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Red Light, Green Light: The Impact of Signals on the College Aspirations of
Urban High School Students of Color

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ABSTRACT

The central purpose of this research project was to understand the signals that urban students of color believe deter or inspire them to pursue a four-year college education. The urban setting for this study was Denver, Colorado where the Denver Public School (DPS) system has a poor track record related to college access. Almost 80% of all DPS students are of color and recently less than 9% go on to complete a four-year college degree. Therefore, this study sought to gain a better understanding of the signals that influence the college aspirations of these students. The study utilized an adapted signaling theory lens to qualitatively examine students of color enrolled in the DPS at three high school sites. The study 's overall goal was to develop a better understanding of best practices for guidance counselors and college enrollment management practitioners seeking to improve access to college for students of color in the DPS system.

Introduction

Access to postsecondary education is a priority for state and federal policymakers as it not only provides socioeconomic equity but also promotes economic competitiveness (Hossler & Maple, 1993). Despite efforts by policymakers to improve college access, particularly for minority and low-income students, the disconnection between policy and praxis continues to hinder substantial improvements to closing the postsecondary entrance gap between Whites and minority students. The figure 1 below demonstrates an overall increase in postsecondary enrollment from 1980 through 2004 yet the gap between minorities and Whites has expanded over the past two decades. While policymakers attempt to attenuate this gap, the overwhelming majority of state and federal programs seeking to improve college access fail to account for the factors deemed critically important to improving college access. For instance, Perna (2008) points out that 90% of state and federal programs focus solely on financial aid. Yet current research indicates that factors such as parental involvement, information access, rigorous K-12 curriculum, and cultural relevant programming impact college choice beyond financial aid the main mechanism for increasing college access (Tierney & Yun, 2001; Hossler & Stage, 1992; Hurtado, Inkelas, Briggs, & Rhee, 1997;).

Percent of 18-24-Year-Olds Enrolled in Postsecondary Institutions by Race/Ethnicity

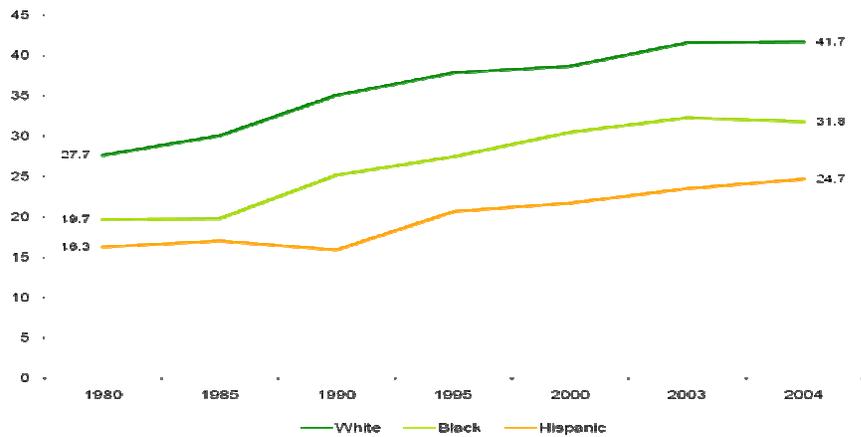


Figure 1: Percent of 18-24-Year-Olds Enrolled in Postsecondary Institutions by Race/Ethnicity. National Center for Education Statistics

According to empirical research, students form their college going aspirations early in high school (Hossler, Braxton & Coopersmith, 1989). However, for students of color in urban school districts, the lower their family income, the poorer their prospect for gaining access to higher education (Astin, 1982; Perna, Rowan-Kenyon, Thomas, Bell, Anderson & Li, 2008). This is the unfortunate reality in Denver, Colorado where 77% of students are minority and approximately 66% are eligible for a free or reduced lunch program (Denver Public Schools, 2008). These problematic statistics coupled with insufficient state and federal policy to improve college access demand a better understanding of the barriers faced by urban students of color and signals and strategies for improving their access postsecondary education. Thus, the central purpose of this study is to investigate how students of color enrolled in the DPS system identify and understand the signals that may deter or inspire them to pursue a four-year college education. In line with understanding the signals that urban

students of color believe deter or inspire them to pursue a four-year college education, we draw upon two conceptual models to drive the methods and analyses of this study.

Conceptual Frameworks

According to social scientists, college choice is influenced by a plethora of factors, such as parental education levels and involvement, socioeconomic status, student and parent expectations, ethnicity, gender, and residency (Astom & Oseguera, 2004; Charles, Roscigno, & Torres, 2007; Hossler & Stage, 1992; Hurtado, Inkelas, Briggs, & Rhee, 1997; Perna & Titus, 2005). Therefore, it is imperative to consider the multiple facets that impact college choice when establishing a framework to guide research on such a topic. Guided by this notion, we sought to incorporate the multiple layers imbedded in the college choice process for students of color. We accomplished this by extrapolating a conceptual framework from Tuitt, Agans, Choudaha, & Krusemark's (2008) model of graduate student recruitment and Perna's (2006) student college choice model.

Tuitt et al. (2008) provide a model of graduate student recruitment based on signaling theory that focuses on structural and behavioral features of organizations and markets along with perceptions, characteristics, and behaviors of individuals to describe why universities select a particular candidate and candidates choose a particular institution. Nobel laureate Michael Spence's (1973) signaling theory suggests that communication occurs between institutions, the environment, and the students in the form of various signals that influence

college going aspirations. Spence denotes that the observable attributes of a college applicant can either be immutably fixed or alterable. The alterable characteristics are analogous to education attainment and are referenced as signals while the generally unalterable attributes such as race or sex are regarded as indices. The Tuitt et al. model takes into account the multifaceted nature of college choice by accounting for the social, political, cultural, and external context that shape decision making. The model rests upon the following four components: a) environmental, b) personal, c) organizational design, and d) organizational behavior. The environmental tenant accounts for the transmission of signals and indices between the student and phenomena such as the labor market, related law and policy (i.e. affirmative action and need-based financial aid). Familial relationships and community social networks such as peer groups and mentorship relationships are represented within the personal integrant of the model. The organizational design segment encapsulates macro-level policies that impact the daily operations of an institution. A university mission statement, affirmative action policy, curriculum, and values would be captured within the organizational design model component. Finally, organizational behavior, the final dimension of the Tuitt et al. model represents the operational aspects of the organizations design. Signals can be derived from policies and initiatives such as scholarship programs, student support services, inclusive pedagogy, and hiring practices to name a few.

Similarly, Laura Perna's (2006) model which builds upon previous research by Hossler, Schmit, and Vesper (1998) provides four layers in which to

contextualize factors that impact college choice. The first layer, Habitus, encompasses personal factors that relate directly to the student such as demographics, cultural and social capital, family income, and academic achievement. The second layer embodies school and community related factors that involve resource availability and structural supports and barriers. The higher education context, layer three, is utilized to explain how college choice is influenced by postsecondary institutions through mechanisms such as marketing and recruitment, location, and institutional characteristics. Finally, the fourth layer denotes the social, economic, and political context of college choice.

Since college choice is a complex interactional process where student signals/indices and institutional characteristics interact to influence the decision making process (Cabrera & La Nasa, 2000; DesJardins, Dundar & Hendel, 1999), we utilize a combination of the Tuitt et al. (2008) model of graduate student recruitment and Laura Perna's (2006) model of college choice to construct a framework as they both provide multilayered and integrated approach to examine a complicated and multifaceted problem, college access for students of color. Below is the proposed model for the study which denotes that students' college going aspirations are shaped by interaction with four primary signal sources— Environmental, Institutional-High School, Institutional-Higher Education Institutions, with the Personal which encompasses the immutably fixed indices proposed by Spence (1973) (see Figure 2).

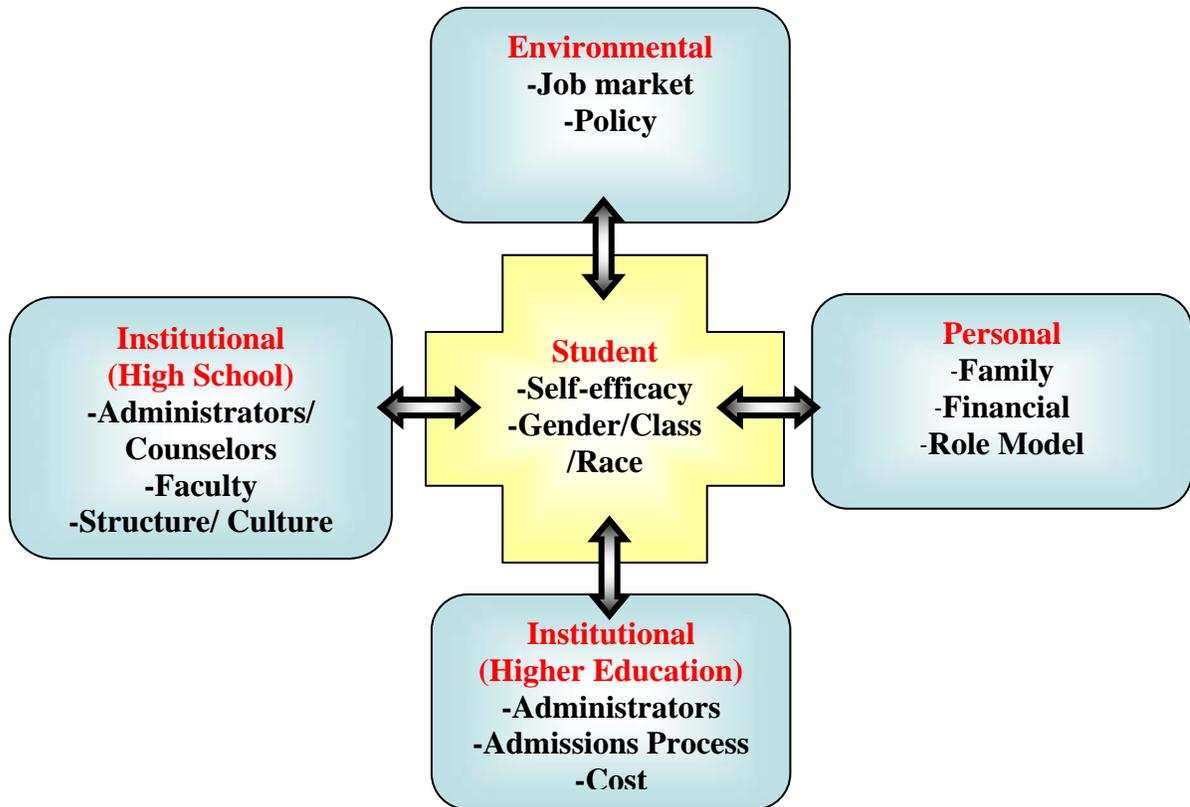


Figure 2. Conceptual model for interactions between student and signal sources

The environmental and institutional (higher education) signal sources reflect how policies such as merit-based or need-based financial aid, tuition costs, and admissions related processes, among other factors, effect college choice. For example, research has shown that tuition costs have a negative correlation with college choice and demonstrates that in some cases where merit-based financial aid programs has widened the gap in college attendance between African American and White students and between students from low and high-income families (Heller, 1999; Dyrarski, 2000). Farmer-Hinton (2008) asserts the importance of considering the social networks of support and guidance for students of color within school and neighborhood settings. Even further, findings

from the Stanford University Bridge Project demonstrate that access to college preparation related policy information follow racial, ethnic, income, and curricular tracking lines (Venezia & Kirst, 2005). By assessing and understanding signals from the personal and institutional (high school) realms, we attempt to capture the disparities asserted by Venezia and Kirst and understand how the social networks discussed by Farmer-Hinton may impact college choice for DPS students. Finally, we seek to understand how Spence's indices such as race interact with the signals from environmental, institutional, and personal spheres of influence thus impacting college choice. Guided by a model grounded in and supported by research, we sought to investigate the signals that promote or hinder the college choice process of urban students of color and to build upon current research to enhance and expand knowledge regarding best practices and areas of improvement for increasing postsecondary access and attainment.

Research Design

This study was conducted through the use qualitative research methods. Due to the fact a majority of research in the area of enrollment management is quantitative; we sought to address an existing gap in studies that investigate the experiences of the students, through their own stories and words. Therefore, our study sought to understand the experiences of the DPS high school students through a qualitative research design. Through a partnership with the Denver Scholarship Foundation, we identified three high schools to serve as pilot sites for this study. Lincoln (87% Hispanic), Montbello (57.4% Hispanic & 34.4% African American), and South (38% Hispanic & 20% African American) high

schools all reported low ratings on standardized test performance and enrollment of students from low income families, resulting in a high percentage of students who receive free or reduced lunch.

School Name	Ethnic population served	% students on free or reduced lunch
Lincoln	87% Hispanic	80%
Montbello	57.4% Hispanic 34.4% African American	58%
South	38% Hispanic 20% African American	44%

Data Collection

In this study, we conducted focus group and individual interviews with DPS high school students of color (18 years or older) in their senior year at three different sites. Qualitative interviewing was appropriate for our research as the purpose of our study was to understand other person's perspective and experiences (Patton, 2002). In this case, we hope to understand the students' perspectives about their college going aspirations. We conducted six focus groups in a semi-structured format taking into consideration that the facilitation and interaction among participants would be guided by our research questions (Patton, 2002). Prior to engaging in the data collection process we developed and piloted an Interview protocol (See Appendix A) to guide the focus our group and individual interviews. Two focus groups were conducted for each school with eight to ten participants in each group. In order to account for students with different levels of college access information we sought to identify students who either had high amount of contact or low amount of contact with high school

college preparatory programs. Accordingly, at each of our three school sites one focus group was for students who had high levels of interaction with college access programs and one was held for students with low levels of interaction with college access programs. Once focus groups were concluded we invited selected students to participate in individual interviews. Three to five students from each focus group participated in individual interviews. The duration for focus groups and individual interviews were 60-90 minutes and 30-45 minutes respectively. In total, we were able to collect over 10 hours of focus group data and more than 20 hours of individual interview data. Our Individual interviews were conducted in an informal conversational format as they provide flexibility and responsiveness to individual differences (Patton, 2002). In total, four doctoral students were used to conduct the focus groups and individual interviews. All focus group and individual interviews were recorded and sent out to be professionally transcribed.

Preliminary Findings

In this section, we highlight preliminary findings related one of the sections of our model -- institutional high school.

According to researchers, the K-12 environment with regard to fiscal and academic resources, curriculum, teachers, demographics, and geography have a deterministic effect on college access for high school students (Martin, Karabel, & Jaquez, 2005; Perna et al., 2008; Wolniak & Engberg, 2007; Yun & Moreno, 2006). In investigating the impact of signals from high school constituents and structures that promote or hinder the college choice process of urban students of

color, we asked students at various DPS schools to explain who and how individuals at their school influenced their decisions to attend college. Findings from our study indicate that there are several individuals, counselors, teachers, and non-affiliated staff who transmitted signals to students regarding college attendance. The high school type, structure, and culture also played a significant role in shaping the views of students regarding college attendance.

Yun and Moreno (2006) conducted a study examining K-12 school related college access disadvantages disaggregated by ethnicity and found that schools with a high percentage of African American and Latino students in California tend to have higher poverty rates, lower teacher certification, and lower advanced placement course offerings than predominately Asian and White schools. The factors analyzed by Yun and Moreno hinder postsecondary entry and completion. Similarly, a study by Martin, Karabel, and Jaquez (2005) demonstrated that high school segregation negatively affects college access in the state of California for minority students. Furthermore, Adelman (1999) contended that the impact of a rigorous high school curriculum is far more pronounced and positively correlated for African-American and Latino students than any other pre-college indicator. Adelman further asserted that many minority students, especially those who live in rural areas, do not have the opportunity to partake in such a rigorous curriculum.

Just as reported in the Yun and Moreno and Karabel and Jaquez cases, students in the DPS were also more likely to be minority and low-income in schools with few rigorous course offerings and less qualified teachers when

compared to their suburban counterparts. The DPS students had a clear understanding of the importance of academic rigor, obtaining high grades and test scores. Additionally, these students were cognizant of how admission requirements vary by institution. Students cited the University of Colorado and the University of Denver as school that require high academic achievement in comparison to other Colorado colleges and universities. At the high school institutional level, student noted the difference among DPS high schools in levels of college preparation. One student stated,

Lincoln themselves focus more in college than any high school I know of. Here at Lincoln, we have so much help to offer [xxx], because I came from a different high school, and over there, they really don't have all that. Again, when I came here, I mean they have college courses.

In this particular case, this student received green signals to pursue postsecondary education from Lincoln high school because they offered resources and support for this endeavor. Another structural signal surfaced during the interviewing sessions. Students mentioned that the high school academic expectations and achievement can impact students' perceptions of the collegiate academic experience. One student testified about the high school coursework load and its impact on his college perspective,

I think amount of homework and like pressure they [students] get in high school because like when you think about college you are like oh you get more homework and you know it's harder. And they are

like you can't do your homework here at high school like it kind of destroys the whole dream of going to college.

This student was expressing how difficulty with high school level coursework impedes a students' motivation to pursue higher education. Therefore academic progress and feedback has the potential to send negative or positive signals regarding a students' ability to succeed in college.

The availability of information related to the college admissions process is critical to college enrollment, the role of high school counselors, teachers, and staff for African American students is important. In addition to a rigorous college preparatory curriculum and a college-going culture within high schools, Corwin, Venegas, Oliverez, and Colyar (2004) cited appropriate counseling and resources committed to advising college-bound students as a reflection of factors critical to postsecondary entry. Low-income and minority students, like those in DPS, need guidance from teachers and high school counselors regarding the process of preparation for postsecondary education the most yet budgetary constraints, alarming counselor-to-student ratios, and in some cases a lack of caring encouraging faculty and staff hinder their ability to successfully navigate through the postsecondary educational pipeline (Corwin et al.; Freeman, 2005; Lee & Ekstrom, 1987).

The findings from this study support the current research that indicates the importance of high school staff in promoting college entry for minority youth. DPS students received red, yellow, and green signals from counselors, teachers, and non-affiliated high school staff members. High school administrators played the

most insignificant role in transmitting direct signals to the DPS students. Many students professed that teachers and/or counselors have supported them in their endeavor to acquire postsecondary education. Equally, the Denver Scholarship Foundation (DSF) Future Center, an on-site location equipped with staff, computers, and resources to assist students in applying for college, also played a vital role in providing students with college related resources, information and support. Some students stated that their college application experience would change for the worse if it were not to the intervention of the DSF Future Center staff. One student asserted, "Because I mean if you don't hear it from the teacher, you hear it from like the Future Center". When asked who provides information regarding college some students stated that teachers played a vital role, yet one student pointed out that only some teachers actually provide support and assistance to college-bound students by stating, "Some of the teachers. Let's be clear about it some of the teachers. Some of the teachers and some don't care". Additionally, one student commented on the reactive nature of college-going support at his school by stating that, "Yeah just nobody really comes to you and tells you to do. Unless you go and tell them you want to do it". This demonstrates that those students who seek out information and resources are served to some extent while other students may be missing vital information and assistance.

Several students mentioned college preparation programs such as DSF, AVID, Women in Engineering and the Rotary Club as resources that have helped them prepare for and signaled a green light toward college entry. One student stated, I am in probably four or five different clubs and organizations based on

going to college. So probably since I got out of fifth grade I have been pulled behind going to college". For many students, college preparation programs and organization emerged students in a college-going atmosphere and provided them with hands on experience and preparation for entry into the academy.

Overall, the preliminary findings of our study suggests that the signals a student receives related to how to gain access to college can either serve as a red light or green light depending on the college-going environment of his/her high school. Both, the high school type, structure, culture and the adults entrusted with supporting these institutional features play a significant role in shaping the views of students regarding college attendance. High school educators should keep in mind that the manner in which they communicate academic progress and feedback has the potential to send negative or positive signals regarding a students' ability to succeed in college. High school environments that hold students to high expectations: provide the support that can increase students' chances for academic success; and provide opportunities for student to acquire information related to the college admissions promise are more likely to signal to urban low income students that getting into and succeeding in college is an achievable goal.

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