The Relationship Between a College Preparation Program and At-Risk Students’ College Readiness

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This study evaluates the relationship between elements of a college preparation program and the college readiness of low-income and/or Latina/o students at the completion of 6 years of participation in the program. Hours of participation in tutoring, mentoring, advising, college campus visits, summer programs, and educational field trips are examined in relationship to students’ college-track course completion and Preliminary SAT (PSAT) participation. In addition, the relationship between students’ expectations for college and their ranking of program activities is examined. Results indicate that key program elements related to college readiness include advising, college campus visits, and college information through booklets and speakers.

Key words: Latina/o, at-risk students, college readiness, socioeconomic status, college preparation program, program elements

There continues to be a persistent gap between groups of students who are more or less likely to attend college. Multiple factors have been identified that predict college enrollment or its absence, and these factors relate to different elements of the multistage process of enrolling in college. Among those groups of students who are least likely to attend college are Latina/o students from low-income backgrounds (Gándara & Bial, 2001; National Association for College Admissions

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In order to address this gap and distribute the benefits of higher education more broadly through society, many programs at the federal, state, and local levels have been established to support traditionally underrepresented groups of students in the pursuit of a college degree (Gándara & Bial, 2001; NACAC, 2004; Perna & Swail, 2001). Programs are often aimed at promoting academic preparedness, providing information about the path to college, and encouraging students to decide to attend college.

GAP IN COLLEGE ENROLLMENT

Despite the overall rise in college enrollment rates, there are discrepancies between enrollment rates for low- and high-income students and students of different ethnic backgrounds. Latina/o students are less likely to attend college than White or African American students. In spite of increased overall Latina/o college enrollment rates over the past three decades, in 2006, 23.6% of Latinas/os aged 18–24 were enrolled in college compared with 41.0% of Whites and 32.6% of African Americans (National Center for Education Statistics [NCES], 2008). Swail, Cabrera, and Lee (2004) noted that Latinas/os enroll in 2-year or 4-year institutions at a rate of 65%, about 10% lower than for White students, and that Latina/o students enroll in 4-year colleges at about half the rate of White students. Even among high-achieving Latina/o students multiple factors often conspire to both block college enrollment and lead students to lower their educational expectations in terms of program selection (Gándara, 2005).

Low-income students are also less likely to enroll in college than higher income students (Cabrera, Burkum, & La Nasa, 2003). Even among high-ability students, low socioeconomic status (SES) students attend college at lower rates than their more well off counterparts (McDonough, 1997; Swail et al., 2004). Cabrera and La Nasa (2001) found that college-qualified students from low-SES backgrounds applied to 4-year colleges at a rate 17% lower than the national average for similarly qualified students. Latina/o students are far more likely to come from lower income families. More than half the Latina/o families studied by Swail et al. (2004) had incomes less than $25,000 compared with 23% of White students’ families. Though students’ low-income and ethnic minority statuses often overlap (Yampolskaya, Massey, & Greenbaum, 2006), it is clear that Latina/o students from low-income families are likely to experience low rates of college enrollment.

COLLEGE-TRACK COURSE ENROLLMENT

The problem of low enrollment is also affected by lower rates of college readiness among low-SES students (Cabrera & La Nasa, 2001). Adelman (1999) identified enrolling in advanced courses as one of the important steps in becoming
qualified to attend college. Berkner and Chavez’s (1997) index for college qualification includes an adjustment for rigorous coursework. According to the National Assessment of Educational Progress 2005 High School Transcript Study, Latinas/os are more likely than any other group to be enrolled in a “less than standard” curriculum. In addition to attending college at lower rates than more well-off students, lower SES students are also less likely to be enrolled in advanced math and science courses in high school (NCES, 2008). Low college enrollment rates are influenced by two factors: Latina/o and low-income students are less likely to attend college when they are qualified to do so, and they are less likely to be academically prepared to go to college.

Latina/o and low-income students are also less likely to have access to the social and cultural capital that can be crucial for college attendance. Social and cultural capital are concepts from the work of Bourdieu (1977; Bourdieu & Passeron, 1977). Social capital can be understood as specific knowledge or strategies that can be applied to the process that leads to college enrollment, and cultural capital can be understood as information about norms and expectations (Coleman, 1988; Perna, 2000b; Stanton-Salazar, 1997). The types of social and cultural capital that are most valuable for getting into college generally accrue more to upper income White students than to lower income or Latina/o students (Stanton-Salazar, 1997). For Latina/o and African American high school students, social and cultural capital may be as important as academic ability in the decision to attend a 4-year college (Perna, 2000b).

Latina/o students from low-income backgrounds often lack access to this type of capital in their families. Perna (2000a) suggested that parents’ educational attainment can usefully serve as an indicator of cultural and social capital. In 2006, 32.4% of Latina/o students reported that their parents had less than a high school diploma compared with 4.0% of the White population (NCES, 2008). Students whose parents have lower levels of educational attainment are less likely to take an advanced curriculum. In fact, 43% of the students who had a parent with less than a high school education were enrolled in a “less than standard” curriculum. In addition, students who were classified as “poor” were more likely to have parents with lower educational attainment, and 26.5% of Latina/o students were classified as poor (NCES, 2008). Latina/o students from low-income families are less likely to have parents with postsecondary education and are therefore less likely to have parents who can provide essential information and resources about the path to college.

STANDARDIZED TESTING PREPARATION

The lack of social and cultural capital impacts another critical piece of the college admissions puzzle, standardized testing (Walpole et al., 2005). One of the
first standardized tests related to college readiness that many students take is the Preliminary SAT (PSAT), which is generally taken early during the junior year and often during the freshman or sophomore year (College Board, n.d.). Taking the PSAT can serve several functions, including helping prepare students for the SAT I and II (Gándara, 2005), which are required for admission to many colleges. Berkner and Chavez (1997) reported that even college-qualified low-income Latina/o students are less likely to take college entrance exams. As with other academic areas, Latina/o students’ SAT performance is often below that of White students and the student population as a whole. Gándara (2005) reported that even for the highest achieving Latina/o students, SAT scores are still lower than those of their White peers. These lower scores reflect, at least in part, a lack of access to social and cultural capital (Contreras, 2005). Walpole et al. (2005) suggested that knowledge about standardized admissions testing represents cultural capital. Therefore, student participation in the PSAT reflects some knowledge about the college admissions process. Participation reflects that students are thinking about college in their sophomore or junior year and are displaying a predisposition for college attendance. Taking the test can also be a step toward becoming prepared for the SAT I and qualifying for college admissions by succeeding on standardized tests.

COLLEGE PLANS AND EXPECTATIONS

A critical step on the path to college is that students develop expectations to go to college and plan to go to college (Cabrera & La Nasa, 2001). One of the widely cited models for understanding the college enrollment process is that proposed by Hossler and Gallagher (1987), which is composed of three stages: predisposition, search, and choice. The predisposition phase involves students making the decision to pursue a college education. In order to select college-track classes and take other steps toward qualification, students must first decide they want to go (Cabrera & La Nasa, 2000a, 2000b, 2001). Though having the predisposition to go to college is not sufficient to get a student enrolled, it is a critical first step (Perna, 2000a). Hossler, Schmit, and Vesper (1999) found that most high school students follow through with their educational plans. College plans and expectations are a crucial piece of the process of becoming qualified for college and of college outreach programs (Cabrera & La Nasa, 2001; Perna, 2002).

ELEMENTS OF COLLEGE PREPARATION PROGRAMS

Many programs exist to try to address the educational needs of less advantaged students. One of these is the GEAR UP program (Cabrera et al., 2006; NACAC, 2004; Perna, 2002; Swail, 2000). In 1998, Congress created the Gaining Early
Awareness and Readiness for Undergraduate Programs (GEAR UP) program. GEAR UP differs from many other programs in that it targets entire cohorts or schools rather than individual students or specified at-risk groups. GEAR UP programs vary by site, but all are designed to be long term and address multiple areas of students’ development. This approach is supported by the recognition that programs that are short term, discontinuous, and narrowly focused are not as effective as more long-term, integrated, broadly focused ones (Cabrera et al., 2006; Perna, 2002; Perna & Swail, 2001). GEAR UP programs do vary by site. The program described in the current study included 5 critical elements suggested by Perna (2002) and 11 elements identified as most important. The five elements identified as critical are goal of college attendance; college tours, visits, fairs; promoting rigorous course taking; parental involvement; and beginning by eighth grade. The 11 elements identified as most important include the five listed above and the following: college awareness or exposure, goal of promoting academic skills, parent college awareness, parent assistance with financial aid forms and involvement in student activities, SAT/ACT training, and tuition reimbursement.

The broad approach of the GEAR UP program in the current study addresses encouraging students to plan to attend college, increasing academic preparedness, and providing social and cultural capital to students and their families in order to help minimize the barriers to college attendance (Gándara & Bial, 2001; McDonough, 1997). GEAR UP attempts to provide students with access to the same kinds of social and cultural capital that are more commonly available to wealthier students (Cabrera et al., 2006).

PURPOSE OF THIS STUDY

Although critical and important program elements have been identified, little is known about how different program elements are related to college readiness. Outcome research for college outreach programs is lacking in crucial areas. First, there is a lack of information about program outcomes. Gándara and Bial (2001) found that the lack of research about programs makes it difficult to know how effective they are, and Cabrera et al. (2006) found that there is a shortage of longitudinal research. Gándara and Bial also concluded that few programs engage in thorough evaluation and outcome studies. Similarly, Perna and Swail (2001) concluded that program evaluations are often just records of student participation. A second area for further research is the relationship between different program elements and outcomes. Most evaluations do not provide information on which program components are associated with various outcomes (Perna & Swail, 2001). Perna (2002) called for further research to better understand the effects of discrete program elements and combinations of elements. Gándara and Bial stated that one of the critical components for future research is determining which
program elements are responsible for helping prepare students for postsecondary education.

After studying the relationship between GEAR UP program elements and various outcome variables, Yampolskaya et al. (2006) found that there is value in examining the amount of time spent in different program activities. They also found that students classified as “high participation” showed significant improvements in grade point average, whereas those classified as “low participation” did not. They concluded “that in order to improve academic outcomes students have to spend ample time in GEAR UP” (p. 473), and they stressed the need for additional studies to determine how program elements and amount of participation influence the students who are participating in GEAR UP programs.

The present study examines a group of students who participated in a GEAR UP program over a 6-year period, beginning in the sixth grade. We evaluate the relationship between the amount of participation in various GEAR UP program elements and components of college readiness. For the purposes of this study, we have included participation in college-track courses, PSAT participation in the sophomore or junior year, and plans and expectations to attend college as indicators of college readiness. More specifically, we investigated four questions:

1. What is the relationship between college-track course completion and hours of participation in the following program elements: tutoring, mentoring, advising, college visits, summer programs, educational field trips, and total hours?
2. What is the relationship between PSAT participation in 10th or 11th grade and hours of participation in the same program elements?
3. What program elements did students rank the highest for helping them decide to go to college?
4. What program elements correlated with students’ self-reported expectations of going to college?

METHOD

Participants

The participants included in this study attended school in one of four school districts in a rural, western region that received GEAR UP services for a 6-year period. All four of the districts that received GEAR UP funding in this study had high percentages of students who received free and reduced-priced meals, between 70.4% and 77.8% of the students received this assistance. All participants included in this study were enrolled in one of these GEAR UP–funded schools for
six of the years that the program was being administered. Only students for whom we had 6 years of participation and survey data were included.

There were a total of 187 participants. Of the participants, 131 were identified as Latina/o (70.1%), 54 were identified as White (28.9%), 1 was identified as “other” (0.5%), and there was no ethnicity information available for 1 of the participants (0.5%). Participants were 51.9% female (n = 97) and 47.6% male (n = 89), and gender information was missing for 0.5% (n = 1). The exact ages of the participants was not recorded, but all of the participants were in the 5th or 6th grade when data collection began, and they completed their 10th- or 11th-grade year during the final data collection period.

Data Collection

Hours of participation in program elements (tutoring, mentoring, advising, college visits, summer programs, and educational field trips and total hours) were recorded for all students over a 5-year period by the GEAR UP site directors in each of the schools. These data were then sent annually to the GEAR UP database manager for compilation and evaluation. In addition, site directors recorded the college-track classes that each student completed each year and sent this information to the database manager. The college-track courses included honors or advanced placement classes and math and science classes that are considered important for college preparation. Finally, site directors recorded whether students participated in the PSAT during their sophomore or junior year and also sent this information to the database manager.

An annual survey was administered by the database manager each spring toward the completion of the academic year. The surveys were administered by the database manager at each of the schools in the four districts. The survey included 40 items and was composed of closed questions with Likert-type response scales as well as some open questions. The questions generally inquired about students’ preparation for and knowledge about college and financial aid, as well as their attitudes about GEAR UP activities and postsecondary education.

Two specific survey questions from the sixth-year survey are relevant to this study. The first survey item used in this study was the statement “I expect to go to college” followed by a response scale (1 = not at all, 2 = probably not, 3 = maybe, 4 = probably, 5 = definitely). The second survey item used in this study was the statement “The following activities helped me decide that I want to go to college.” This statement was followed by 14 activities, each with a response scale below it (5 = a great deal, 4 = a lot, 3 = some, 2 = a little, 1 = none, or not applicable). The activities were visiting college campuses; participating in summer programs; tutoring; activities with mentors; talking with mentors; listening to GEAR UP guest speakers; 6th-grade trip to a 4-year university; 7th-grade trip, such as a film festival or Day of the Dead; 8th-grade career showcase at the community college;
9th-grade college planning at a 4-year college; 10th-grade speakers about college; college information booklets for each grade level; after-school GEAR UP activities, such as video production club or quilting club; and after-school homework help. All procedures for data collection and management were reviewed and approved by the university Human Subjects Review Committee.

RESULTS

To address the first research question we conducted a standard multiple regression to determine the accuracy of the independent variables (hours of participation in tutoring, mentoring, advising, college visits, summer programs, and educational field trips and total hours) in predicting the number of college-track classes completed between Grades 7 and 11. Data screening for outliers using Mahalanobis Distance values led to the elimination of five cases. Evaluation of normality and linearity led to square root transformations of numbers of college classes, tutoring hours, college visit hours, and total participation hours; reflect and square root transformations of mentoring hours and advising hours; and natural log transformation of summer program hours. Regression results indicated that the overall model significantly predicted the number of completed college-track courses, $R^2 = .181$, $R^2_{adj} = .147$, $F(7, 172) = 5.42, p < .001$. This model accounted for 18.1% of the variance in the number of completed college-track classes. A summary of regression coefficients is presented in Table 1 and indicates that two of the seven variables contributed significantly to the model: advising hours and tutoring hours. Participation in advising was positively correlated with college-track course completion, whereas participation in tutoring was negatively correlated with college-track course completion.

<table>
<thead>
<tr>
<th>Program Element</th>
<th>B</th>
<th>$\beta$</th>
<th>t</th>
<th>Bivariate r</th>
<th>Partial r</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tutoring</td>
<td>-0.066</td>
<td>-0.350</td>
<td>-2.116**</td>
<td>.053</td>
<td>-0.159</td>
</tr>
<tr>
<td>2. Mentoring*</td>
<td>0.037</td>
<td>0.221</td>
<td>0.913</td>
<td>-0.080</td>
<td>0.069</td>
</tr>
<tr>
<td>3. Advising*</td>
<td>-0.291</td>
<td>-0.509</td>
<td>-3.810***</td>
<td>-0.366</td>
<td>-0.279</td>
</tr>
<tr>
<td>4. College visits</td>
<td>-0.017</td>
<td>-0.048</td>
<td>-0.422</td>
<td>0.140</td>
<td>-0.032</td>
</tr>
<tr>
<td>5. Summer programs</td>
<td>-0.085</td>
<td>-0.123</td>
<td>-0.949</td>
<td>0.009</td>
<td>-0.072</td>
</tr>
<tr>
<td>6. Educational field trips</td>
<td>0.006</td>
<td>0.099</td>
<td>0.086</td>
<td>-0.080</td>
<td>0.061</td>
</tr>
<tr>
<td>7. Total participation</td>
<td>0.040</td>
<td>0.375</td>
<td>0.852</td>
<td>0.124</td>
<td>0.065</td>
</tr>
</tbody>
</table>

*a* Interpretation of results should be reversed because of the use of reflection in the data transformation (Tabachnick & Fidell, 1996).

**$p < .05$. ***$p < .001$. 
To address the second research question we conducted a discriminant analysis to determine whether six variables (hours of participation in tutoring, mentoring, advising, college visits, summer programs, and educational field trips) could predict whether students took or did not take the PSAT. Prior to analysis five outliers were identified and eliminated. Because of non-normality, square root transformations were used for tutoring, mentoring, and advising and a natural log transformation was used for summer program hours. The function that was generated was significant, $\Lambda = .840$, $\chi^2(6, n = 180) = 30.488$, $p < .001$, indicating that the function of predictors significantly differentiated between students who took the PSAT and those who did not. PSAT participation was found to account for 16.0% of the function variance. Standardized function coefficients and correlation coefficients (see Table 2) revealed that the variables of advising hours, summer program hours, educational field trip hours, and college campus visit hours were most associated with the function. Based upon these results, the function was labeled Advising and College Campus Visitation. Original classification results revealed that 92.9% of the students who did not take the PSAT were correctly classified and 29.6% of the students who took the PSAT were correctly classified. For the overall sample, 73.9% of the students were correctly classified. Cross-validation derived 72.2% accuracy for the total sample. The means of the discriminant functions were consistent with these results. Students who did not take the PSAT had a function mean of .284, and students who did take the PSAT had a function mean of –.663. These results suggest that students with less advising hours and less college visit hours (including summer program and educational field trips hours) are less likely to have taken the PSAT.

To address the third research question regarding which of 14 program elements students ranked the highest for helping them decide to go to college, we ranked

<table>
<thead>
<tr>
<th>Program Element</th>
<th>Correlation Coefficient With Discriminant Function</th>
<th>Standardized Function Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tutoring</td>
<td>–.051</td>
<td>0.095</td>
</tr>
<tr>
<td>2. Mentoring</td>
<td>–.097</td>
<td>–0.032</td>
</tr>
<tr>
<td>3. Advising$^a$</td>
<td>.526</td>
<td>1.074</td>
</tr>
<tr>
<td>4. College visits$^a$</td>
<td>.450</td>
<td>0.738</td>
</tr>
<tr>
<td>5. Summer programs$^a$</td>
<td>.496</td>
<td>0.436</td>
</tr>
<tr>
<td>6. Educational field trips$^a$</td>
<td>.454</td>
<td>–0.246</td>
</tr>
</tbody>
</table>

$^a$Program elements associated with the function Advising and College Campus Visitation.
the means for each item on a self-report survey in order from highest to lowest scores (scores ranged from 5 = a great deal to 1 = none, and “not applicable” was a choice). Students who selected “not applicable” were excluded from the analysis. The program elements that were ranked the highest by students and had a mean higher than 3.00 (indicating that the element helped “some” in their decision to go to college) were all related to visiting college campuses or getting college planning information. These elements were visiting college campuses during the school year ($n = 180, M = 4.04, SD = 1.42$), 10th-grade speakers about college ($n = 179, M = 3.59, SD = 1.44$), college information booklets for each grade level ($n = 179, M = 3.59, SD = 1.42$), 6th-grade trip to a 4-year university ($n = 179, M = 3.46, SD = 1.54$), 9th-grade college planning at a 4-year university ($n = 179, M = 3.41, SD = 1.43$), listening to GEAR UP guest speakers ($n = 180, M = 3.31, SD = 1.41$), and 8th-grade career showcase at the community college ($n = 178, M = 3.24, SD = 1.50$). All results are reported in Table 3, listed from highest to lowest ranking.

Bivariate correlations were conducted to address the fourth research question regarding which of 14 program elements correlated with students’ self-reported expectations of going to college. Five activities had significant positive correlations with student expectations about attending college ($p \leq .001$). These activities were 10th-grade speakers about college ($n = 173, r = .282$), college information

<table>
<thead>
<tr>
<th>Ranking of Program Activities</th>
<th>$n$ for Expectations</th>
<th>$M$</th>
<th>$SD$</th>
<th>Expectations for College</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Visiting college campuses in school year</td>
<td>174</td>
<td>4.04</td>
<td>1.42</td>
<td>.211†</td>
</tr>
<tr>
<td>2. Grade-level college information booklets</td>
<td>173</td>
<td>3.59</td>
<td>1.42</td>
<td>.280†</td>
</tr>
<tr>
<td>3. 10th-grade speakers about college</td>
<td>173</td>
<td>3.59</td>
<td>1.44</td>
<td>.282†</td>
</tr>
<tr>
<td>4. 6th-grade trip to a 4-year university</td>
<td>173</td>
<td>3.46</td>
<td>1.54</td>
<td>.223†</td>
</tr>
<tr>
<td>5. 9th-grade college planning at 4-year university</td>
<td>173</td>
<td>3.41</td>
<td>1.43</td>
<td>.074</td>
</tr>
<tr>
<td>6. Listening to GEAR UP guest speakers</td>
<td>174</td>
<td>3.31</td>
<td>1.41</td>
<td>.157**</td>
</tr>
<tr>
<td>7. 8th-grade career showcase at community college</td>
<td>172</td>
<td>3.24</td>
<td>1.50</td>
<td>.098</td>
</tr>
<tr>
<td>8. After-school homework help</td>
<td>172</td>
<td>2.92</td>
<td>1.50</td>
<td>.129</td>
</tr>
<tr>
<td>9. 7th-grade event (film festival, Day of the Dead)</td>
<td>172</td>
<td>2.88</td>
<td>1.57</td>
<td>.099</td>
</tr>
<tr>
<td>10. Activities with college mentors</td>
<td>172</td>
<td>2.75</td>
<td>1.51</td>
<td>.120</td>
</tr>
<tr>
<td>11. Talking with college mentors</td>
<td>173</td>
<td>2.69</td>
<td>1.50</td>
<td>.192**</td>
</tr>
<tr>
<td>12. Participating in summer programs at university</td>
<td>171</td>
<td>2.67</td>
<td>1.53</td>
<td>.226†</td>
</tr>
<tr>
<td>13. Tutoring</td>
<td>174</td>
<td>2.67</td>
<td>1.47</td>
<td>.101</td>
</tr>
<tr>
<td>14. After-school activities (video club, quilting club)</td>
<td>172</td>
<td>2.50</td>
<td>1.44</td>
<td>.020</td>
</tr>
</tbody>
</table>

Note. GEAR UP = Gaining Early Awareness and Readiness for Undergraduate Programs program. *$p \leq .05$. †$p \leq .005$. **$p \leq .01$. ***$p \leq .001$.}

TABLE 3

Pearson Correlations for Student Rankings of Program Activities and Self-Reported Expectations for Going to College

...
booklets for each grade level ($n = 173, r = .280$), participating in summer programs at a 4-year university ($n = 171, r = .226$), 6th-grade trip to a 4-year university ($n = 173, r = .223$), and visiting college campuses during the school year ($n = 174, r = .211$). Results are shown in Table 3.

**DISCUSSION**

Results of the regression analysis for the first research question indicate that students who participated in more GEAR UP advising hours also completed more college-track classes. Completing college-track classes is important (Adelman, 1999; Berkner & Chavez, 1997). However, Latina/o students are less likely to be enrolled in them (NCES, 2008) and often attend schools in which opportunities for advanced classes are limited (Gándara, 2005). In addition parents’ educational levels and language barriers may mean that students do not receive information about college-track curricula at home. Advising for Latina/o and/or low-income students may be an important element for improving enrollment in and completion of college-track courses. What is interesting is that tutoring hours was negatively correlated with college-track course completion. This may indicate that students receiving more tutoring are not in college-track courses or that those students in college-track courses require less academic support.

The results of the discriminant analysis for the second research question found that the program elements advising hours, summer program hours, educational field trip hours, and college campus visit hours were most associated with the function. The function, Advising and College Campus Visitation, suggests that students who are not involved in advising and college visit activities are less likely to take the PSAT. This finding is consistent with Walpole et al.’s (2005) conclusion that low-SES ethnic minority students need more and better information about standardized tests. Walpole et al. also pointed out the potential impact of the stereotype threat effect. This is the process by which an individual’s belief that students like him or her do not do well on a particular task creates a self-fulfilling prophecy. Involvement in advising and visits to college campuses may help counter these perceptions. The elements of the function also represent social and cultural capital. By providing students with information about going to college as well as activities that increase familiarity with college campuses and promote educational attainment, programs increase access to capital that is more readily available in higher income schools.

The results of the third research question suggest that out of 14 program elements, those that students reported were most influential in their decision to go to college were activities designed to welcome them in a college environment and provide them with task-specific information about college and future planning. These activities include visiting college campuses, bringing speakers from
colleges to their schools, and being provided with information booklets about college preparation. Again, these elements represent capital in the form of specific information and knowledge as well as socialization to higher education. In addition to impacting objective measures of college readiness, like PSAT participation and college-track course completion, students self-reported that visiting college campuses and receiving direct information about the path to college were most important in their decision to attend college.

The results of the bivariate correlation for the fourth research question reveal that as students’ expectations for college attendance increase, so does the influence that they assign to various program elements. Specifically, 10th-grade speakers from college campuses and grade-level college information booklets correlated with expectations for college attendance. Both of these elements represent access to information about navigating the path to college. Participating in summer programs, the 6th-grade trip to a 4-year university, and college campus visits during the school year were also correlated with expectations. Clearly, students who expected to go to college believed that visiting college campuses influenced their decision. What is interesting is that the 6th-grade trip to visit a 4-year university was significant, whereas subsequent grade-level visits were not. This may indicate that an early visit has influence that later trips do not, which may support the importance of beginning college outreach programs prior to eighth grade (Perna, 2002).

Although the results of these research questions are interesting individually, taken together they illustrate the critical role that social and cultural capital plays in the college readiness process for Latina/o and/or low-income students. Perna (2000a) stated that “additional research is required to understand racial/ethnic group differences and the ways in which social and cultural capital influence particular stages of the process” (p. 137). For the Latina/o and/or low-income students in the present study the influence is clear. Students’ participation in both the PSAT and college-track classes was related to the number of advising hours. This suggests the critical role that access to information about the college process plays for these students, particularly when one considers the relationship between the students’ family backgrounds and social and cultural capital. Similarly, students reported that program activities that put them in contact with the college environment and helped make higher education more tangible were related to their expectations for obtaining a college degree. Furthermore, participation in these same activities was associated with taking the PSAT.

The present study also supports the importance of the critical elements identified by Perna (2002). Overall, the GEAR UP program in this study had a clear goal of college attendance and provided information toward this end through advising, information booklets, and guest speakers. Participation began prior to eighth grade. College tours, fairs, and visits were significant in both PSAT participation
and college expectations. Advising was also related to another critical element (Adelman, 1999; Perna, 2002), enrollment in college-track classes.

Several program elements common to many college outreach programs were not found to be significantly related to college readiness as defined in this study, nor were they identified by students as influencing their decision to attend college. Tutoring (e.g., after-school homework help) and mentoring (e.g., after-school activities) were two of these elements. Though these elements may be important to other aspects of college readiness, such as academic performance, the results of this study indicate that it may be important to continue to focus on college campus visits and providing information to at-risk students. This can be challenging because these activities are often logistically difficult and expensive to carry out compared with tutoring or mentoring.

### IMPLICATIONS AND LIMITATIONS

The schools attended by many Latina/o students may offer lower quality educational options than are available to higher income White and Asian students (Gándara, 2005), making it important that traditional academic support activities (e.g., tutoring) be included in GEAR UP and other college readiness programs. However, helping students secure necessary social and cultural capital is also essential. This may become challenging in the present era of accountability and budget pressures. Therefore, continued research into the role of social and cultural capital is necessary.

Several limitations to the present study should be considered when interpreting the findings. The sample represented students for whom complete long-term data were available. There may have been differences between students who participated in the program for shorter periods of time. This study examined only a few elements of college readiness and did not include measures of academic achievement, which may be impacted more by other program elements. Although the participants in this study self-identified as Latina/o, it is known that the communities in which these GEAR UP services were administered were composed primarily of Mexican and Mexican American families. Therefore, the results of this study may not generalize to other Latina/o populations. In addition, the participants in this study were from a rural, agricultural area, and though they faced many of the same challenges as their urban peers, there may also have been important differences in what helps them prepare for college.

In addition to examining the role of social and cultural capital in college preparation for at-risk students, future research should follow students who participated in college readiness programs to learn whether they pursued their stated plans for attending college. In addition, it is important to understand whether students are
able to complete their degrees once they do enroll in college and, if they do not, what barriers are preventing them from achieving their goals.

REFERENCES


