about as

unsafe as African American and American Indian women feel. Given the composition of California's high schools, it is reasonable to conclude that the white and Asian students are more likely to attend more economically advantaged schools in higher income, and less risky neighborhoods (IDEA, 2007). Their responses probably reflect the very real circumstances of the schools that they attend. All students of color, including Latinas, report higher incidences of racial discrimination in their schools than white female students. Even Asian and Pacific Islander students, who are less likely to feel unsafe, also report experiencing racial discrimination at their schools, suggesting that campus racial climate may be different from the climate of safety at school.

Consistent with other research that we have reported, Latinas feel less of a sense of belonging at their high school than all other subgroups except African American women and, in a somewhat different twist, Latinas are less likely to feel that they have a teacher who cares about them than all other subgroups of women except Asian women, who have similarly low feelings of connection with their teachers. Latinas are also less likely to report doing "interesting" activities at school than all other subgroups of women and Latino males.

Finally, Latinas are less likely than either white or Asian females to plan to graduate high school or go to college. They are, however, similar to other young women of color in this regard. Taken as a whole, the picture that emerges from the CHKS data is one of Latinas feeling systematically less engaged and connected to school, with a weak sense of belonging, and this is reflected in their lower sense of self efficacy with respect to completing high school or going on to college, compared to white and

Asian women. Campus climates in which Latinas disproportionately feel unsafe, discriminated against based on race or ethnicity, and without connections to teachers no doubt affect their plans to complete high school or go on to college.

Our analyses of the two data sets provide much food for thought, significant reason to worry about the future of Latinas in California (and probably other) schools, but also some insight into factors that can lead to better outcomes. The ELS data findings of the importance of early plans to finish high school and go to college, the importance of doing well in math and connecting to extracurricular activities, and the special role of Latino teachers, as well as the CHKS data that reinforce concerns about the need to help Latinas feel a stronger connection to school and to engender a sense of belonging provide some suggestions of things we might focus on in attempting to change the academic trajectories of many young Latinas. In the following section we explore these, and other findings from the research literature, and the role these factors have played in the lives of Latinas who are struggling —and succeeding—in achieving academic success.

## **IV. CASE STUDIES**

In order to explore the factors that our literature review and analyses of data yielded and how they may have contributed to the academic pathways followed by young Latinas, we selected 7 women who had managed to graduate high school and go on to postsecondary education in the Los Angeles metropolitan area, in spite of significant challenges. The road has not been easy for these young women as they all

faced real hardships—undocumented status, low-income homes, early pregnancy, struggling with low grades and little support in high school—but they have all surmounted most of those hurdles. Two attend a community college, three a state university, one attends the University of California and the last one recently graduated from there. Below we use their stories to illuminate the ways in which protective factors contribute to successful outcomes, but we also attempt to describe the very real challenges these young women face in attempting to educate themselves against significant odds.

### Method

In order to locate "typical" Latinas who could represent a variety of challenging circumstances and a variety of responses to those circumstances, we decided to seek women at different institutions, from the most open access, the community college, to the most selective, the University of California, in this case UCLA. We also sought women from very modest and sometimes impoverished backgrounds, and at least one who was undocumented. It has been well-established that parent income and education are highly related to educational outcomes so the stories of Latinas from middle class homes and good, solid schools are of less importance for this analysis than those that are more representative of the majority of Latina students, who have had to overcome multiple and sometimes extraordinary challenges.

We selected institutions based on places where we either worked or had good

contacts and who would support our Institutional Review Board (IRB) application.<sup>3</sup> We used a variety of strategies to identify the women, from asking program directors to identify potential candidates to informally interviewing young women with whom we had contact on campus. We set out to identify women who could give us insight into the processes that were suggested by our earlier research. However, as is always the case when one deals with real people, the interviews yielded insights into factors and circumstances we had not anticipated and virtually always were more interesting and more surprising than we could have imagined. The seven young women are:

**Andrea**: Andrea recently finished a degree in political science from UCLA and was applying to law school as she aspired to be an immigration and disability rights public service lawyer. In addition to being an outstanding student throughout school, Andrea was also an accomplished musician and athlete. Andrea's father has always worked in construction and times were rough over the last several years; her mother provided childcare. She was also undocumented and had fought homelessness and hunger during her years at UCLA.



<sup>3</sup> 

<sup>&</sup>lt;sup>3</sup> In order to conduct research on human subjects the federal government requires that the research be reviewed for any potential harm to the individuals involved, and to ensure that they are provided with informed consent. This process can be lengthy and requires cooperation from the host institution. 39

**Vanessa:** Vanessa is in her third year at community college. She was a good, but not terribly focused student in high school, graduating with a B average. She attended some of the worst schools in the city school system and had inconsistent instruction. She also had a traumatic home life, with a father engaged in the drug culture and who spent much of his time in jail, and a mother from whom she was periodically estranged. Although she had dreamed of being a pediatrician, by 12<sup>th</sup> grade Vanessa had become pregnant and considered just leaving school, but her boyfriend, then husband, encouraged her to continue on to college.



**Eva:** Eva responded to questions confidently and with the poise of someone much older. Her large brown eyes were directed at the interviewer throughout the interview. Eva was an exceptionally strong student in high school, graduating with nearly a 4.0 and good SAT scores. Now attending a state university campus, she maintains a B+ average with a double major in sociology and human development, with a minor in Spanish. Eva attributes much of her academic success to her stable home life, very supportive parents, and involvement in sports and community service. But Eva is also undocumented, the only one of her siblings to be born outside the U.S., and she has struggled to support her education.



Alina: Alina is direct in answering questions but becomes emotional at times, especially when talking about her career in sports. Like many of the young women with whom we spoke, Alina comes from a "mixed status" family –some members are legalized and some are undocumented. Alina is one of two siblings to be born in the US: two others were born in Mexico. However, all have gone to college or are on track to do so. Her parents have 6<sup>th</sup> grade educations from Mexico and work as a cook and a housekeeper. Alina finished high school with a C+ average, making community college her best option, but she has also improved her academic performance at college and is poised to transfer to a four-year university in the coming months.



Karina: Karina is about to graduate with a degree in psychology. She is interested in going on to graduate school, probably a Ph.D. program. She graduated high school with a very high GPA—4.3, which allowed her to win one of the very coveted spaces in the freshman class at UCLA. While at UCLA she has done well, but notes that she has had to struggle at times to keep up academically. Her parents were both born in Mexico and have elementary school educations and have worked in janitorial and other working class jobs. They have not been able to provide very much guidance about school and college, but they have always urged her to do well and take advantage of the opportunities she has, especially as she was born in the U.S. Counter to stereotypes, it was Karina's father who most supported her going away to college.



**Lizet:** Born and raised in East Los Angeles to immigrant parents from Mexico, Lizet's parents have a 6<sup>th</sup> grade education and while her father works as a delivery truck driver, he has managed to support the family of 4 (she has one older sister) on his income, allowing her mother to be a stay-at-home mom. She graduated from high school with a 3.3 GPA, but had done well in higher mathematics and science and had high SAT scores. Due to financial constraints she chose to go to a local state university campus where she could commute from home accompanied by her older sister, who is undocumented. She believes that being a commuter student has made it more difficult to excel in college, where she has a 2.8 GPA because of her inability to immerse herself in a lot of support activities that the college provides. In her third year of college, she will graduate next year with a degree in mechanical engineering.



Alejandra: At 18, Alejandra is the youngest of the women with whom we spoke and she is just in her first year of college at a state university. She is a kinesiology major. Her parents both immigrated from Mexico, but she was born in the U.S. Her father has worked in maintenance and her parents both worked as managers of the apartment where they lived in southern California. Alejandra showed an early aptitude for mathematics, which set her on a course of high achievement, but she lost her motivation more than once during high school and her grades tumbled. Nonetheless, she was able to graduate high school with a 3.3 GPA. She has recently lowered her aspirations from becoming a doctor to becoming a physical therapist because of the amount of schooling required for the MD. She represents the kind of Latina student who can be easily lost in the system—capable, but needing guidance and support and bolstering of her aspirations.



**Common Themes** 

## Early support for educational aspirations

Parents are children's first and most important educators. This is a refrain with more than a little truth to it. Parents have the opportunity to set their children on a positive track with respect to school, and although parents vary greatly in the resources -both human and material—that they can provide for their children, all parents have the opportunity to help their children dream and aspire to lofty goals. Almost all of these young women had parents who strongly encouraged them and who instilled a desire to go to college and "be something" from an early age. Often this took the form of what Alejandra's parents said, "You don't want to work in McDonalds like we did!" Even Vanessa, the one student who had an absent father and a mother with whom she did not have a "trustful relationship," noted that her mother had been a role model of hard work and resilience that she could now see had influenced her greatly. There was a common finding that these parents had instilled attitudes in their daughters that were key to their persistence, hard work, and high aspirations to not just finish high school, but to go on to college. Psychologists often refer to this as "resilience," the ability to bend and not break with the winds of misfortune, and it is typically fostered by having 43

at least one strong adult who supports and encourages the young person during his or her development (Werner & Smith, 1989). Most of the young women talked about how they "always" knew they wanted to go to college, and we have seen how important this is in predicting high school graduation and making the leap to higher education possible. Beliefs matter, and these young women were encouraged to believe in themselves.

Literacy, defined not just as learning to read, but also learning to learn and learning to value ideas and the ability to craft an argument, were aspects of almost all of these young women's early lives as well. Most had strong families that daily met over the dinner table and found time to discuss each other's lives and broader concerns.

Andrea's mother exposed her to arts, Lizet's parents took her regularly to the library, Alina's parents read to her in Spanish and insisted that she maintain her Spanish skills even as she was learning English, Karina helped her father write up the arguments for a discrimination lawsuit against his employer when she was just 12 years old, and Eva's parents were community activists who brought her along and constantly discussed social justice issues with her. In these ways the young women's parents were giving them the tools to help them succeed academically and in navigating some of the challenges they would face along the way even though the parents had limited formal educations themselves.

## Early aptitude for school: Getting on the right track

Parents' encouragement for doing well in school as well as the early literacy training discussed above were certainly key to preparing them for a successful schooling

experience, but teachers also needed to notice them and provide educational opportunities that would get them on track educationally. Almost all of the young women were noticed early on to be good students and therefore were provided additional educational benefits. Many were placed in the Gifted and Talented program, which set them up early to be on the college preparatory track, and this was often due to an early aptitude for math. Several of the young women talked about how they had enjoyed math and felt their educational confidence bolstered by their ability to perform well in math. Later on, their confidence in taking higher math led to them be noticed as students with "high potential" and provided with additional support from the counselors. Lizet recounted how when her teacher saw that she was particularly adept in math, he started to steer her toward a career in engineering –something she had never thought about. Unfortunately, though many of the young women began school with an interest in math, and most took higher math courses (algebra II, pre-calculus), in most cases this early interest was not nurtured and only one of the 7 women opted to study in a math-related field, which can provide abundant opportunities in the labor market.

#### Extracurricular activities

Although we had noted how extracurricular activities showed up as important both in the prior literature as well as in our data analyses, we were nonetheless surprised by just how important these activities had been for the young women we interviewed. Virtually all had participated in sports and/or other significant activities

such as music. It was interesting as well to hear about the various ways that these activities had supported their academic performance. For example, Vanessa, one of the students with the greatest personal and academic challenges, explained that "I always tried to get the best grades I could" because her soccer coach would be monitoring her grades and it was important for her to play on the team that "on the field [was] a family" to her. Vanessa's soccer teammates formed her peer group and these young women were seriously engaged in school. She recounted how being on the soccer team made her feel "like I was a part of something."

Andrea was both an athlete and a musician, on her high school swim and water polo teams, and playing in the orchestra and singing in the choir. For Andrea, music became a way for her to earn enough money to live once she went to college and found herself without the ability to get either financial aid or a "regular" job because of her undocumented status. Her skill in playing the violin provided her with the opportunity to join a mariachi group that allowed her to earn enough money to keep going. But the music was much more than just a way to earn money. As she explains:

"Music played a very important role because it was a big motivator. . . . I couldn't afford books sometimes, I couldn't afford rent, [but] I always had music to look forward to. It just kept me going so much, even when things got really, really hard . . . . When I could have given up and I could have just thrown in the towel, I always had music to look forward to."

Alina talked about how time management was a serious problem for her in school, but she learned to balance time when she joined the school softball team, and she also had to maintain a minimum GPA, which kept her conscious of the importance of her schoolwork. In fact, her grades improved considerably after joining the softball

team. It was also important that her teammates became her primary peer group and these were other Latinas who were serious about school – many applied to four-year universities, and all were competitive, which spilled over into their school work.

Eva was a member of the cross-country track team all four years of high school and she was one of the best runners on her team. Unfortunately, she turned down opportunities for college scholarships because of bad advice from a coach who allowed her to think she had to choose a career as an athlete in order to accept an athletic scholarship. Nonetheless, being on the team meant that she was consistently encouraged by her coaches to do well and that they held high expectations for her, as she did for herself. Even as an undocumented student who occasionally had doubts about the value of her education, her sport kept her engaged in school. And, like Andrea, who loved music (and swimming), she noted that running was something that provided her great enjoyment.

Lizet joined the swim team because she had been told it was important to her college application to have some extracurricular involvement, and while "grades for me came first before the sport," she also commented that she found a supportive peer network on the team. Many of the swim teammates were also in her AP classes, so she "was around an environment of people that were doing well. So to me the norm was to do well, to have AP classes, and to get good grades." Lizet had also joined the band in middle school and was promoted to concert band, which helped her to feel especially competent. Karina engaged in clubs, like the Spanish club, that resulted in her being able to go on an eye-opening educational trip to Europe, and service activities at her

school, which led to community service activities and interactions with local politicians and officials, giving her confidence in expressing herself in public situations.

Although we had no idea, going in to the interviews, of the women's involvement with extracurricular activities, these activities, especially music and sports, appeared to play a very large role in their school lives and their connection to school. These helped them to discipline themselves (time management); strengthened their sense of competition (desire to do well); taught skills and competencies that enhanced their sense of self-efficacy (for example, learning to talk with important people); provided a supportive and engaged peer network that was also focused on doing well in school; provided coaches and other adults who were "looking out" for them; made students who might otherwise not feel a sense of belonging at school feel they belonged; and provided true pleasure and relief from the daily grind of school, and was, as Andrea said, "something to look forward to." Other studies have shown that extracurriculars are important, but they have largely speculated on why this may be. These young women spelled out in very specific terms just how these involvements had deeply influenced them.

#### Latino educators

Our data analyses showed that having a Latina/o teacher increased Latina students' chances of going on to college. We could not say if it also increased their chances of completing high school, but all of the young women we interviewed had a great deal to say about the Latino/a teachers and counselors they had. Karina commented on how important her AP Spanish teacher was for her. "She was very 48

encouraging and she'd talk to me about going to college. I think she spoke about it more with me because I was Latina." It was also important that the Spanish teacher could talk with her parents. "With [this] teacher they [her parents] felt really comfortable because she spoke Spanish and she was very welcoming. So, because of that I felt very comfortable taking my parents to her classroom . . . "

For many of the young women, Latino teachers or counselors were also very important role models in addition to be being sources of support. Alina talked about the critical importance of her counselor, who was Latino:

"I feel like I bonded more with him. I was able to talk with him a lot more and I felt like we both opened up a lot to each other . . . . He was born in Mexico as well, and I just feel we had a lot of things in common, with my parents and his parents, we both came from low-income families and he worked himself up and became a counselor. He seems like he's doing very well in his life, and is proud of where he is at, and I just hope that I can be there someday too."

Karina, too, saw her Spanish teacher as a role model:

"My Spanish teacher had also come from immigrant parents and she had gone to college and become a teacher and established herself. I thought of her has a role model figure because growing up, I didn't have a lot of females in my family going into higher education . . . . I looked up to her a lot."

Some research has shown that minority teachers may be more likely to identify talents in students from their own racial or ethnic group and to recommend them for GATE programs than teachers from the majority group (Forsbach & Pierce, 1999). Lizet mentioned two Latino teachers in her K-12 years that were especially important to her. According to Lizet, Ms. González, her second grade teacher would give her more challenging math assignments than the other students and would buy her higher level books out of her own money. She felt that Ms. González always held higher

expectations for her, and she identified Lizet for the GATE program, which allowed her to be placed in more challenging classes in middle school, and then in high school. Lizet continued to credit Ms. Gonzalez and the GATE program with giving her access to college preparatory courses and especially higher math. The second Latino teacher she mentioned was Mr. Villalobos, a math teacher she had for two years in high school:

"He made a really huge impact, he made me feel like 'this isn't that hard; you can do it, you have the ability to do it!' which is something I never felt coming from [previous math teachers]. I think the fact that Mr.Villalobos took the time to encourage you a little bit more, it did make a difference. At least it made a difference to me. It made me gain my confidence back."

It was also Mr. Villalobos who counseled Lizet to consider becoming an engineer. She explains that she left high school "very passionate about math."

Alejandra had not had any Latino teachers that she could remember in her neighborhood schools, but she had a Latina counselor who played a very key role in her life. Her Latina counselor constantly told her that she was smart and that all she needed was motivation. She told Alejandra that she would have to face up to the stereotypes that people had about Latinas:

"She was a person who really influenced me to want something more with my life because she would tell me that because I was a Latina that I would be stereotyped . . .you don't want to prove people right, you want to prove them wrong! You want to be able to say 'I'm Latina and I'm going to college and I'm furthering my education!"

#### College access programs

Research has shown that college access programs can play an important role in helping low income and minority youth graduate high school and get to college (Gándara & Bial, 2001; Tierney, Corwin & Colyar, 2004; Kazis, Vargas & Hoffman, 2004). In fact, though described as "college access," many of these programs know that their 50

first goal must be to stem drop out and help students successfully graduate from high school. Although some of these programs have been shown to be quite successful, one of their serious limitations is that few of the students who actually need such programs are able to participate in them because of limited capacity: the most effective programs provide one-to-one support for students, a costly endeavor (Gándara & Bial, 2001). Thus, two of the young women we interviewed had been in the AVID program (a program that identifies talented students who are not working up to their potential, advocates to get them into college preparatory classes and provides support to help them achieve at higher levels with the goal of getting them successfully through high school and into college), and one had attended a program called *Stepping Up*.

Eva joined AVID in middle school and credits the program with getting her into rigorous math courses that set her on a college bound track, as well as inspiring her to want to go to college:

"I was encouraged to take a lot of honors classes and when it came to high school, I took a lot of advanced placement courses . . . They told us we were all going to college, that was our motto."

Alina was also placed in AVID in middle school, but she became impatient with the teacher's high expectations for her, and dropped the AVID program at a time in her life when she was beginning to lose motivation for school. For Alejandra, though, being inducted into the Stepping Up program was a clear turning point. Her grades had been sliding and she had gone from being an A/B student to being a C student. She noted that the program "helped me get back on track." The program also introduced her to a Latina counselor who would strongly encourage her and get her headed back on a

college trajectory.

## Cross cultural relations and desegregated schools

There is a growing literature on what academics sometimes call "(cultural) border crossing" (Phelan, Yu & Davidson, 1994; Aikenhead & Jagede, 2001; Cooper et al, 2002;; Gibson, Gándara & Koyama, 2004). While, in fact, several of the young women we interviewed had actually crossed a physical border into the United States at one point in their lives, here we refer to a metaphorical border crossing - the ability to coexist in two cultures and to feel comfortable moving from one to the other. Such skills have been identified as important factors in succeeding both socially and academically, and in later life. Becoming a "border crosser" requires knowing and appreciating one's own culture and maintaining a strong sense of identity. But it also requires exposure to mainstream culture, ideas, and friends or classmates. Thus students who have the opportunity to attend desegregated schools with a diverse student body and/or have experiences that take them outside of their own communities have the advantage of potentially becoming cultural brokers or "border crossers". Most of our interviewees spoke of such experiences. Karina found herself being assigned to a new high school located in a middle class community when her old high school was shut down for repairs. The new high school was much more diverse than the school in her low income neighborhood, and had many more high achievers from more advantaged backgrounds. Karina explained,

"My friends in those honors and AP classes were the ones who told me everything I needed to do to go to college. I didn't know what the SAT was, it was through one of my friends, she actually was Romanian and she had an immigrant

background, so I feel we really connected. Her parents had gone to college and she'd talk about the SAT and I would be like, 'What? What is that?' She started telling me what . . . . I needed to do to go to college. I just thought having good grades would get there but she said, 'No, you have to do this, you have to do that."

Also because her new school had a better mix of students, she encountered more

Latinas in her AP courses, which made her feel more comfortable. In the new school,

she felt she really belonged.

When she came to the U.S. in the third grade, Andrea attended school in the Midwest, then in Utah, and then in Northern California. All of her schools had mostly white students, though once she came to Northern California there was a more diverse study body. However, she noted that as she began to take advanced classes, and especially AP, she routinely found herself as the only Latina in the class. But this is also how she acquired information about college:

"I learned by talking about it . . . in the honors and AP classes. We started to talk about the SAT and what we needed to do, making sure our requirements were met for UC's and CSU's. It was through those conversations that I learned what it was I needed to go to college. I knew the basics. I knew GPA. I knew you needed to have extracurriculars; I didn't know the specifics. I didn't know [how] to apply to the university. It was through talking and asking questions [and] through a lot of listening I learned what to do."

Unfortunately, most Latina students attend segregated schools with few students who have contact with the mainstream, whose peers don't have any more information than they have, where these kinds of conversations don't occur, and too often going to college becomes something that "other people do."

For most of the young women, their extracurricular activities were also sites of cultural border crossing. The female students who were most engaged in these

activities tended also to be more diverse and come from homes with more social capital, so that these peers, who several women referred to as "family" at school, were also sharing different perspectives, and introducing them to a taste of mainstream culture. Lizet talked about how being in band introduced her to a whole new world:

"Now that I think back on it, programs like that are so great because my parents didn't know to play an instrument, I didn't know who Bach was. I got exposed to that. I got an introduction to classical music. I got some kind of appreciation for that music. That helped me a lot. The school I go to, the population is greatly white, so I can have conversations about these things."

The other half of these kinds of experiences is maintaining the cultural capital from one's own family background to share with others. Most of the young women spoke Spanish fluently and several of their parents had insisted on them keeping their Spanish as a cultural asset. Lizet reflected on what this meant for her:

"I'm very thankful and grateful to [my parents] that they were always pressuring me to speak Spanish. The fact that I can speak Spanish makes me feel very useful . . . I think by being bilingual I can identify with [Chicano] culture . . . . I am a U.S. citizen legally, but I feel like I'm Mexican. I would say it's just me being able to feel like I can incorporate both of those [cultures] and not feel I have to choose one or the other."

Eva's identity not only as Mexican, but as an undocumented Mexican living in the United States, has special meaning for her; it is directly tied to a sense of empowerment and resilience. Eva sees herself as helping other undocumented persons in the future.

"My identities really empower me to want to try hard and not give up. They are a reminder of what I want to do in the future, and what I want to do now. It really helps me when I've very stressed out thinking . . . . not only what I have gone through with my family . . . . there's people I've met who have struggled even more than I have.

#### **Notable Barriers**

While this study is focused on the factors that can contribute to positive educational outcomes for Latinas, it is important to address three major barriers that can be intractable problems for this population: lack of financial resources, early pregnancy, and undocumented status. These three barriers play special roles in the lives of many Latinas.

#### **Financial limitations**

Paying for a college education can be a struggle for many students, but it is particularly acute for Latina/o students. Richard Fry (2004) has pointed out that Latino/a students are more likely to attend two-year and less selective colleges (even when they qualify for selective universities), where they are not likely to complete a college degree. One important reason for these choices is financial—many Latina/os choose to commute to a local school because the costs of going away to college are too high and many have financial responsibilities at home (Fry, 2004). In a recent study of the impact of rising costs and declining support for higher education in California, Gándara and Orfield (2011) surveyed over 2100 undergraduate students at a large state university campus; 617 were Latinos (two-thirds of the Latinos were female). Latina/o students reported many hardships as a result of increased costs of tuition, however, the most stunning finding was that 40% of Latino/a students reported helping support their parents while also attending college. By comparison, this was also the case for 25% of white students and 20% of African American students at this very diverse campus. Some students talked about the need to live at home and commute for hours in order to help pay their parents' rent. Tuition support is helpful, but it is only part of the financial story for many Latina/o students. Latina/o students are more likely to work long hours in addition to going to school, which slows down their progress toward degree (Fry, 2004; Gándara & Orfield, 2011), and in many cases simply makes it impossible.

## Early pregnancy

Vanessa was the only young woman among our interviewees who had had a pregnancy during high school. This is not surprising, as most girls who become pregnant do not complete high school, at least not with their peers. Vanessa was able to continue her education because of a particularly well-timed birth that allowed her begin her senior year on time, and a supportive boyfriend-husband, who urged her to continue school and took financial responsibility for the young family. This is not the norm. However, Vanessa demonstrates another phenomenon that those who work with young women who become pregnant have seen not infrequently: her baby became a major source of motivation for her. Whereas sometimes young women become pregnant because they do not have any focused ambition – in one study we conducted with Latinas in a rural school, nearly one-third began high school without *any* idea of what they might do upon completion (Gándara, O'Hara & Gutiérrez, 2004)—being a mother can focus a young woman and cause her to feel the importance of being a positive role model for her child.

Vanessa put it this way,

""Being a good mom does influence education . . . . If you are educated maybe then your son will be like 'Hey, my mom went on to college, she went somewhere, I'm gong to do the same". . . . I feel like if I get educated, my son is going to get educated."

As we noted at the beginning of this report, the jury is still out on the most effective programs to prevent teen pregnancy, but given that this is such a large and vulnerable group of young women, it only makes sense to continue to seek supports for these Latina mothers. There is good evidence that having clear academic and vocational goals, and the means for realizing them, is a deterrent to early pregnancy, but if prevention fails, it appears that Vanessa provides insight into an important alternative route: help young women to see themselves as role models for their own children, and support them in completing their educations.

#### **Undocumented status**

An estimated 1.5 million young people who came to this country as children -with no say in the matter -- and who have done well, and have or will graduate high
school in the U.S. (MPI, 2010), would be affected by a pathway to citizenship and
removal of the yoke of illegality under the Dream Act, as it has most recently been
proposed. Although we did not select most of our interviewees on this basis, at least
half of them were either undocumented or lived in families with undocumented
members, and in both cases the women were greatly affected by this. Obviously, if they
could not work, get a driver's license, travel, or get financial aid, many doors were
closed to them. In the cases where other family members were undocumented, a
sadness and worry pervaded every decision they made. They knew they had options

other family members were denied, and this made them feel guilty and as though it was wrong to take advantage of some of these opportunities. And, in a different case, Eva's brother dropped his own ambitions to go to work to help pay her tuition, which caused her a tremendous sense of guilt.

A study by the non-partisan Congressional Budget Office (CBO, 2010) found that legalization of these young people would actually result in a net gain to the economy. And, since only law-abiding young people with good educations and/or military service would be accepted, there can be no argument that legalizing their status would not be a benefit to the nation. It serves no one's purpose to have these young people marginalized, unable to work legally, and consequently unable to pay taxes. From the comments of the young women in our interviews, we discern that it can also dampen the aspirations of many and reduce their potential contributions to their families, communities, and the nation.

#### V. SUMMARY AND RECOMMENDATIONS

Many researchers have referred to the problem of Latina/o underachievement as a pipeline problem, and with good reason. It is possible to trace the challenges, and the lost opportunities, all the way back to birth, when so many young Latino/as are born into families that are disproportionately poor, undereducated, and isolated in American society. And where about half are born to unmarried mothers whose future prospects are bleak. At each point along this continuum, from birth to young adulthood, there are

opportunities to change the trajectory and we have pointed to many of these in this report.

- Preschool is the first time that government institutions come into sustained contact with children in our society and Latinos are less likely to attend preschool and especially a good preschool than any other racial/ethnic group (Gándara & Contreras, 2009). Good preschool education could make a large difference in the academic disadvantages that young Latinas bring with them into kindergarten, where they, along with African American children perform significantly more poorly than either white or Asian children from the very first day of school (Gándara & Contreras, 2009). If the playing field were more even at the start of schooling, the cleavages would not be so great for Latinos going forward.
- reading in the language of the home, discussing important issues, stimulating inquiry and imagination—are critically important for cognitive development and almost all parents can participate in such activities with their children. Even parents who are non-readers can take their children to the library and sit with them as they choose or read books. Parents can share their "funds of knowledge" (see González & Moll, 2002) about the work that they do in the home and outside the home. But Latino parents need to have the confidence that these are important activities to engage in, and that they are just as important in Spanish as in English.

- Parent education. Parents are critical educators for their children and they can plant the seeds of confidence in their children. Parents who instill a belief in their children early that they are going to be successful in school, and go on to college, are powerful sources of inspiration for their children. Most Latinas who do well in school and go on to college name their parents as the key source of their belief in themselves and their abilities. Parents need to know how powerful they are. In order to steer their daughters toward high school graduation and college, they need specific knowledge of US schooling, how it operates, and what role parents can play in helping their children navigate the system. There are programs such as PIQE (Parent Institute for Quality Education) that focus on this kind of parent knowledge that has been shown to be effective (see, for example, Chrispeels & Rivero, 2001), but these programs reach a tiny fraction of the parents who could benefit. There needs to be a much more systemic effort to impart this critical information to parents.
- Desegregated schooling opportunities. Once children are in school, Latino/as are more likely than any other group in the western United States to attend highly segregated, under-resourced schools with less experienced and less prepared teachers and administrators (Orfield and Lee, 2006). And these students are typically tracked into the most dead-end classes in these schools (Oakes, 2005). They also have disproportionately less access to gifted education and other high level curriculum (Gándara & Contreras, 2009).

School reform is a long and tedious process, and by no means guarantees success, but Latino/a students can be given access to stronger schools and stronger curriculum by organizing parents to demand more diverse schools and access to the same teachers and curriculum resources offered in middle class and upper income neighborhood. One program that has dedicated itself to providing both strong curriculum and the counseling and mentorship that Latino/a students need is *Puente*. It has been demonstrated to double the percent of Latino/as going on to college and significantly increase those transferring to 4-year from 2-year colleges (Gándara, 2002). Other successful programs for Latino/as are discussed by Oseguera and her colleagues (2006).

- Peers are a powerful force in the lives of young people and because school-oriented peers' behavior tends to "rub off" on their friends, schools need to be pressured to provide integrating experiences for Latino youth to be in contact with high performing students, both Latina/os and others. And, because extracurricular activities are an important way for students to interact informally with academically engaged (and sometimes more diverse) peers, the public schools need to take a lesson from Catholic schools, which insist –and create the opportunities --that all (Latino/a) students engage in some kind of extracurricular activity to help integrate them into the school and gain a stronger sense of belonging.
- Create a sense of belonging. Disproportionately, both in our data and in other studies, we have seen that Latinas feel they "don't belong" at their

schools. There appear to be a variety of reasons why this happens – from discrimination to lack of connection with school personnel, to language and cultural barriers. But, whatever the reason, feeling like one "belongs" is critically important for everyone, but especially for adolescents, and feeling that one does not belong is a good predictor of dropping out. Schools need to marshal resources to create connections for Latinas to teachers—through professional development that focuses on this issue and structured opportunities for Latinas to interact with their teachers and counselors—and with peers—through both curricular and extracurricular activities that bring diverse students in *equal status* contact with each other, and by consciously creating roles for these young women that provide them with visible status in the school. The latter can be accomplished by providing clubs and organizations that are especially attractive to Latinas.

limitless opportunities, yet very few pursue an education in math, science or engineering. In 2010 only 14% of all STEM (science, technology, engineering and mathematics) degrees went to Latino/as in California although they comprised nearly 43% of the age cohort (Higher Education Research Institute, UCLA, 2012; CPEC, 2011). Even those young women who choose not to pursue studies in these areas are provided significant opportunities in school if they simply do well in math. Emphasizing mathematics education for Latinas would be a way to redistribute schooling resources to this

population. MESA (Mathematics, Engineering, Science Achievement) is a program in California schools that attempts to provide special opportunities and encouragement for students of color, yet few Latinas take advantage of the program.

- Latina/o teachers and counselors. Our data show that Latino/a teachers are importantly associated with Latina students going on to college. One reason is that they are crucial role models for young Latinas who may have never known a college graduate, but they are also often acutely aware of the students' circumstances and therefore able to better able to connect to these young women. Latino/a counselors are also critical, but rare resources in our schools, as they can help bridge the gap between home and school and to provide guidance to parents as well as to students. There must be more emphasis placed on recruiting and retaining Latino/a teachers and counselors. An additional priority should be placed on recruiting bilingual teachers so that the many Latina students who come to school speaking Spanish and wanting to maintain a competency in their first language are able to do so. Research shows the most positive academic outcomes for those Latino Spanish speakers who participate in dual language programs (Genesee, Lindholm-Leary, Saunders, & Christian, 2006).
- **Financial aid.** As we have noted, simply providing funding to cover tuition and even living expenses is often insufficient for Latino/a students who are also helping to support their parents and siblings while going to school. If

financial aid is to truly make a difference for Latino/as' degree completion, then eligibility formulas may need to be rethought in order to incorporate the actual financial responsibilities that so many of these students carry. Especially in the case of teacher recruitment, Latinas from lower income circumstances who want to become teachers should have access to forgivable loans and significant grant funding so that they do not have to carry debt in order to serve their communities.

- Preventing early pregnancy/supporting young mothers. It has been said that the best pregnancy prevention for young women is a dream. If Latinas have a dream of what they can be and a focus on how to get there, early pregnancy can often be avoided. But, when it isn't, we need to have a good response to young Latina mothers. We need programs that support them in raising their children while they finish their high school diplomas and prepare for and enter postsecondary education, building on their desire to be good role models for their own children.
- Fostering exposure to the mainstream. In order to truly aspire to loftier goals, Latinas must have contact with the kinds of opportunities that exist in the wider world. Most Latinas grow up in segregated communities of concentrated poverty where there are few if any models of mainstream success. These young women need to build "social capital" (familiarity with the mores of the middle class and contacts with people who can "make things happen"). This calls for helping these young women to feel truly

comfortable in two worlds –proud of their home culture and knowledgeable about the mainstream culture and what it has to offer, so that they can move back and forth comfortably between the two.

## **Making Choices**

All of the areas of need that we have listed are urgent. None can really afford to wait, but resources are always finite and policymakers must choose where to begin.

Some of the things we have suggested require more will than dollars – extracurricular opportunities can be converted into "curricular" opportunities and administrators can consciously connect Latinas to them; math clubs for Latinas can be launched in every school and successful parent-student reading programs can be extended to more schools; partnering with organizations such as PIQE to bring critical information to parents can be done at minimal cost and usually with outside sponsors. Desegregated magnet schools require transportation, but cost no more to operate than segregated schools. Bringing undocumented students into legal status has some political costs, but would be a net economic benefit to the nation and to communities (GAO, 2010).

Perhaps our first priority for expenditure of *dollars* should be on high quality preschool, where many of the disadvantages that these students face can be ameliorated early. But we also think that a priority for expenditure of *political capital* should go to a national, state, and local campaign to recruit and support bilingual and Latina/o teachers and counselors. Some funds need to be made available so that young Latina/os who would like to be a teacher can cover the cost of the years it takes to

Teaching has been the entry point into the middle class for many generations of immigrant groups, and teachers are cornerstones of our democracy; they vote, they volunteer, they are, on the whole, engaged citizens. And, the role model that teachers provide is critical for the next generation of Latina citizens. We include counselors in this category as well, as they are often the critical link to the home and to opening up the doors of opportunity for students who were unaware of what their futures might look like. It is also worth bearing in mind that Latina students who maintain their dual language skills are more likely to go to college, and over a lifetime to make more money and have more opportunities in the labor market. We should be making this possible for every Latina student who shows up in kindergarten (or later) already on her way to being a bilingual individual. The cost is minimal if we have the teachers (which we can) and the pay off is lifelong.

### Appendix 1

## Data and Statistical Analyses

Our datasets for this study come from two different sources: (1) the Education Longitudinal Study of 2002 (ELS: 2002), conducted by the National Center for Education Statistics, and (2) the California Healthy Kids Survey (CHKS). ELS: 2002 data consist of multilevel surveys, which include separate questionnaires for students and their parents, teachers, school administrators, and librarians. The base-year survey was conducted in 2002, and a series of follow-up surveys were performed in 2004, 2006, and 2012, respectively. The CHKS survey was a statewide survey that convers various topics, including students' health behaviors and academic performance.

With a special emphasis on postsecondary education experience and educational attainment of Latina students, chi-square test of independence and logistic regression analysis were conducted. Chi-square test was used to examine whether there was a statistically significant difference between Latina students and other students in terms of various school experiences. More specifically, this study compared the Latina group with their male counterparts and with other racial groups of students at the same time. In addition, given that variables of interest were binary, logistic regression was used to estimate the probability of the outcomes, controlling for several predictors that are relevant to students' background, academic achievement index, and school environment. For instance, we employed race/ethnicity, gender, family income, mother's education level, math test standardized score, and percentage of full-time Hispanic teachers in schools. In regard to outcome variables, postsecondary education experience variable was recoded as a binary outcome that indicates whether the sample member has ever attended a postsecondary institution since high school. High school attainment variable was also recoded as a binary outcome. Employing the variables aforementioned, the basic structure of the regression models was as follows:

# Model 1:

$$Y_{Highschool-attainment} = \beta_0 + \beta_1 (income) + \ \beta_2 (Mother \ Education) + \ \beta_3 (Math \ Score) + \\ + \beta_4 (Share \ of \ Latino \ Teachers) + \epsilon$$

## Model 2:

$$Y_{Postsecondary\;education} = \beta_0 + \beta_1 (income) + \; \beta_2 (Mother\;Education) + \; \beta_3 (Math\;Score) + \\ + \beta_4 (Share\;of\;Latino\;Teachers) + \epsilon$$

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