Student Aspirations, Background Characteristics and a Four-Part Model of College Readiness

Elizabeth M. Gilkey, MA, JD
Educational Policy Improvement Center

Mary Seburn, PhD
Educational Policy Improvement Center

David T. Conley, PhD
Educational Policy Improvement Center

This study analyzed what predicted students' postsecondary aspirations in a sample of 5258 high school students. Variables explored were GPA, gender, race/ethnicity, FRPL eligibility, parent's education, and student ratings on the importance and occurrence of behaviors associated with a model of college readiness. Race predicted four-year college and work aspirations for Latino students, and four-year college aspirations for African American students. GPA explained 36% of the variance in four-year college aspirations. FRPL eligibility predicted work plans. Student ratings on the importance of Academic Behaviors predicted aspirations to pursue higher education; ratings on the occurrence of Contextual Skills predicted work aspirations. These results can inform schools on how best to target limited resources to increase students' college aspirations.

Keywords: Postsecondary Education, High Schools, At-Risk Students

A journey of a thousand miles must begin with a single step. Lao-Tzu

Objectives

The purpose of this study was to determine which variables predicted students' aspirations for after high school: grade point average (GPA), gender, race/ethnicity, Free and Reduced Price Lunch eligibility (FRPL), parent's education, and student ratings on the importance and occurrence of behaviors associated with a model of college readiness. The results of this study can inform schools on how best to target limited resources to increase students' college aspirations.

Theoretical Framework

College preparation is gaining focus in the educational policy arena as the Department of Education announced that it intends to reauthorize the Elementary and Secondary Education Act to prioritize college and career readiness (Duncan & Martin, 2010). Further, more students than ever aspire to attend higher education, of eighth graders surveyed in the National Educational Longitudinal Study (NELS), 88% had postsecondary aspirations (Venezia, Kirst & Antonio, 2003). Cooper (2009) states, "Educational aspirations are critical to educational attainment because people cannot achieve what they do not dream" (p. 616). Students with postsecondary aspirations are more likely to apply and students who apply to college are more likely to attend. Seniors in the NELS dataset who aspired to earn a bachelor's degree (BA) were 28% more likely to apply to a four-year institution than students with no aspirations to attend college, and seniors aspiring for advanced degree were 34% more likely to apply (Cabrera & La Nasa, 2001). Seniors whose parents expected them to earn at least a BA were 26% more likely

to apply and seniors whose parents expected them to earn a degree beyond a BA were 22% more likely to apply.

The NELS data revealed that race influences the relationship between college aspirations and attendance (Bennett & Xie, 2000, Perna, 2000, Solozorano, 1991, U.S. Department of Education, 1997). Aspiring to an advanced degree had a positive influence on college enrollment rates for Latinos and Whites but was unrelated to enrollment for African Americans (Perna, 2000). Similarly, parental or school personnel encouragement to attend college increased the likelihood of enrollment for Whites but was unrelated to enrollment for African Americans and Latinos. A smaller proportion of African American students aspired to obtain a college degree than White students (Bennett & Xie, 2000). However, of the students who aspired to earn a BA, larger proportions of White students than African American students actually enrolled in college. When controlling for SES, African American students had higher educational aspirations than other ethnic groups in the NELS dataset (Solozorano, 1991). Students from both ethnic groups valued education similarly, yet the likelihood of African American students attending college was 43% lower than White students. When controlling for gender, costs, benefits and financial resources, Latino students were less likely than White students to enroll in college, yet African American students were as likely as White students to enroll (Perna, 2000).

Socioeconomic status (SES) affects college enrollment (Antonio & Bersola, 2004, Cabrera & La Nasa, 2001, Merchant, 2004). Even controlling for access to financial aid, high-SES students were 55% more likely to apply to four-year colleges than their lowest-SES counterparts, and low-SES students were 15% less likely to apply than middle-upper

SES students (Cabrera & La Nasa, 2001). The Bridge Project conducted case studies in eight states to examine high school-college transition policies (Kirst & Venezia, 2004). In California, the project found that there were differences in college aspirations by SES, significantly more mid-SES students (34.7%) aspired to attend their local community college than high-SES students (21.5%) (Antonio & Bersola, 2004). In Illinois, the percentage of students who aspired to full-time college was directly related to SES. Low- and mid-SES students were more likely to report that they planned to attend community college than high-SES (35.1% and 37.2% versus 18.2%) (Merchant, 2004). Further, a higher percentage of low-SES than mid- or high-SES students intended to work after graduation.

Even if students aspire to college, they cannot attend if they are not prepared. College readiness is the level of preparation a student needs to enroll and succeed without remediation in a credit-bearing general education course at a postsecondary institution that offers a baccalaureate degree (Conley, 2005, 2007, 2010). Of students in the NELS dataset who had obtained college qualifications such as the requisite GPA, class rank, aptitude test scores, SAT and ACT scores, 69% enrolled in college whereas 9% of unqualified students enrolled (Cabrera & La Nasa, 2001).

The results of the Bridge Project indicated that many students were not prepared to attend college because the secondary and postsecondary education systems in the case study states were not adequately integrated (Kirst & Venezia, 2004). In order to address this lack of integration, Conley (2005, 2007, 2010) developed a four-part model of college readiness through a study of the programs and practices at 38 high-performing high schools nationwide. The 38 schools were selected because they had effective

postsecondary preparation programs that focus on students from groups historically underrepresented in higher education. Schools with high proportions of low-income students, English learners, Latino and African American students were over-sampled in the study. Researchers collected extensive information on each school's type and size, geographic setting and location, student body demographics, performance indicators, and, in particular, college readiness programs and practices. Through this study, four dimensions of college readiness were identified: Key Cognitive Strategies, Key Content Knowledge, Academic Behaviors and Contextual Skills (see Table 1).

Table 1

Four-part Model of College Readiness

Dimension	Definition	Components
Key Cognitive Strategies	Patterns of intellectual behavior that lead to the development of skills and capabilities necessary for college work. These include problem formulation, research, interpretation, communication, and precision/accuracy.	Hypothesizing Strategizing Identifying Collecting Analyzing Evaluating Organizing Constructing Monitoring Confirming
Key Content Knowledge	The strong, grounding foundation for the understanding of academic disciplines. Includes English and language arts (ELA), mathematics, natural science, second language(s), and social science.	Attribution Value Motivation Challenge
Academic Behaviors	The attitudes and behavioral attributes that students who succeed in college must demonstrate. Academic Behaviors require students to take responsibility for their own learning through self-awareness, self-monitoring, and self-control.	Goal Setting Strategies Persistence Strategies Self-Awareness Strategies Test Taking Skills Note taking skills Group skills Time Management Skills General Study Skills
Contextual Skills	The privileged knowledge and skills that are necessary to enroll in college and understand how	College and Career Preparation College and Career Expectations College Selection

	college operates as a system and a culture, these include a general understanding of college admissions processes, career and college culture, and tuition and financial aid.	College Application College Awareness Career Awareness Financial Aid Awareness Tuition Awareness

Note. Adapted from Conley (2005, 2007, 2010)

Data sources

Data were collected in a pilot administration of The CollegeReady School Diagnostic (Diagnostic), a school-level measure that assesses the four-part model of college readiness (Conley, 2005, 2007, 2010). The Diagnostic enables schools to identify the areas in which they already excel and offers approaches for incorporating strategies not yet used through questions about the activities, policies, and programs at a high school. Upon completion of the Diagnostic, each school receives a descriptive report outlining its results, allowing schools and districts to see how well their programs compare with best practices and provides individualized, actionable recommendations to help administrators and teachers see where instruction could be made more effective and how best to target limited resources.

A sample of 5258 students from 14 schools in three districts took the Diagnostic in three, randomly assigned forms. The Diagnostic assessed students' perceptions of the importance of behaviors associated with the Academic Behaviors and Key Cognitive Strategies dimensions of the four-part model and the occurrence of behaviors around the Contextual Skills dimension of the model. The Diagnostic also asked students several background questions regarding their demographics and future aspirations for after they completed high school. Key Content Knowledge was not assessed in the pilot administration.

Methods

Data were analyzed using regression analysis to determine which variables had the greatest effect on students' aspirations for after high school: GPA, gender, race/ethnicity, Free and Reduced Price Lunch eligibility, parental education, the average importance students ascribed to Academic Behaviors and Key Cognitive Strategies, and the average occurrence ratings students ascribed to Contextual Skills (see Table 2).

Table 2

Variables Explored and Diagnostic Response Options

Variable	Diagnostic Response Options
GPA	0-5.2
Gender	Male Female
Race/ethnicity	Asian or Pacific Islander African American American Indian or Alaskan Native Hispanic or Latino White Multiple categories or mixed race Prefer not to answer
Free and Reduced Price Lunch eligibility	Yes No Don't know
Mother's education	Some high school High school Some college Associate's degree Bachelor's degree Master's degree Doctoral/ professional degree
Father's education	Some high school High school Some college Associate's degree Bachelor's degree Master's degree Doctoral/ professional degree

Aspiration for three months after graduation	Four-year college Two-year college Work Technical school Travel Military Internship Volunteer Other Don't know
Academic Behaviors Importance	How important do you think this is for your success in high school and beyond? Not at all important Minimally important Important Very important Don't know or N/A
Key Cognitive Strategies Importance	How important do you think this is for your success in high school and beyond? Not at all important Minimally important Important Very important Don't know or N/A
Contextual Skills	Have you done any of the following? Yes No I don't know what this means

Results

GPA GPA explained 36% of the variance in four-year student aspirations. GPA predicted students' four-year college aspirations (b = .19, $t(8) = 19.18$, $p > .01$) and their two-year aspirations (b = -.05, $t(8) = -6.92$, $p > .01$). GPA also predicted which students planned to enter the military after graduation (b = -.01, $t(8) = -4.51$, $p > .01$), which students planned to work (b = -.06, $t(8) = -9.42$, $p > .01$), and which students did not know what they would do after high school (b = -.03, $t(8) = -5.58$, $p > .01$).

Gender Gender did not predict the postsecondary aspirations of students who took the Diagnostic.

Race Race significantly predicted four-year college aspirations for Asian American/Pacific Islander students (b = .06, $t(8) = 2.82$, $p > .01$), African American students (b = .07, $t(8) = 3.48$, $p > .01$) and Latino students (b = -.08, $t(8) = -5.18$, $p > .01$). Race significantly predicted students' plans to work after high school graduation for American/Pacific Islander students (b = -.05, $t(8) = -3.41$, $p > .01$), and Latino students (b = .03, $t(8) = 3.21$, $p > .01$).

SES Free and Reduced Price Lunch eligibility significantly predicted students' plans to work after graduation (b = -.039, $t(8) = -2.790$, $p > .01$). Being the first in family to attend college, however, did not significantly predict any student aspiration.

Academic Behaviors Average importance ratings on the Academic Behaviors dimension of the four-part model of college readiness (Conley, 2005, 2007, 2010) significantly predicted students' four-year college aspirations (b = .50, $t(6) = 7.45$, $p > .01$), two-year college aspirations (b = .35, $t(6) = 4.57$, $p > .01$), plans to work (b = .33, $t(6) = 4.19$, $p > .01$), and plans to attend technical school (b = .44, $t(6) = 3.812$, $p > .01$).

Key Cognitive Strategies Average importance ratings on the Key Cognitive Strategies (KCS) items did not significantly predict student aspirations for after high school.

Contextual Skills Average occurrence ratings on the Contextual Skills dimension of the college readiness model significantly predicted students' plans to work after graduation (b = .08, $t(6) = 2.93$, $p > .01$).

Significance to the Field

One cannot do what one does not aspire to. Raising the college aspirations of students will improve the chances that some of those students will attend college. The results of this study can inform schools on which student subgroups to target limited

resources to improve college aspirations and attendance. As the results indicate, GPA predicted all of the aspirations examined in this study, thus schools should encourage students with low GPAs to consider four-year colleges by making them more aware of what it takes to be college-eligible and the benefits of going to a four-year college. At the same time, schools should develop more options for low-GPA students to learn about career pathways and what it takes to gain additional training and certification beyond high school. Encourage these students to consider community colleges by providing much more information about the range of two-year certificates available locally and how students access those programs. Finally, schools should make sure the classes these students take are academically challenging but also aligned with the academic skills they will need in certificate programs.

Schools should also focus on Latino students for whom race significantly predicted four-year college aspirations and plans to work after high school. Race also predicted plans to attend four-year college for African American students. Schools should also target students from low-SES backgrounds as FRPL status significantly predicted students' plans to work after graduation. Students from low-income backgrounds need more information about the actual costs of attending college, as research indicates that students and parents from the lowest income backgrounds are most likely to lack information about the actual costs of attending college (Horn, Chen & Chapman, 2003). Academic Behaviors (see Table 1) also predicted student postsecondary aspirations to attend four-year, two-year and technical colleges. Schools should identify common approaches to building these skills and begin to implement them consistently schoolwide.

In order to create a college-going culture, schools should develop more systematic college preparation programs to gauge student understanding of key aspects of college knowledge (Conley, 2010). Schools can institute college preparation programs beginning in ninth grade, cover topics systematically, and revisit topics in junior and senior year. As part of these programs, schools can build student schedules with the assumption that all students will be attending a postsecondary institution. All teachers should be aware generally of admission requirements for four-year state universities, they also need a general awareness of the types of two-year certificate programs available at the local community college. Schools need to arrange visitation programs whereby sophomores get a general introduction to the local college or community college. College students should be enlisted to work with students in small groups to explain the challenges of college and how to prepare for them. Finally, schools can require that all students complete an application for a college or community college, first as juniors and again in their senior year; students should be encouraged, but not required, to submit the application.

References

Antonio, A.L. & Bersola, S.H. (2004). Working toward K-16 coherence in California. In M.W. Kirst & A. Venezia (Eds.), *From high school to college: Improving opportunities for success in postsecondary education* (pp. 31-76). San Francisco, CA: Jossey-Bass.

Bennett, P.R. and Xie, Y. (2000). *Explaining the black-white gap in college attendance: Racial differences versus socioeconomic determinants* (Research Report No. 00-

447). Ann Arbor, MI: Population Studies Center at the Institute for Social Research.

Berkner, L. & Chavez, (1997). *Access to Postsecondary Education for the 1992 High School Graduates* (NCES 98-105). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Cabrera, A.F. & La Nasa, S.M. (2001). On the path to college: Three critical tasks facing America's disadvantaged. *Research in Higher Education, 42*(2), 119-149.

Conley, D.T. (2005). *College Knowledge.* San Francisco, CA: Jossey-Bass.

Conley, D. T. (2007). Redefining college readiness, Volume 3. Eugene, OR: Educational Policy Improvement Center.

Conley, D.T. (2010). *College and Career Ready*. San Francisco, CA: Jossey-Bass.

Cooper, M. A. (2009). Dreams deferred? The relationship between early and later postsecondary educational aspirations among racial/ethnic groups. Educational Policy, 23(4), 615-650.Duncan, A. & Martin, C. (2010). *ESEA Blueprint for Reform.* Washington, D.C.: U.S. Department of Education, Office of Planning, Evaluation and Policy Development.

Horn, L.J., Chen, X. & Chapman, C. (2003). *Getting Ready to Pay for College: What Students and Their Parents Know About the Cost of College Tuition and What They Are Doing to Find Out* (NCES 2003–030). Washington, DC: U.S. Department of Education. National Center for Education Statistics.

Hossler, D., & Gallagher, K. (1987). Studying student college choice: A three-phase model and the implications for policymakers. *College and University*, 57(3), 207-211.

Kirst, M.W. & Venezia, A. (Eds.) (2004). *From high school to college: Improving opportunities for success in postsecondary education.* San Francisco, CA: Jossey-Bass.

Merchant, B. (2004). Roadblocks to effective k-16 reform in Illinois. In M.W. Kirst & A. Venezia (Eds.), *From high school to college: Improving opportunities for success in postsecondary education* (pp. 115-150). San Francisco, CA: Jossey-Bass.

Perna, L.W. (2000). Differences in the decision to attend college among African Americans, Hispanics, and Whites. *The Journal of Higher Education, 71*(2), 117-141.

Solorzano, D. (1991). Mobility aspirations among racial minorities, controlling for SES. *Sociology and Social Research*, 75, 182-188.

Venezia, A., Kirst, M.W. and Antonio, A.L. (2003). Betraying the college dream: How disconnected K-12 and postsecondary education systems undermine student aspirations. Palo Alto, CA: The Bridge Project.