Texas Students' Knowledge of University Admissions Policies and Standards: Do High School Counselors Matter?

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Introduction

High school students are faced with a dizzying array of choices as they consider their options for post-secondary education. In the state of Texas, for example, a student can choose from an array of 142 institutions of higher education scattered throughout the state, ranging from community colleges and technical institutes to the highly selective Rice University (Texas Higher Education Coordination Board 2004). Additionally, both individual institutions and public policy bodies such as state legislatures have formulated specific admissions policies and criteria. School selectivity is determined by institutional standards for SAT scores, high school class ranks, and/or GPAs. Furthermore, Texas HB 588, popularly known as the top 10% law, guarantees admission to The University of Texas at Austin (UT-Austin) and Texas A&M for the top decile of graduating seniors from each high school in the state. This policy, embedded in the vast higher education landscape of Texas, provides the backdrop for the higher education decisions of most Texas high school students.

For Texas high school students, understanding the college application and enrollment context of their state is essential for making informed decisions about post-secondary schooling, especially for the nearly 70% of high school seniors who report plans to complete a 4-year college degree (Frost 2004). In particular, knowledge of the provisions of the top 10% law and the admissions standards of institutions of higher education empower college bound students in their search and enable them to choose appropriate schools. In this paper, I examine the characteristics of students who have crucial information about the college admissions process. Specifically, I consider how individual interactions with high school guidance counselors and the college preparatory

orientation of counseling departments are associated with students' knowledge about the college admissions environment.

To assist students in the college search process, high schools utilize guidance counselors as the formal repository of information about post-secondary institutions and college applications. However, there is little rigorous quantitative research examining how counselors' interactions with students and the emphases of school counseling departments influence academic outcomes, including high school students' knowledge of information important in the college decision making process. Therefore, I attempt to fill this gap by examining how Texas students' interactions with high school guidance counselors influence their knowledge of the top 10% law and the selectivity of Texas universities. Additionally, I assess whether the focus of a high school's counseling department on college preparation and attendance influences this knowledge above and beyond individual interactions with counselors. Finally, given the influence of counselors on student awareness of admissions policies, I examine the groups of students for whom counselors are particularly important.

My paper proceeds as follows. First, I review existing studies about counseling effectiveness and formulate hypotheses about likely impacts in Texas. I next discuss why survey data from the Texas Higher Educational Opportunity Project are well suited to test the hypotheses and outline the analytic plan. Using results from hierarchical logistic regression models, I present my findings, which suggest that certain types of counselor exposure and encouragement, as well as some characteristics of school counseling departments, are related to the amount of knowledge students have about the university admissions context in Texas. I also find that minority and first generation college

students are most likely to depend on counselors for college information. Finally, I discuss implications of my findings.

Counselors and Student Knowledge of College Admissions

Counselor Responsibilities

High school guidance counselors have a primary responsibility to encourage and assist students as they formulate college plans, prepare applications, and make enrollment decisions. Because they are uniquely situated between the two spheres of secondary and university education, counselors have access to valuable information about college requirements and admissions standards, tuition and financial aid, and application and enrollment procedures, especially with regard to their particular geographical location. Such information, irrespective of source, is essential for students to make appropriate and purposive decisions about college attendance (Cabrera and LaNasa 2000; Hamrick and Hossler 1996; Rowe 1989; Venezia, Kirst, and Antonio 2003). High school college counselors are positioned to offer such information to all students; however, for students who lack information about college, such as first generation college goers, counselors can be crucial conduits of information (Corwin, Venegas, Oliverez, and Colyar 2004; Fallon 1997; Johnson and Stewart 1991; McDonough 1997).

In spite of their potential to provide college advisement, public school counselors are commonly portrayed as overworked and inaccessible to large numbers of students due to numerous school responsibilities (Spielvogel 2002), and this conclusion is supported by some qualitative research (Corwin et al. 2004; McDonough 1997). Student-to-counselor ratio is the most commonly used measure to support claims of inadequate

access. In her qualitative study of Los Angeles schools, for example, McDonough (1997) reports public high school student-counselor ratios greater than 1000 (See also Corwin, Venegas et al. 2004). In another study, McDonough (1994) claims that "public high schools have effectively divested themselves of any college advisement" because of the large number of students each counselor oversees. National statistics show a slightly different picture than case studies of overcrowded urban schools: on average, there are 284 students for every guidance counselor in public high schools (Parsad, Alexander, Farris, and Hudson 2003). In general, however, both the popular media and researchers have claimed that guidance counselor are unsuccessful in fulfilling their college guidance responsibilities, with little to no impact on the college decision making process (Hossler, Braxton, and Coppersmith 1989; Paulsen 1990).

In addition to college counseling, secondary counselors also perform a variety of other functions in public high schools (Parsad et al. 2003). A 1998 survey showed that their responsibilities include personal and academic counseling, course scheduling, and test-related activities, with only 25% of their total working time devoted to college guidance (Lawton 1998a). Because of various social problems occurring among the teenage population, including depression, suicide, pregnancy, dropout, and drug abuse, the responsibilities of a guidance counselor are often split between college bound students and students with discipline and other problems. This leaves a vast swath of students in the middle with little or no exposure to counselors (Lawton 1998b; McDonough, Korn, and Yamasaki 1997). However, a recent national survey by the Department of Education showed that on average, counselors spend most of their time

working with students on choice and scheduling of high school courses and postsecondary education admissions and selections (Parsad et al. 2003).

Counselors' Pathways of Influence

Despite their responsibility to help students choose colleges, very little rigorous quantitative research has examined whether and how school counseling affects college outcomes, including students' knowledge of information about the college admissions environment. The few existing studies either detail the inner workings of counseling departments in specific poor, urban schools (Corwin et al. 2004; McDonough 1997) or provide only a descriptive portrait of counselors without appropriate statistical controls and methodology to identify counselors' unique influences (Fallon 1997; Johnson and Stewart 1991; Tornatzky, Cutler, and Lee 2002). However, prior studies suggest several ways that high school counselors could impact students' knowledge of essential college admissions information.

First, simple exposure to counselors in any kind of interaction might be associated with greater student knowledge of the college admissions environment. Because of their connections between secondary and higher education and their greater overall familiarity with the college application and enrollment process, increased exposure to counselors could lead to more shared knowledge about the identification of appropriate colleges and application policies and procedures. This is particularly true in cases where students meet with counselors for any college-related issues, including discussion of long term educational plans or college applications. It is less clear that interactions with counselors regarding personal problems, school discipline problems, or career objectives would lead to a similar divulgence of information about college, but it is not an entirely unlikely

scenario. Although a student's primary purpose to visit a counselor might be non-academic, counselors focused on academic achievement and college preparation might use any opportunity to reinforce general knowledge about how the college applications process functions.

Second, counselor encouragement to pursue post-secondary schooling should directly influence students' knowledge of the college admissions landscape. Explicit counselor encouragement is a positive signal about students' likelihood of college success. More than likely, counselor encouragement will include college-specific information. However, when counselors make specific suggestions about alternatives to college, including advising about job options, the divulgence of specific information about college admissions is less probable.

Finally, the focus of schools' college guidance programs may typify a school's orientation toward college and college preparation (Corwin et al. 2004; McDonough 1997). In McDonough's (1997) research of specific schools' guidance activities, she concludes that the culture of each school, as represented by the academic orientation of counseling departments, channeled high school students toward different kinds of postsecondary destinations. Additionally, college counselors can shape the college climate of schools, not just reflect it, by the ways they interact with students (Fallon 1997; Yonezawa 1997). Frequent encouragement of college attendance and information sharing with many students throughout schools could lead to a more strongly focused college going culture (Antonio, Venezia, and Kirst 2004). Furthermore, as college information is disseminated to more students, further transmission of information and discussion of college plans among peers is likely.

In summary, I theorize that transmission of college admissions information from guidance counselors to high school students operates through three possible mechanisms. First, student *exposure* to counselors, either for academic or personal reasons, provides guidance staff with the opportunity to share information about college admissions standards and criteria. Second, counselor *encouragement* to attend college signals a counselor's positive sentiment regarding successful enrollment in higher education, and likely includes dissemination of admissions information. Conversely, counselors who encourage students to work after high school graduation are unlikely to provide specific information about college application standards and policies. Finally, a counseling *department's orientation* towards college enrollment can influence the overall school climate, providing a normative push towards the acceptability and desirability of higher education, which in turn leads to more information sharing between students and from teachers, counselors, and other staff to students.

Direction of Causality

Most available research about high school counseling focuses on how counselors impact distinct groups of students, particularly those who are underrepresented among college-goers. For example, King (1996) reports that exposure to and encouragement by counselors increases the likelihood that low income students will attend 4-year colleges. Tornatzky and colleagues (2002) find that for Latinos of all levels of socioeconomic status, greater exposure to school counselors increases numbers who know about college, but that language barriers can stymie the flow of information among counselors, parents, and students.

Because these and other descriptive analyses fail to consider how interaction with counselors is related to both academic achievement and other factors that influence whether students have knowledge of the college admissions context, the direction of causality is unclear. Do counselors provide information that students would not have otherwise, or are students who already have this knowledge simply more likely to interact with counselors? In other words, it is unclear whether interaction with counselors is independently linked with improved knowledge about college admissions, or if it is simply correlated with other factors that determine students' level of understanding of the college admissions environment and college attendance. Without simultaneously controlling for potentially confounding factors, like scholastic experiences, achievement, and ambitions, it is impossible to make any claims regarding counselor influence on student knowledge of university admission criteria and enrollment context.

To address the shortcomings of prior research, I examine the influence of counseling on student knowledge of college admissions policies and standards by explicitly considering other factors related to this knowledge. All high school students have personal connections and individual characteristics and experiences that shape their propensity to obtain and hold valuable information about college prior to any interaction with school guidance counselors. Parents who have no post-secondary education and thus have no personal experience with college are not as able to assist their children in the college selection process as college educated parents (Fallon 1997; Tornatzky et al. 2002). Furthermore, students who are immigrants or whose parents lack fluency in English are less likely to obtain assistance from parents in their college search, and thus must rely on counselors, teachers, and other sources to obtain information about college

application and enrollment policies (Tornatzky et al. 2002). These factors are also likely to inhibit the collection of college information by the students themselves. Other research has shown that minority students are less likely to have knowledge of college information (Attinasi 1989; Diamond and Gomez 2004; Tomas Rivera Policy Institute 2004; Tornatzky et al. 2002).

Students also come to the college selection process with varying levels of scholastic achievement, differing educational experiences, and ambitions (Schneider and Stevenson 1999). Students who have taken honors and AP courses, who have achieved high grades, and who aspire to complete a 4-year university degree are privy to college information from their honors teachers, counselors, and other college-educated adults (Kirst and Bracco 2004; Venezia 2004). In fact, a study of non-honors students in 2 Texas high school found that they "had a clear understanding that they were being left out of the college policies information stream as compared to the honors students" (Venezia 2004). High educational achievement and positive academic experiences also increase student motivation to seek out college information from counselors and other sources.

Therefore, I evaluate whether increased counselor exposure and encouragement among students with similar educational achievement, parental educational attainment, and racial and immigrant status are associated with an increased likelihood of understanding college admissions standards and policies. I also examine how variation in the college orientation of counseling departments influences students' knowledge of college admissions policies and standards. Finally, I investigate whether there are specific groups of students without alternative sources of information for whom

counselors play a particularly important role in disseminating information about the college admissions process.

Data, Measures, and Analytic Plan

Data Source and Sample Study

Data for this study come from the Texas Higher Education Opportunity Project (THEOP), an ongoing study designed to understand the consequences on college enrollment of replacing race- sensitive university admissions with a percent plan. The baseline sample was drawn using a two-stage stratified sampling design. In the first stage, 62 PSUs were randomly chosen to represent the state high school-age population. The PSUs were stratified on the basis of metropolitan area status and school racial/ethnic composition. In the second stage, 108 public high schools were randomly drawn from the group of secondary schools that included both 10^{th} and 12^{th} grades and had a senior class of 10 or more students. Of the eligible schools selected, 93% participated in the study, and 13,803 seniors and 19,969 sophomores were surveyed in 96 and 97 high schools respectively.[1] During the spring of 2002, baseline data was collected within sampled schools using an in-school paper and pencil survey.[2] For the purposes of this study, I use baseline data only from the senior cohort.

The survey asked respondents about their course-taking, extra-curricular activities, educational experiences, and knowledge and perceptions of college admissions.

[1] Two sampled schools enrolled only 9^{th} and 10^{th} graders, while one sampled school enrolled only 11^{th} and 12^{th} graders.

[2] A random sample of the original senior cohort is being followed for a planned total of six years as these students continue from high school on to college and other post high school activities. The first follow up of the senior cohort took place one year after high school graduation in the spring of 2003. Additionally, the sophomore cohort was reinterviewed during their senior year, in the spring and summer of 2004.

Students were asked how much they knew about the top 10% law and what class ranking and SAT scores were needed for admission to a variety of Texas schools that differ in the selectivity of their admissions. These range from community colleges and vocational schools to UT-Austin and Rice University, respectively the most selective public and private universities in the state. Furthermore, students were asked a series of questions about their interactions with high school counselors.

For the multivariate analysis, I impose two constraints on the sample.[3] First, for each sample, I omit all cases that lack valid responses on the dependent variables, knowledge of the top 10% plan, knowledge of rank needed for admission to UT-Austin, and knowledge of the relative selectivity of three Texas universities. This excludes (10.61%, 13.2%, and 16.6%[4] of the cases for each of three dependent variables, respectively. Second, I restrict the analyses to students identifying themselves as white, black, Hispanic, or Asian. Other racial/ethnic groups had small sample sizes and I omit all students who report that they are Native American, "other" race, or multi-racial. This restriction reduces each sample by 1.7%, 1.5%, and 1.7%, so that the final analytic samples of senior students clustered in 96 schools consist of 11,992 for the top 10% analysis, 11,770 for the high school rank analysis, and 11,307 for the university selectivity analysis.

To address the other individual-level missing data in my independent variables, I used predictive mean matching, a form of hotdeck imputation, to impute an observed value that is closest to the predicted value (Landerman, Land, and Pieper 1997; Little

[3] Because I have three dependent variables, I generated three slightly different analytic samples
[4] The proportion of omitted cases for the variable measuring knowledge of university selectivity is greater than for the other two dependent variables since students needed valid responses for *three* questions (for each university included), while the others required only one valid response.

1988). This allows me to preserve enough student responses by school to enable multilevel analysis, and details on the process used are included in a footnote.[5]

Measuring Knowledge of College Admissions Policies and Standards

To measure students' knowledge of college admissions policies and standards, I constructed three dependent variables. (See Appendix 1 for all variable constructs and operationalizations.) The first variable measures whether students understood the provisions of the top 10% plan, a law which guarantees admission to either UT-Austin or Texas A&M for graduates in the top decile of each high school class. This information was obtained from a survey question asking students "How much have you heard about the Top 10% Rule?" I combine response categories of "none" and "a little" to represent no knowledge of the law and "some" and "a lot" to signify an understanding of the law.

The second dependent variable measures whether students have an accurate perception of the class rank needed for admission to UT-Austin, the top ranked public institution in Texas. I obtain this information from students' responses to the question, "How high must students rank in their class to be admitted to UT-Austin?" Consistent with actual enrollment information provided by the university,[6] all students who stated that graduation in the top quarter of one's high school class was necessary for admission

[5] In order from the variable with most missing data to that with the least missing, I regressed each variable with missing values on all the other individual-level variables used in the analyses, and then sorted the data based on predicted values for the variable of interest. I then divided my sample into bins of 50 respondents each to locate donors for missing values. Within each bin, I randomly selected a non-missing value to impute a value for missing cases. I repeated this process for each of the variables with missing data and flagged all instances where data were imputed. This process was completed separately for each of the three analytic samples.

[6] In 2003, almost 95% of the entering freshman class graduated in the top quarter of their high school classes Austin, University of Texas at. 2004. "Student Profile, 2003 Entering Freshman Class." .

were coded as one, to signify understanding of this portion of the admissions environment at UT-Austin, while those who put some other value were coded as zero.

Finally, a third dependent variable measures students' knowledge of the relative selectivity of three Texas universities. Students were asked what SAT score was necessary to be admitted to various Texas universities. In response, they could select "a very high score", "an above average score," "an average score," and "a below average score." Rice University, UT-Austin, and University of Texas El Paso (UTEP) provide distinct differences in university selectivity (US News and World Report 2004). I compare students' answers for each of the three universities. Students who correctly ordered Rice, UT-Austin, and UTEP by the SAT score needed for admission, they were coded as having an understanding of the institutional selectivity of Texas higher education.

Table 2 shows that on average, less than half of seniors about to graduate knew at least a moderate amount of information about the top 10% law, while 66% knew that a rank in the top quarter of a graduating high school class was important for admission to UT-Austin. Only 23% of senior high school students correctly ranked Rice, UT-Austin, and UTEP in order of their selectivity. Despite that 70% of seniors expected a 4-year college degree, knowledge of college admissions policies was moderate to low.

Measuring Counselor Influence

The key independent variables measure frequency and focus of student interaction with counselors and the amount of college-preparatory orientation of high school counseling departments (see Appendix 1). I analyze four separate counselor variables measured at the student level and four measured at the school level. The first two

variables measure student exposure to counselors for college matters and for any other reasons. They are taken from a series of questions asking students how many times during their senior year they spoke with guidance counselors about a variety of matters, ranging from personal and school discipline problems to college applications and letters of recommendation. I generated two additive indices, representing the approximate number of times students have interacted with counselors over the course of the year for matters surrounding college and for all other issues. Possible student responses are top-coded at "three or more times," and I code these responses as 3 visits. Because there are students who have visited counselors more than 3 times for a given response, the measured exposure that students have had with counselors is deflated somewhat compared to their actual exposure.

Descriptive statistics reported in Table 2 show that students average 5 counselor visits to discuss college matters during the school year, versus 3.5 times for non-college issues. Those who understand the provisions of the top 10% law and entrance requirements for Texas universities interact more with counselors about college matters than their counterparts who lack this knowledge. Conversely, students who don't know Texas universities' admissions standards have more overall interactions with counselors about non-college issues than those with this knowledge. This difference in use of counseling services suggests a difference in the kinds of students seeking specific types of counselor assistance.

The second set of variables measuring counselor interaction represent the type of encouragement counselors provide students. Each student was asked a series of questions about whether counselors encouraged them to pursue various activities upon

high school graduation, including college, work, military, or other alternatives. Slightly less than 20% of all students report receiving encouragement for a job, but the proportion is higher among students reporting no knowledge of the top 10% law, rank needed for admission to UT-Austin, and relative selectivity of Texas universities. Statewide, three out of four students received counselor encouragement to pursue higher education, and those with a greater understanding of the policies surrounding admission to universities were more likely to receive encouragement from counselors than those without this knowledge. This provides initial support for my hypothesis that counselor encouragement for college (job) is associated with greater (less) awareness of college admissions policies. Of course, these descriptive statistics might only reflect counselor reinforcement of students' initial dispositions. It is necessary to control for possible confounding factors in order to separate out the influence of counselor exposure and encouragement on student knowledge of college admissions policies and standards.

To assess a counseling department's college orientation, I aggregate three student variables to the school level, measuring the high school percentage of students whose counselor (1) provided information about college options; (2) encouraged them to attend college; and (3) encouraged them to work directly after high school graduation. I construct an additional variable measuring the number of counselors per 100 students, using data supplied by the Texas Education Agency in order to measure the availability of counselor resources. On average, sampled students attend schools where three quarters of students have both received information about college and encouragement to attend college from guidance counselors, with little difference between students who differ in their knowledge of college admissions policies and standards. Students who

lack knowledge of the college admissions environment are slightly more likely to attend high schools where larger shares are encouraged to work upon high school graduation. The school average for this variable is much lower than the other aggregated school variables—around 20%--with a range of 0 to 63%. Finally, on average there are almost .60 counselors for every one hundred students (or around 170 students for every counselor) in Texas public high schools, with small differences among students according to knowledge of college admissions standards and policies.

Other Controls

Simple bivariate associations shown in Table 2 between student knowledge and counselor variables likely overstate counselors' influence on what high school seniors know about the college application process because the counseling variables measured here are correlated with other factors, such as achievement, that shape student knowledge. Do counselors actually share information about the college application process in ways that enhance what students know about post-secondary admissions policies and standards, or are students who understand the provisions of the top 10% law and Texas college admissions standards more likely to interact with counselors? In a cross-sectional study, it is impossible to determine the true direction of association, but in order to reduce the possibility of reverse causality, it is necessary to include controls for student characteristics that influence both student knowledge of the college admissions environment and counselor interaction.

Thus, multivariate models include several additional measures of student educational background, including GPA, number of AP courses completed, enrollment in a college preparatory curriculum, self-reported class rank, timing of educational

orientation, educational expectations, and fall college plans. Table 2 shows overall averages for each variable and by knowledge of admissions policies and standards. Clear differentials exist in the educational achievement and background of students who do know about the top 10% plan and college admissions standards, as expected, compared with those who do not have this same knowledge.

Finally, I include measures of parental socioeconomic status, race and immigration status, language ability, and family structure as additional factors influencing students' knowledge of the top 10% law and necessary SAT scores and class rank need for admission to Texas universities. Parents who have not attended any college, my measure of parental education, are less able to provide their children with relevant college information or assist in the college enrollment and application process. While overall, 34% of students' parents have no college experience, only 22% to 28% of students with a knowledge of HB 588 and university admissions standards have parents who never attended any college, compared to 38 to 43% of students who lack this knowledge. I include home ownership as another measure of individual socioeconomic status. Overall, home ownership by students' parents is high at more than 80%, and relatively small differentials exist between those with and without college knowledge.

Some research has shown that minority students, specifically blacks and Hispanics, are less likely to know about college admissions policies (Diamond and Gomez 2004; Tomas Rivera Policy Institute 2004; Tornatzky et al. 2002). However, it is uncertain whether this is due to their parents' underrepresentation among the college educated, to their under representation in honors classes and among high achieving students, or for some other reason. I control for racial/ethnic status of students to

examine whether racial differences in student knowledge persist once adjusting for other relevant factors. Table 2 shows that black and especially Hispanic students are underrepresented among those who have knowledge of college admissions policies, compared to their population share, while in a similar comparison, Asian students are overrepresented.

Additionally, I include immigrant status and English language proficiency to capture familiarity with the United States system of higher education and ability to directly access information about college admissions and enrollment relayed by schools and other venues. Small differentials exist between those with and without knowledge of the top 10% plans, necessary class rank to be admitted to UT-Austin, and Texas university selectivity for these two factors, as shown in Table 2.

Finally, I include family structure as an additional control. It is possible that students residing with both parents—who are both presumably involved and participating to some extent in their child's college search—have more access to information about college admissions than students with only one such parent. Furthermore, there some research suggests that single-parent families have less time (refs here). On average, 60% of students live with both parents, but the proportion is higher among students that have knowledge of university admissions policies and standards.

I also include a school-level variable measuring overall student achievement. This is taken from data collected by the Texas Education Agency and reflects the proportion of students in a school who have met or exceeded state standards as assessed by state examinations. Equalizing schools on average achievement separates the

independent influence of school counseling focus on college admissions knowledge from the aggregated scholastic attainment of the school's students.

Methods

In order to obtain estimates of school level effects and to correct standard errors for student clustering in schools, I use multilevel models to analyze the influences of counselors on students' knowledge of university admissions policies and standards. Because I do not focus on how the effects of individual covariates differ between schools, I fix all slopes and estimate hierarchical logistic random intercept models with a sixth order approximation of the likelihood based on a Laplace transform for Bernoulli models. This approximation provides the most accurate estimates of effects for a multi-level model with a dichotomous outcome (Rodriguez and Goldman 1995). I report τ_{00} , the estimate of the between school variance, for each model considered.

In order to estimate how school counselors influence student knowledge of the Texas college admissions environment, I estimate a series of nested models for each dependent variable, including knowledge of 1) the provisions of the top 10% law; 2) rank needed for admission to UT-Austin; and 3) the relative selectivity by SAT score of three Texas universities, including Rice, UT-Austin, and UTEP. First, I model the effects of students' educational, socioeconomic, and other background characteristics that shape their propensity to know about the Texas college admissions context, prior to any interaction with a school counselor. To these models, I first add measures of counselor exposure and encouragement measured at the student level and next measures of the high school counseling department's college orientation and the counselor-student ratio.

Results

The first model estimates the influence of students' educational and background characteristics, that exist prior to any interaction with a counselor, on their knowledge and results are shown in Table 2. As expected, student educational characteristics and expectations are positively associated with their knowledge of the Texas university admissions landscape. For example, for a student enrolled in the college prep track, the odds of knowing the provisions of the top 10% plan are 50% (1-e^.415) greater than for students in a general curriculum track. A similar pattern obtains for the relationship between college prep curriculum completion and for knowing both the rank needed for admission to UT-Austin and the relative selectivity of three Texas universities, although the magnitude of the effect is smaller. In addition to serving as markers for the types of students who are college bound, student educational experiences could also proxy for sources of college information because teachers of AP and college prep courses are more likely to transmit information about college admissions policies and standards.[7] Additionally, college expectations and plans to attend college are strongly and positively associated with student knowledge. For example, the odds of knowing the relative selectivity ranking of three Texas universities are 37% greater for students who plan to attend college in the fall following graduation.

Student background characteristics are also related to their knowledge of the college admissions context. A student whose parents have no college education are less likely to report all three varieties of knowledge of college admissions standards and policies. For example, the odds of knowing the rank needed for admission to UT-Austin

[7] High school class rank is negatively associated with student knowledge of the Texas university admissions environment because lower numbers represent a higher overall ranking.

are 12% lower (1-e^-.127) for those students compared to their counterparts whose parents have some college education. Socioeconomic status, as measured by homeowner status, is unrelated to student knowledge as is family structure, for the most part. There is one exception. The odds that a student will have knowledge of the provisions of the top 10% law are 15% larger for students who live with both parents than for their counterparts living with only one parent.

On the whole, minority students are less likely than their white counterparts to hold knowledge of Texas university admission standards and policies, although some differences exist among groups depending of the dependent variable under consideration. As an example, while black students are less likely than similar whites to know the rank needed for admission to UT-Austin, Hispanic students do not differ from white students in their levels of this knowledge once equalized by educational characteristics. However, Hispanic students have lower levels of knowledge about the provisions of the top 10% law than whites, while there is no statistical difference between black and white students' knowledge. Similarly, students that are foreign born or who do not speak English with friends also have lower levels of knowledge about Texas university policies and standards. These baseline associations essentially remain unchanged as counselor variables are included in the next two sets of models, to which I now turn.

In the second set of models, I include four measures of counselor exposure and encouragement and these results are shown in Table 3. First, at a given level of academic achievement and expectations, college oriented exposure to counselors is positively related to all three measures of student knowledge: for instance, each additional visit to a counselor about college matters is related to 8% higher odds of knowing the provisions of

the top 10% law. On the other hand, contrary to expectations, visiting a counselor about non-college issues is unrelated to students' knowledge of the higher education admissions environment in Texas once equalizing students on educational and other background characteristics.

When counselors encourage students to work directly after high school graduation, the odds of having knowledge of college admissions standards—specifically for knowing the rank necessary for admission to UT-Austin and knowing the relative ranking by selectivity of three Texas universities—are 17% and 29% lower, respectively. Counselor encouragement for college attendance influences only students' knowledge of the top 10% law, and this effect is in the positive direction, as expected.

Counselors likely base specific types of encouragement on their perceptions of student potential for success in higher education: thus, students who are not believed to be college bound are encouraged to find work. Furthermore, it is likely that college bound seniors make active efforts to interact with counselors about college plans and applications. However, these effects linking student knowledge of the Texas university admissions environment and counselor interaction are obtained when controlling for educational experiences and ambitions. Given a specific level of scholastic achievement, counselor encouragement for work is associated with a lower likelihood, while increased exposure to a counselor about college matters is associated with a greater likelihood, that a student holds knowledge of university admissions standards and policies.

The third set of models includes measures of the high school counseling department's college orientation, and these results are shown in Table 4. The first result of note is the negative relationship between the proportion of students who are

encouraged to work directly after high school graduation and the average knowledge students have of the Texas university admissions environment for each of the three dependent variables. For example, students' odds of knowing the provisions of the top 10% plan are 30% lower [(1-e^-.032)*10] when an additional 10% of a senior class is encouraged by counselors to work.[8] Although student composition—the aggregation of student traits like academic achievement at the school level—is related to how often counselors encourage work in a school, this effect is obtained when controlling for both students' individual educational achievement and the collective school achievement, suggesting an independent influence of the orientation of counseling departments on students' knowledge of the university admissions context.

Other school level variables measuring this same construct do not influence whether students know specifics of Texas university admissions policies and standards. There is one exception: in schools where college information is more widely disseminated by counselors, students are more likely to know the rank needed for admission to UT-Austin. However, there is no clear reason why the relationship between this variable and the other two dependent variables are not similar. I find no influence of the number of students served per counselors, the most commonly cited measure of counselor ineffectiveness on students' college knowledge.

For Whom are Counselors Most Important?

The analysis up to this point suggests that individual interaction with counselors and some elements of a counseling department's amount of focus on college preparation are associated with higher levels of student knowledge about university admissions

[8] An increase of 10% is consistent with the data. The variable mean is around 20%, the standard deviation around 10%, and the range is from 0 to 60%.

standards and policies. However, it is not clear if, in the absence of counselor guidance, students would have still obtained information about the provisions of the top 10% plan and admissions standards of various universities in the state from other sources. The prior analysis is more suggestive than conclusive about the importance of guidance counselor on students' knowledge, compared to other sources of college information. In order to shed light on this question, I examine how students first learned about HB 588 to determine what kinds of students were more likely to obtain primary information from counselors. In Table 5, I show tabulations of students' first source of information about the top 10% plan. The largest proportion of students, 365%, do not know what HB 588 is. Among those students who do know, however, the largest group found out first from a counselor, accounting for 26% of students. The remainder gained information about the top 10% law from teachers, friends, and family.. I utilize a multinomial logistic model to compare students who first learned about the top 10% plan from counselors to those who don't know about it and to those who learned about it from family, friends, and other sources.[9] Results are shown in Table 6.

Among students who do know about the top 10% plan, black, Hispanic, poorer, and first generation college students of comparable academic abilities are more likely to first receive information about HB 588 from counselors than from family or friends--two other main sources of information.[10] For instance, black students are 58% more likely to learn about the top 10% plan from counselor relative to their families compared with similar white students. These students are, on average, traditionally underserved by the

[9] Includes teachers, media, and all other sources

[10] In Table 4, counselors as a source of information are the reference category. Thus, the negative coefficients, such as that for Hispanic students, signifies that they are *less likely* to learn about the top 10% plan from both family and friends than from counselors.

educational system and are less connected to information and understanding of the educational system as a whole. For these kinds of students, counselors play a particularly important role in providing information that they might not receive elsewhere. Immigrants also are more likely than native students to receive information about the top 10% plan from friends and other sources than from counselors, and they are more likely to not know anything about HB 588 than to have received information from counselors. This suggests a group of students that are not being reached successfully by counselors and a possible target for information sharing about college admissions. Full results from this model can be examined in Table 6.

Discussion

In contrast to most research and media portrayals of high school guidance counselors, in this analysis I find that counselors are associated with an important part of high school seniors' college preparation phase. Specifically, the amount of exposure to and encouragement by high school guidance counselors are related to student knowledge about university admissions policies and standards, which is essential information for successfully college search and application processes. Do counselors actually increase the knowledge that students have of the college application environment, or do students who have interactions with counselors already hold this knowledge? Because of the cross-sectional nature of the survey data, this question of causality cannot be definitively answered. It is possible that student characteristics related to their propensity both to have information about college admissions in Texas and to interact with counselors were not accounted for in this analysis. Measures of student motivation, which could explain

student predisposition to seek counselor help, are not included in this analysis. Furthermore, measures of student GPA, class rank, and completed AP courses are self-reported, introducing some inaccuracy in the models. Nevertheless, this study showed that net of individual differences in students' scholastic experiences and achievement, educational ambitions and plans, and background characteristics such as family socioeconomic status and race, higher levels of knowledge are associated with exposure to counselors about college matters and encouragement by high school guidance counselors to attend college, while lower levels of knowledge are associated with encouragement to find full time employment upon graduation from high school. Additionally, I find that student knowledge is associated with some aspects of a counseling department's focus on college preparation.

This study is unique among research considering counselor efficacy on students' college preparation in its use of quantitative data and the simultaneous control for educational experiences, educational expectations, and other student characteristics. Others investigating similar topics have mainly relied on the simple measure of the number of students served per counselor within a school, drawing conclusions on their effectiveness in helping students prepare for college based on this sole measure. In some sense, I obtain similar results: the counselor-student ratio is not related to students' knowledge of university admissions standards and policies. However, this unidimensional measure obscures important information about counselor-student interactions, and the non-relationship doesn't necessarily mean that counselors have no effect on students' preparation for college. By utilizing both detailed student-reported measures of their exposure to counselors and the nature of their interaction with

counselors and appropriate statistical analysis, I find that high school guidance counselors do influence the amount of knowledge students have about university admissions policies and standards. Specifically, I find that exposure to counselors about college issues is associated with greater knowledge and counselor encouragement for students to work directly after high school graduation is associated with lower levels of knowledge, even when adjusting for educational characteristics and ambitions.

In another contribution to the literature, I also investigate the influence of a counseling department's college preparatory orientation on levels of student knowledge using multilevel statistical models. In schools where greater proportions of students are encouraged to work by high school counselors, students have less information about college admissions standards and policies. This occurs in addition to the negative influence that a counselor's encouragement to an individual student to work has on student knowledge. Furthermore, in schools where more students obtain college information from counselors, they have higher levels of knowledge about college application procedures and enrollment standards, in addition to the individual influence of their own personal interactions with counselors.

There are at least two explanations for this. First, counselor behavior, by means of encouragement and information sharing, can influence the academic climate of a school and students' normative expectations to attend college, and thus to seek out information about the applications context from any available source. Second, it is possible that students themselves can disseminate college information received from counselors to peers. All college admissions information that I examined in this paper are likely to be passed through peer to peer interactions. Once students learn about

university selectivity and admissions policies such as the top 10% plan, they can relate this information to others in informal settings. It is also possible that school aggregations of student interactions with counselors, which represent the college preparatory orientation of counseling departments, are correlated with other school characteristics related to a school's level of college knowledge, such as school achievement. However, I find no evidence that these results of school counseling vary with the introduction of other school variables.

Finally, multinomial logistic results on students' primary source of information about HB 588 suggest that for certain groups of students, including minority, first generation college, and poorer students, counselors are particularly important sources of information about university admissions policies and standards. Despite being more likely to receive information from counselors than from other sources, my results show that these students are still less likely to hold knowledge. The combination of these results with the rest of my analysis leads to a policy application. Counselors should make every effort to target underserved students, without many other forms of educational capital, in their discussions of college applications and admissions. Although these students many not seek counselor advice and help of their own volition, the extra effort by counselors to meet with them can provide important information about college admissions that may not be obtained through other sources. Furthermore, discussion of college plans and dissemination of specific college information can by relayed when students interact with counselors for non-college reasons, such as class schedules or personal issues.

Although my analysis suggests that counselors do seem to influence students' knowledge about the college application context, it is uncertain what the relationship is between knowledge, counselor guidance, and actual university application and enrollment. Future research is needed to understand how high school climate, and specifically guidance counselors, influence students' further steps that lead ultimately to attainment of a university degree.

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Table 1. Means and percentages by student knowledge of texas university admissions policies and standards
(Standard deviations for continuous variables)

	Know 10% Plan[1]			**Know Rank[2]**			**Know Selectivity[3]**		
	Average	Know	Don't know	Average	Know	Don't know	Average	Know	Don't know
Knowledge of admissions policies and standards	0.439			0.656			0.227		
Counselor Interaction									
Collegiate exposure to counselor	4.90	6.15	3.92	4.88	5.09	4.49	4.91	5.64	4.70
(Number of times in senior year)	(4.45)	(4.65)	(4.03)	(4.44)	(4.46)	(4.37)	(4.44)	(4.57)	(4.39)
Non-collegiate exposure to counselor	3.54	3.72	3.40	3.53	3.44	3.70	3.53	3.37	3.57
(Number of times in senior year)	(2.84)	(2.96)	(2.73)	(2.80)	(2.66)	(3.02)	(2.81)	(2.52)	(2.89)
Counselor encouragement for college	0.762	0.821	0.716	0.756	0.769	0.732	0.759	0.792	0.749
Counselor encouragement for work directly after high school	0.189	0.152	0.218	0.190	0.160	0.248	0.189	0.122	0.209
Counseling Department Focus on College Preparation (School-Level)									
Percentage students who received information	0.736	0.739	0.733	0.736	0.735	0.738	0.737	0.725	0.740
from counselor about college	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)
Percentage students encouraged by counselors	0.755	0.760	0.752	0.756	0.754	0.759	0.756	0.749	0.759
to go to college	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Percentage students encouraged by counselors	0.199	0.182	0.211	0.198	0.192	0.210	0.197	0.176	0.204
to work directly after high schools	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Counselors per 100 students	0.585	0.587	0.583	0.586	0.584	0.590	0.587	0.580	0.588
	(0.19)	(0.18)	(0.20)	(0.19)	(0.19)	(0.20)	(0.19)	(0.18)	(0.20)
Educational Characteristics									
GPA	3.19	3.39	3.03	3.19	3.27	3.02	3.190	3.370	3.140
	(0.63)	(0.56)	(0.63)	(0.63)	(0.60)	(0.64)	(0.63)	(0.59)	(0.63)
College prep curriculum track	0.640	0.716	0.534	0.635	0.706	0.501	0.638	0.769	0.600
High school rank	41.060	30.820	49.090	41.175	35.595	49.893	41.064	31.518	43.857
	(23.76)	(20.61)	(22.98)	(23.92)	(22.67)	(23.81)	(23.86)	(21.46)	(23.81)
AP courses completed	1.090	1.760	0.560	1.095	1.299	0.708	1.100	1.660	0.934
	(1.55)	(1.73)	(1.13)	(1.56)	(1.62)	(1.33)	(1.56)	(1.71)	(1.47)
College Expectations and Plans									
Expected to attend college at a young age	0.555	0.671	0.464	0.553	0.605	0.453	0.556	0.679	0.520
Currently expects to complete a four year college degree	0.680	0.856	0.543	0.678	0.744	0.550	0.684	0.848	0.637
Plans to attend college in the fall following graduation	0.726	0.871	0.613	0.721	0.788	0.594	0.731	0.873	0.690

Background Characteristics									
Parents have no college experience	0.333	0.226	0.417	0.332	0.280	0.431	0.337	0.207	0.375
Parents own home	0.837	0.867	0.814	0.830	0.853	0.788	0.832	0.859	0.824
Black	0.102	0.090	0.111	0.104	0.088	0.130	0.104	0.077	0.112
Hispanic	0.335	0.269	0.387	0.333	0.302	0.392	0.328	0.232	0.356
Asian	0.040	0.057	0.027	0.040	0.047	0.028	0.041	0.072	0.032
Speak language other than English with friends	0.042	0.027	0.052	0.043	0.033	0.061	0.042	0.020	0.049
Foreign-born	0.109	0.097	0.118	0.113	0.097	0.143	0.113	0.081	0.122
Live with both parents	0.607	0.666	0.561	0.606	0.627	0.565	0.604	0.658	0.589
School background characteristics									
School Achievement	0.532	0.570	0.502	0.533	0.547	0.505	0.534	0.579	0.521
	(0.16)	(0.17)	(0.15)	(0.16)	(0.16)	(0.16)	(0.16)	(0.17)	(0.16)
Sample Size	11992	5355	6637	11770	7641	4129	11307	2570	8737

[1] This dependent variable measures knowledge of the Top 10% Plan

[2] This dependent variable measures knowledge of high school class ranked needed for admission to UT-Austin

[3] This dependent variable measures knowledge of the relative selectivity of three Texas univerisities

Table 2. Hierarchical logistic regressions of student knowledge of Texas university policies and standards: student educational and background characteristics (standard errors)

	Know 10% Law[1]	Know Rank[2]	Know Selectivity[3]
Intercept	-0.510 ***	0.651 ***	-1.514 ***
	0.089	0.054	0.065
Educational Characteristics			
GPA	0.175 **	0.067	0.021
	(0.055)	(0.054)	(0.053)
College prep curriculum track	0.415 ***	0.257 ***	0.216 *
	(0.066)	(0.061)	(0.090)
High school rank	-0.019 ***	-0.013 ***	-0.012 ***
	(0.001)	(0.001)	(0.002)
AP courses completed	0.343 ***	0.129 ***	0.128 ***
	(0.018)	(0.016)	(0.020)
College Expectations and Plans			
Expected to attend college at a young age	0.202 ***	0.172 **	0.105
	(0.055)	(0.055)	(0.064)
Currently expects to complete a four year college degree	0.645 ***	0.206 **	0.369 ***
	(0.065)	(0.072)	(0.080)
Plans to attend college in the fall following graduation	0.238 ***	0.303 ***	0.314 ***
	(0.067)	(0.081)	(0.089)
Background Characteristics			
Parents have no college experience	-0.180 **	-0.127 *	-0.206 **
	(0.068)	(0.062)	(0.072)
Parents own home	-0.026	0.072	0.021
	(0.072)	(0.065)	(0.088)
Black	-0.028	-0.239 *	-0.441 ***
	(0.108)	(0.094)	(0.105)
Hispanic	-0.137 *	-0.067	-0.238 **
	(0.069)	(0.077)	(0.084)
Asian	0.037	0.159	(0.252)
	(0.136)	(0.139)	(0.161)
Speak language other than English with friends	-0.245 *	-0.153	-0.499 **
	(0.123)	(0.157)	(0.174)
Foreign-Born	-0.164	-0.333 ***	-0.317 **
	(0.089)	(0.071)	(0.103)
Lives with both parents	0.142 *	0.067	0.07
	(0.060)	(0.057)	(0.074)
τ_{00}	0.464	0.106	0.102
	(0.092)	(0.033)	(0.039)
Deviance	34685	35403	31658

[1] This dependent variable measures knowledge of the Top 10% Law

[2] This dependent variable measures knowledge of high school class rank needed for admission to UT-Austin

[3] This dependent variable measures knowledge of the relative selectivity of three Texas univerisities, including Rice, UT-Austin, and UTEP

Table 3. Hierarchical logistic regressions of student knowledge of Texas university policies and standards: adding counselor interaction (standard errors)

	Know 10% Law[1]	Know Rank[2]	Know Selectivity[3]
Intercept	-0.549 ***	0.653 ***	-1.515 ***
	(0.093)	(0.054)	(0.064)
Counselor Interaction			
Collegiate exposure to counselor	0.073 ***	0.018 *	0.026 **
	(0.010)	(0.009)	(0.009)
Non-collegiate exposure to counselor	-0.003	-0.016	-0.027
	(0.012)	(0.010)	(0.016)
Counselor encouragement for college attendance	0.222 **	0.110	0.116
	(0.075)	(0.085)	(0.089)
Counselor encouragement for job	-0.044	-0.192 **	-0.341 ***
	(0.071)	(0.069)	(0.089)
Educational Characteristics			
GPA	0.158 **	0.059	0.011
	(0.060)	(0.054)	(0.055)
College prep curriculum track	0.364 ***	0.241 ***	0.193 *
	(0.071)	(0.062)	(0.097)
High school rank	-0.019 ***	-0.012 ***	-0.011 ***
	(0.002)	(0.001)	(0.002)
AP courses completed	0.338 ***	0.127 ***	0.126 ***
	(0.019)	(0.017)	(0.012)
College Expectations and Plans			
Expected to attend college at a young age	0.174 **	0.163 **	0.091
	(0.057)	(0.055)	(0.068)
Currently expects to complete a four year college degree	0.613 ***	0.183 *	0.337 ***
	(0.069)	(0.073)	(0.086)
Plans to attend college in the fall following graduation	0.163 *	0.276 ***	0.277 .**
	(0.072)	(0.083)	(0.091)
Background Characteristics			
Parents have no college experience	-0.182 *	-0.121 *	-0.195 **
	(0.075)	(0.064)	(0.074)
Parents own home	-0.013	0.070	0.017
	(0.076)	(0.067)	(0.086)
Black	-0.175	-0.261 *	-0.472 ***
	(0.106)	(0.102)	(0.113)
Hispanic	-0.177 *	-0.076	-0.251 **
	(0.069)	(0.081)	(0.093)
Asian	0.044	0.164	0.260
	(0.141)	(0.140)	(0.178)
Speak language other than English with friends	-0.222	-0.152	-0.491 **
	(0.128)	(0.161)	(0.188)
Foreign-Born	-0.147	-0.327 ***	-0.309 **
	(0.094)	(0.074)	(0.106)
Lives with both parents	0.151 *	0.063	0.062
	(0.065)	(0.061)	(0.078)
τ_{00}	0.469	0.102	0.093
	(0.099)	(0.034)	(0.039)
Deviance	34464	35381	31621

[1] This dependent variable measures knowledge of the Top 10% Law

[2] This dependent variable measures knowledge of high school class rank needed for admission to UT-Austin

[3] This dependent variable measures knowledge of the relative selectivity of three Texas univerisities,

Table 4. Hierarchical logistic regressions of student knowledge of Texas university policies and standards: adding counseling department focus on college preparation
(standard errors)

	Know 10% Law[1]	Know Rank[2]	Know Selectivity[3]
Intercept	-0.564 ***	0.622 ***	-1.573 ***
	(0.079)	(0.046)	(0.057)
Counselor Interaction			
Collegiate exposure to counselor	0.069 ***	0.014	0.027 *
	(0.011)	(0.009)	(0.011)
Non-collegiate exposure to counselor	-0.0003	-0.014	-0.024
	(0.013)	(0.011)	(0.017)
Counselor encouragement for college attendance	0.175 *	0.068	0.128
	(0.086)	(0.103)	(0.117)
Counselor encouragement for job	-0.032	-0.177 *	-0.314 **
	(0.074)	(0.074)	(0.099)
Counseling Department Focus on College Preparation (School Level)			
Percentage students who received information from counselor about college	0.006	0.014 *	-0.003
	(0.010)	(0.006)	(0.009)
Percentage students encouraged by counselors to work directly after high schools	-0.032 ***	-0.018 **	-0.022 **
	(0.008)	(0.006)	(0.008)
Percentage students encouraged by counselors to go to college	0.006	-0.011	0.003
	(0.010)	(0.007)	(0.009)
Counselors per 100 students	-0.212	0.038	0.050
	(0.300)	(0.179)	(0.189)
Educational Characteristics			
GPA	0.159 *	0.063	0.014 **
	(0.062)	(0.059)	(0.056)
College prep curriculum track	0.366 ***	0.245 ***	0.194 *
	(0.078)	(0.069)	(0.096)
High school rank	-0.019 ***	-0.013 ***	-0.012 ***
	(0.002)	(0.001)	(0.002)
AP courses completed	0.339 ***	0.127 ***	0.122 ***
	(0.021)	(0.018)	(0.020)
College Expectations and Plans			
Expected to attend college at a young age	0.173 **	0.158 **	0.084
	(0.057)	(0.060)	(0.075)
Currently expects to complete a four year college degree	0.609 ***	0.175 *	0.321 ***
	(0.071)	(0.078)	(0.089)
Plans to attend college in the fall following graduation	0.159 *	0.269 **	0.263 **
	(0.062)	(0.087)	(0.094)
Background Characteristics			
Parents have no college experience	-0.176 *	-0.108	-0.175 *
	(0.079)	(0.066)	(0.079)
Parents own home	-0.017	0.067	0.005
	(0.079)	(0.071)	(0.096)
Black	-0.142	-0.210	-0.420 ***
	(0.105)	(0.116)	(0.114)
Hispanic	-0.162 *	-0.045	-0.199 *
	(0.070)	(0.084)	(0.088)
Asian	0.049	0.168	0.269

	(0.146)	(0.151)	(0.197)
Speak language other than English with friends	-0.218	-0.139	-0.481 *
	(0.131)	(0.186)	(0.214)
Foreign-Born	-0.151	-0.329 ***	-0.316 **
	(0.096)	(0.077)	(0.109)
Lives with both parents	0.149 *	0.057	0.058
	(0.068)	(0.062)	(0.080)
School Achievement (School level)	0.007	0.006 *	0.006 *
	(0.004)	(0.003)	(0.003)
τ_{00}	0.321	0.056	0.044
	(0.080)	(0.023)	(0.029)
Deviance	34439	35344	31591

[1] This dependent variable measures knowledge of the Top 10% Law

[2] This dependent variable measures knowledge of high school class rank needed for admission to UT-Austin

[3] This dependent variable measures knowledge of the relative selectivity of three Texas univerisities, including Rice, UT-Austin, and UTEP

Table 5. Tabulations of Source of Information about Top 10% Plan

Where student learned about Top 10% Law	
Don't know about Top 10% Law	0.359
Family	0.076
Friends	0.169
Counselors	0.258
Teachers	0.138

Table 6. Multinomial logistic regression results of primary source of information about top 10% plan (standard error)

	Family vs. counselor	Friends vs. counselor	Other source[1] vs. counselor	Don't know vs. counselor
Educational Characteristics				
GPA	-0.171 **	-0.015	-0.132	-0.134 *
	(0.060)	(0.108)	(0.077)	(0.068)
College prep curriculum track	-0.484 ***	-0.048	-0.140	-0.153
	(0.123)	(0.103)	(0.112)	(0.127)
High school rank	0.016 ***	-0.003	0.000	0.003 *
	(0.001)	(0.004)	(0.002)	(0.002)
AP courses	-0.405 ***	0.030	0.018	-0.013
	(0.029)	(0.032)	(0.030)	(0.024)
College Expectations and Plans				
Expected to attend college at a young age	-0.217 ***	0.166 *	-0.075	-0.059
	(0.060)	(0.076)	(0.068)	(0.060)
Currently expects to complete a four year college degree	-0.620 ***	0.063	-0.059	-0.125
	(0.088)	(0.127)	(0.095)	(0.084)
Plans to attend college in the fall following graduation	-0.065	0.179	0.056	-0.093
	(0.075)	(0.105)	(0.079)	(0.082)
Background Characteristics				
Parents have no college experience	0.060	-0.668 ***	-0.152 *	-0.222 **
	(0.060)	(0.134)	(0.076)	(0.080)
Parents own home	0.037	0.341 **	0.069	-0.004
	(0.095)	(0.124)	(0.087)	(0.086)
Black	-0.251	-0.857 ***	-0.621 ***	-0.178
	(0.131)	(0.181)	(0.148)	(0.131)
Hispanic	0.049	-0.710 ***	-0.380 **	-0.228
	(0.142)	(0.173)	(0.147)	(0.150)
Asian	0.077	-0.249	0.610 ***	0.123
	(0.159)	(0.207)	(0.178)	(0.148)
Speak language other than English with friends	0.202 *	0.154	-0.077	0.058
	(0.096)	(0.295)	(0.162)	(0.165)
Foreign-Born	0.168 *	-0.136	0.277 **	0.262 **
	(0.081)	(0.175)	(0.090)	(0.085)
Lives with both parents	-0.200 ***	0.261 **	0.008	-0.087
	(0.050)	(0.100)	(0.061)	(0.064)
Constant	1.309 **	(1.542) **	0.178	0.146
	(0.227)	(0.484)	(0.297)	(0.315)
Observations	11992			
Log pseudo-likelihood	-16112			

[1] "Other" sources include teachers, media, and everything else

Appendix 1. Variables and constructs used in analysis of student knowledge of Texas university admission policies and standards

Variable Name	Operationalization
Dependent Variables	
Student Knowledge of Texas University Admissions Policies and Standards	
1. Knowledge of top 10% plan	Dummy variable coded 1 if student reports knowing "a lot" or "some" about the Top 10% Law
2. Knowledge of rank needed for admission to UT-Austin	Dummy variable coded 1 if student says that rank in top quarter of high school class is necessary for admission to UT-Austin
3. Knowledge of relative selectivity of Texas Universities	Dummy variable coded 1 if student correctly ranks Rice, UT-Austin, and UTEP in order of their selectivity as measured by SAT score needed for admission to each university
Independent Variables	
Counselor Interaction (student-level)	
1. Counselor Exposure	
a. College related exposure to counselor	Continuous variable ranging from 0-15 measuring the number of times a student has seen a counselor in their senior year for college related issues
b. Non-college related exposure to counselor	Continous variable ranging from 0-18 measuring the number of times a student has seen a counselor in their senior year for non-college related issues
2. Counselor Encouragement	
a. College	Dummy variable coded 1 if student was encouraged by counselor to attend college
b. Work	Dummy variable coded 1 if student was encouraged by counselor to work full time upon graduating from high school
Counseling Department Focus on College Preparation (school-level)	
1. Information dissemination regarding college	School level variable ranging from 33% to 100% measuring the percentage of students within a school who have received information from a counselor about college
2. Couselor focus on college	School level variable ranging from 36% to 100% measuring the percentage of students within a school who have been encouraged to attend college
3. Counselor focus on work	School level variable ranging from 0% to 63% measuring the percentage of students within a school who have been encouraged to work directly after high school graduation
4. Counselor availability	School level variable ranging from 0 to 2.32 measuring the number of counselors per 100 students
Student Educational Characteristics (all self-reported)	
1. GPA	Continuous variable measuring student grade point average based on the most recent grading period
2. College preparatory curriculum	Dummy variable coded 1 if student will graduate having completed a college preparatory curriculum
3. High school rank	Continuous variable ranging from 10 to 100 measuring student class rank, percentage, where 10% is the top of the class and 100% is the bottom of the class
4. AP courses	Continuous variable ranging from 0-6 measuring whether AP courses were taken in a given subject area (math, science, etc)

College Expectationas and Plans

1. Expectation to attend college at a young age	Dummy variable coded 1 if student reports "I have always wanted to go to college" in response to the question "When do you first think about going to college?"
2. Expectation to graduate with a 4 year college degree	Dummy variable coded 1 if student's educational ambitions are at least a 4 year college degree
3. Plans to attend college	Dummy variable coded 1 if student is planning on attending collge in the fall immediately following high school graduation

Background Characteristics

1. Parental college experience	Dummy variable coded 1 if parents have not attended any college
2. Parental home ownership	Dummy variable coded 1 if parents own their home
3. Race	Set of dummy variables designating the following racial groups: White, Black, Hispanic, and Asian
4. English language proficiency	Dummy variable coded 1 if student speaks language other than English with friends
5. Foreign born	Dummy variable coded 1 if student was born outside the United States
6. Family structure	Dummy variable coded 1 if student lives with both parents

School Background

1. School achievement	School level variable ranging from 6% to 97% measuring the percentage of students who have met or exceeded state standards on state-wide assessments