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LOS GUERREROS ACADÉMICOS 30 Academically Invulnerable Mexican-American Students who Forged Their Way into America's Most Selective Universities

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UNIVERSITY OF CALIFORNIA, SAN DIEGO

CALIFORNIA STATE UNIVERSITY SAN MARCOS

LOS GUERREROS ACADÉMICOS
30 Academically Invulnerable Mexican-American Students Who Forged Their Way into
America's Most Selective Universities

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Education

in

Educational Leadership

by

Roxanne Ocampo

Committee in charge:

University of California, San Diego

      Frances Contreras, Chair

      Juan González

California State University, San Marcos

      Sinem Siyahhan

2017

The Dissertation of Roxanne Ocampo is approved, and is acceptable in quality and form for publication on microfilm and electronically:

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Chair

University of California, San Diego

California State University San Marcos

2017

Dedication

This study, the academic pursuit of a Doctoral degree, and the volume of information regarding Mexican-American students gleaned from this process, is dedicated to the following.

Para mi esposo, Dr. Arturo E. Ocampo. Without his on-going support, patience, encouragement, kind ear, and full-time income that supported our family during the past several years, I would not have been able to complete this journey. *Mil Gracias*.

To the students who participated in the study, as well as students I've worked with during the past seven years. The inspiration I received from these exceptional individuals proved to be an extraordinary motivating factor that pushed me to better understand and appreciate the incredible obstacles and challenges that preclude so many Mexican-American students from reaching their true academic potential. This inspiration helped me remain focused on completing the research and earning the Doctorate degree.

Epigraph

I guessed and hoped and prayed! (laughter).
Jesus was watching over me,
and did some magic with *la Virgincita*,
so here I am.

—Citlali
Studies Biomedical Engineering at an Ivy League campus

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List of Key Terms

1. **First Generation College Student**: Although there are many definitions concerning "first generation college student," I choose to define this demographic as students whose parents have not received a four-year college degree in the U.S. I use this definition to exclude parents who may have attended a 2-year college and/or enrolled, but did not complete/graduate from a 4-year college. Additionally, this definition includes students who may have older siblings who are current college students and/or graduates, but still belong to the first generation within their respective family to attend college.

2. **High Performing**: I am using Hoxby & Avery's model of "high achieving" (Hoxby & Avery 2010) to refer to high performing students. Their model classifies those students who generally rank in the 90th percentile in their respective high school class, and whose standardized test scores (SAT and/or ACT, SAT Subject Tests, AP or IB exams) fall in the top 4% to 10% of national test takers, and hold an average GPA of A- or above. The term, "High Performing" is also intended to be synonymous with the academic profiles of those students who traditionally earn admission to highly selective universities. All participants in this study met the definition of "High Performing."

3. **Historically Underrepresented or Minority Student**: A student who belongs to a racial and ethnic population that is underrepresented in higher education, relative to their numbers in the general population. Specifically, this refers to African Americans, Mexican-Americans, Native Americans (American Indians, Alaska Natives, and Native Hawaiians), Pacific Islanders, and mainland Puerto Ricans.

4. **Latinx:** Throughout the study, I use the term "*Latinx*" (versus "Latino") as a gender-neutral alternative; to acknowledge those who are trans, queer, agender, non-binary, gender non-conforming, or gender fluid; and to refer to individuals who self-identify as one who is of Latin American origin or descent. Although Mexican-Americans fall under the umbrella of the term "Latinx" I will specifically use the term "Mexican-American" when referring to the study participants.

5. **Latino**: While I chose to use "*Latinx*" throughout the study, I will substitute "Latino" when the research literature (or author) references this specific term.

6. **Low-Income** or **Low SES Background**: This term refers to students whose parents receive or are eligible to receive Free and Reduced Lunch, as defined by the July 1, 2015 Income Eligibility Guidelines for the 2015/2016 School Year. This definition can be obtained here:

   http://www.fns.usda.gov/school-meals/income-eligibility-guidelines

7. **Open Access Institution:** Refers to postsecondary institutions with open admissions policies to accept all students who apply. There are over 3,200 open access institutions in the United States.

8. **Selective College or Selective University**: Because college rankings are subjective, and because there is not a commonly accepted definition in peer reviewed college literature of what constitutes "selective," the colleges and universities identified in this study as "selective" represents colleges that meet the following criteria. First, they represent colleges that limit admission to 10% to 20% of student applicants, with student profiles representing the top 10% nationally for standardized tests (SAT & ACT), GPA, and class ranking. Secondly, they included colleges identified in the

2011 Barron's Guide to the Most Competitive Colleges, including only those

campuses earning a rank of "1" referring to "Most Competitive." Finally, colleges

with mean SAT and ACT scores in the top 10% along with an average GPA in the A

range, were included. This final criterion is referenced by Caroline Hoxby in, "*The

Changing Selectivity in American Colleges*" (2009). This list was compared to the

Forbes List of Top 25 Colleges Ranked by SAT Scores, as compiled and retrieved

from the U.S. Department of Education. Colleges that appeared on all three lists were

included in this study.

Vita

EDUCATION

2004   Bachelor of Arts in Liberal Studies (Concentration English)
       California State University Hayward

2006   Master of Arts in English (Chicano & African-American Literature)
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PUBLICATIONS

Ocampo, Roxanne (2016). *Flight of the Quetzal Mama: How to Raise Latino Superstars and Get Them into the Best Colleges*. 2nd edition. CreateSpace Publishing.

Ocampo, Roxanne (2015). *El Vuelo de la Mamá Quetzal: Cómo Criar Hijos Exitosos y Prepararlos para las Mejores Universidades*. CreateSpace Publishing.

Ocampo, Roxanne (2015). *Betcha Didn't Know: Quetzal Mama's Tips for Latino Parents* (eBook).

Ocampo, Roxanne (2014). *Nailed It! Quetzal Mama's Toolkit for Extraordinary College Essays*. CreateSpace Publishing.

FIELDS OF STUDY

National College Admissions Practices; Undermatching of Low-Income, First Generation, Mexican-American Students; Parenting Strategies of Latinx Parents; Essay Writing Strategies

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I am especially grateful for the expertise and encouragement I received from Dr. Frances Contreras. Her insight and recommendations, as an expert in the P-20 continuum, were extremely valuable. I feel fortunate to have received her guidance throughout this process. *Mil gracias, Dr. Contreras*.

I am also especially grateful for The San Diego Fellowship. The valuable financial support from this Fellowship enabled me to complete the doctoral journey. I hope to be in a position in the future to contribute financially toward other promising students.

Additionally, I acknowledge the importance of several local and regional organizations (and individuals) that generously referred potential participants for this study. These organizations include Elvia Prieto from El Centro Chicano, Stanford University; James Montoya from the Arizona Ivy League Project, and Gabriella Herrera who referred potential participants from the Chicano/Latino Youth Leadership Program (CLYLP) alumni group, as well as Harvard University including Harvard Latinas Unidas, Harvard Fuerza Latina, and Harvard 1 Generation Club.

Lastly, I appreciate the friendships developed in the JDP program, especially the friendship of Dr. Melissa Han. Thank you for being a good friend, Melissa.

Abstract of the Dissertation

LOS GUERREROS ACADÉMICOS

30 Academically Invulnerable Mexican-American Students who
Forged Their Way into America's Most Selective Universities

by

Roxanne Ocampo

Doctor of Education in Educational Leadership

University of California, San Diego, 2017
California State University, San Marcos, 2017

Professor Frances Contreras, Chair

Undermatching refers to college ready students who select and enroll in colleges

with selectivity levels significantly lower than their academic profile, resulting in attending

a non-competitive college, a two-year college, or foregoing applying to college altogether.

The current research trend examining the topic of Undermatching focuses on studies of

low-income students in aggregate, ignoring the fastest growing racial/ethnic student

demographic: *Latinxs*. Latinx[1] students, as a subgroup, undermatch at the highest rate compared to all subgroups within the demographic of low-income, first generation students. While the majority of high-performing, low-income, Latinx students Undermatch, there is a small percentage of students from this demographic who avert undermatching and in fact properly match to selective colleges. This phenomenological study explored the behaviors, practices, and experiences, of 30 Mexican-American college sophomores (15 females and 15 males) whose demographic consisted of first-generation status, low-income, immigrant parents, English Learners, who earned admission to a highly selective college. This research study draws upon several theoretical frameworks to guide understanding of the ways in which this targeted demographic has the greatest potential to undermatch including Critical Race Theory, Cultural & Social Capital Theory, and Academic Invulnerability Theory. The study explores various environmental, psychological, and institutional factors, with emphasis on digital technology resources that impacted or influenced the college choice process of this target demographic. This study contributes to our understanding of the challenges, successful practices, and interventions that influenced and impacted participant's pathway to a selective college. The purposeful sample was comprised of students who recently graduated from public high school in Arizona, California, Nevada, and Texas. The qualitative methodology consisted of individual, semi-structured interviews, and a Qualtrics Survey.

Keywords: *undermatching; Latinx students; low-income students; first-generation college students; highly selective colleges; postsecondary success.*

[1]See "Key Terms" for definition of *Latinx*.

Chapter One: Introduction

But what are the characteristics of those who successfully navigate the path to and through college? What distinguishes them from their peers who are not as academically successful? And what can we learn from these success stories that can help pave the way for them?
        —Patricia Gándara & Frances Contreras, *The Latino Education Crisis*

Historically, our country has apathetically accepted the reality that our nation's most elite and selective universities are predominately populated by our nation's highest net-worth families. Nearly three quarters of students in the highest income quartile are enrolled in our nation's most selective colleges (Giancola & Kahlenberg, 2016; Hoxby & Avery, 2010). Our nation has also accepted that low-income, first generation, historically underrepresented students are nearly non-existent at these selective universities, where only 3% of entering freshman at the top 146 most selective universities are situated at the bottom socioeconomic quartile (Carnevale & Rose, 2004; Giancola & Kahlenberg, 2016). This historical inequity has never garnered much national attention, nor been labeled with a novel term.

However, recently researchers have begun questioning and examining why highly qualified, low-income students are not applying to these selective colleges when their academic profile is aligned with the profile of admitted students. Due to a sparked interest by former President Barrack Obama, scholars and researchers within economics departments, stakeholders in higher education, and those interested in educational equity, we now have a conceptual term that names this phenomenon: *Undermatching*.

Undermatching refers to college ready students who select and enroll in colleges with selectivity levels significantly lower than their academic profile, resulting in

attending a non-competitive college, a two-year college, or foregoing applying to college altogether.

Nationally it is estimated that nearly 40% of high school students (~250,000) undermatch annually. In studies where the population was localized, those numbers exceed the national percentage, at 62% (Roderick, M., Nagaoka, J., & Coca, V. 2008).

However, undermatching is not a shared phenomenon, proportionally experienced by all socio-economic and ethnic backgrounds. By closely examining the pool of high performing, low-income students, researchers find that undermatching disproportionately impacts historically underrepresented (Bowen, Chingos, & McPherson, 2009; Roderick, et. Al., 2008; Smith, Pender, Howell, & Hurwitz, 2012) and potential first generation students (Gándara, 2005; Pallais & Turner, 2006). Moreover, the subgroup most impacted by undermatching among *all* demographics is Latinx students (Black, Cortes, & Lincove, 2015). More specifically, high-performing, low-income, first generation, *Latinx* students (Bowen, et al., 2009; Hoxby & Avery, 2010; Roderick, Coca & Nagaoka, 2011; Rodriguez, 2013; Smith, et al., 2012).

Although current research exists as to how, why, and when low-income students undermatch, there is limited research concerning Latinx students. However, Latinx students should be on our radar. According to the 2010 Federal Census Bureau, Latinxs are the fastest growing demographic in the United States where currently one-in-four (24.7%) public elementary school students are Latinx. In California public schools, Latinxs represent 54% of all K-12 students.

Currently, among 18- to 24-year-olds nationally, Latinx students constitute 16.5% (more than 2M students) of all college enrollment – the largest minority group on our

nation's college campuses today. While Latinx students have made recent strides in college enrollment, representation at selective colleges is disproportionate with their numeric population and is *strikingly* concentrated in community *colleges* (Gándara, 2005; Malcom-Piqueux, et al., 2014; Smith, et al., 2012).

Matriculation among low-income students at selective colleges has significant societal and quality of life implications including (1) higher graduation rates; (2) graduating in an ideal time frame (four years); (3) greater access to post graduate studies and likelihood to attend graduate school; (4) greater occupational prestige including "gateways" to positions of influence and leadership; and (5) greater earnings (Carnevale & Rose, 2004; Pallais & Turner, 2006; Santiago, Taylor & Calderón Galdeano 2016; Smith, et al., 2012; Walton-Radford 2009).

In addition to these direct and immediate affects, mitigating undermatching supports the intellectual and social development of students (Roderick, et al., 2008), opportunities for intergenerational mobility (Pallais & Turner, 2006), critical role models for peers and future generations, as well as bringing a much needed "voice" of this demographic into a mostly white, upper class, privileged university classroom (Zamudio, Russell, Rios, & Bridgeman, 2011).

Examining the many and various ways in which this demographic navigates within their institutional, community, familial, and online resources, may shed light on how to strategically design and implement programs and strategies to mitigate the possibility of undermatching.

Statement of the Problem

Our current postsecondary educational system is highly stratified by socioeconomic class, resulting in an unbalanced and unequal distribution of entering freshman classes. Today, students in the lowest income quartile constitute only 3% of enrollment in selective universities (Giancola & Kahlenberg, 2016; Hoxby & Turner, 2013), whereas 72 percent of students from the wealthiest families attend our nation's most selective universities (Giancola & Kahlenberg, 2016).

While there exists a pool of qualified, academically talented students from socioeconomically disadvantaged and first generation college-going backgrounds, these students are not applying to selective colleges. In fact, this pool of students either (a) matriculate at college campuses misaligned with (below) their academic profile; (b) attend "open access" or two-year colleges; or (c) forego applying to college altogether. This phenomenon of qualified, college-ready students who select and enroll in colleges with selectivity levels significantly lower than their academic profile, is referred to as *Undermatching*.

Matriculation at a highly selective college extends beyond social recognition and prestige, resulting in greater odds of graduation success, graduating in an ideal timeframe, greater likelihood to attend graduate school, greater future earnings (and conversely, lower levels of unemployment), greater occupational prestige, and greater access to higher quality health care (Hoxby, 2013; Klugman, 2012; Roderick, 2011; Rodriguez, 2013).

While the phenomenon of Undermatching disproportionately impacts low-income students, first generation college-going students (Gándara, 2005; Pallais & Turner, 2007), as well as historically underrepresented students (Latino, Native-American, and African-Americans) one subgroup undermatches at the *highest* rate compared to all other low-income and first generation college-going students: Latinx students.

High performing, low-income, first generation, Latinx students are not applying to selective universities. Even when controlling for factors such as quality of high school, college readiness, and guaranteed admission programs at elite flagship universities, Latinx students are still not applying (Black, Cortes & Lincove, 2015). Instead, they are largely attending "open access" institutions (community colleges) and Hispanic Serving Institutions (HSI's), where representation is at 64%. Open access institutions are primarily community colleges and non-competitive state colleges, where the graduation rates, time to graduate, and available financial aid is significantly lower compared to selective institutions with significant endowments. Currently, only 12% of Latinx students attend highly selective colleges (Santiago & Calderón Galdeano 2016).

Yet, despite the incredible obstacles this demographic experiences in their trajectory to college – whether socio-cultural barriers, or structural and institutional, there are some students who somehow thrive and excel in navigating the selective college admissions arena.

To explain this anomaly of excellence in educational attainment despite barriers, researchers have focused on theories spanning anthropological, sociological, psychological, and institutional. The purpose has been to examine *why* these students succeeded. Generally, researchers find that these students adapted a particular mindset

(e.g. resilience) that aided them in their steep educational journey. The implication being that these few students were highly unique by virtue of possessing a rare and valuable psychological disposition that guided positive behavior.

However, complex psychological traits such as resilience are not visible, tangible, scalable, or transferable. Therefore, rather than focusing on the complex *why*, this study introduces a practical examination concerning the *how* – *how* did high performing students obtain access to certain programs, *how* did they receive the right type of information at the right time, and *how* were they able to utilize specific resources to learn more about the college choice process? The research decision to focus on *how* is to advance beyond the limitations of *why* – the enormity of deficits and obstacles faced by this demographic – in order to identify specific success strategies. Seeking out the *how*, may yield practical and identifiable behaviors may be more accessible to a broader mass of students.

Purpose of the Study

Through a qualitative research design – specifically a Phenomenological Study, the study focused on first-hand testimony of participants who recently matriculated at a highly selective college and avoided the phenomenon of Undermatching. The study explored perspectives, patterns, and decision making behaviors among low-income, first generation, high performing, Mexican-American students (LIFGHPMAS) engaged in the selective college choice process.

More specifically, this study explored how participants *successfully* engaged in college choice behaviors that influenced application and matriculation at a selective

college campuses closely aligned with their exceptional academic profiles. This exploration included an examination of environmental, institutional, digital technology, psychological, and community-based resources that impacted or influenced the selective college choice process for this studied demographic.

Significance of the Study

This study is significant for several reasons. First, the study focus is qualitative in design, versus quantitative. While there is much practical use for quantitative studies concerning the phenomenon of Undermatching, these studies are often conducted with an econometric lens, lacking the personal, first-hand narrative that is critical toward our understanding of this unique and rare demographic. Furthermore, quantitative studies concerning *Undermatching* tend to focus on presumptive theoretical models and estimation tools regarding who "could have" but did not attend a selective university.

Second, the study explored students who *successfully* navigated the selective college system and currently attend a selective institution. The study examined specific behaviors of participants who recently transitioned from high school to college and matriculated at extremely competitive universities – versus students who have already completed a degree or have not yet applied. Rather than speculating and theorizing, or a retrospective approach, this study obtained real-time, contemporary information.

Third, because persistence is a particularly significant factor for this demographic, the participant's enrollment in a selective institution will likely yield the strongest probability of graduation success. These participants are situated in elite institutions with exceptional graduation rates, financial resources, and institutional resources that nearly

guarantee graduation (Carnevale & Rose, 2004; Fry, 2004; Lee, Contreras, McGuire, Flores-Ragade, Rawls, Edwards, & Menson, 2011).

Fourth, a relatively new component previously unavailable for seminal studies on high-performing Latinx students and college admission was considered: *digital technology*. Adding digital technology as a component added a new layer in which to examine behaviors and perspectives of high-performing Mexican-American students. More importantly, learning whether or not this demographic may utilize digital technology as an effective resource in the college choice process may inform future studies.

Lastly, few studies focus specifically on students who experienced multiple obstacles and barriers (SES status, immigrant status and educational attainment of parent, language barriers, low resourced educational institution, societal beliefs about racial and cultural inferiority, etc.) yet managed to earn admission to a selective college. Therefore, the focus will move from the *why*, to the more practical and useful *how*. *How* did the participants adapt, traverse, accommodate, leverage, manage, and somehow excel in these environments? *How* might these behaviors be positively linked to matriculating at a highly selective college? And, *how* can learning about these behaviors potentially help other students with similar backgrounds successfully apply to colleges aligned with their academic profiles?

The study moves away from class-based or socio-cultural based deficit ideology, and attempts to identify "best practices" of those students who have been successful. Although these "positive deviants" (for lack of a better term) represent a small sector of the U.S., it is important to learn *how* they succeeded. This study examined how a group

of 30 high-performing students avoided *Undermatching* and applied and matriculated at campuses closely aligned with their academic profiles.

Theoretical Framework

Attempting to understand the lived experiences of low-income, first generation, high-performing, Mexican-American high school students, without listening and including their voice via first-hand testimony, is both problematic and counterintuitive. It is equally illogical to consider the plight of Mexican-American students who leaped over institutional barriers and historical discrimination without considering how race and ethnicity have played a role in their rare pathway to a selective university.

Race and ethnicity is a key consideration for this study. Mexican-American students – versus the monolithic "Latinos" or low-income students in aggregate – were chosen for this study for two important reasons. First, due to the significant growth rate of Mexican-Americans in the US – where currently 64% of those classified as Hispanic origin in the US are Mexican-American (Census, 2014) and where in 2036 one out of three school age children are projected to be of Hispanic heritage (most being Mexican-American), justifies this focus. Second, Mexican American students have the lowest four-year college-going rates of all Latinxs (and all other racial/ethnic groups). Therefore, focusing on Mexican-American students may yield important findings specific to potentially unique experiences and barriers among this subgroup.

Critical Race Theory. Critical Race Theory (CRT) offers a unique perspective in which to understand the complexities surrounding the phenomenon of selective college admission for Mexican-American students. CRT is precisely aligned with this

phenomenon as it sharply defines the ways in which Mexican-American students have been historically and systematically excluded from highly selective universities. CRT explains how the system of racism functions to oppress Mexican-American students who deserve a spot at a selective university, and indicts the spurious claim that the U.S. educational system is based on objective, meritocratic, color-blind and race neutral systems of equal opportunity. CRT acknowledges the role that racism (as a form of subordination) via curriculum, policy, institutional practices, etc., has impacted Mexican-American students' access to elite educational institutions. Consistent with CRT, the legitimacy and appropriateness of experiential knowledge of the 30 participants – via their lived experiences from their oral testimony – provides exceptional understanding of the ways participants avoided Undermatching and pursued admission to highly selective universities.

CRT within the educational landscape is defined as, ". . . *an analytical framework that examines and challenges the effects of race and racism on educational structures, practices, and discourses*." (Yosso, Parker, Solórzano & Lynn, 2004). As such, CRT can explain the complex, systematic, and nuanced ways Mexican-American students are situated in underperforming educational systems, how the compounded nature of these disadvantages exclude marginalized students from being aware of, preparing for, and entering selective universities, and how the dominant culture is the broker of such forms and systems of capital.

The CRT framework also challenges the existing modes of scholarly research in education and refutes the "Majoritarian Storytelling" paradigm that insists racism in education no longer exists (Solórzano & Yosso, 2002). By silencing the majoritarian

storytelling paradigm, CRT brings forth voices of those who hold valuable knowledge but have been silenced within the traditional discourse of academic research: *Thus:*

> *Critical race theory's methodological emphasis on storytelling and its political commitment to counterhegemonic representations have links with post-colonialism's emphasis on testimonio – giving witness to social injustice – and the production of counternarratives.*
> (Marshall & Rossman, 2016, p. 28)

The foundation of this study moves away from models that treat and perceive the targeted demographic as "positive deviants," rationalizing their individual and significant academic achievements as *exceptions* to their culturally ascribed "normative" behaviors. Rather, aligned with CRT, the roles of "counter-storytelling" (Yosso, 2006) and "politics of exceptionality" (Holguín-Cuádraz, 2006) will be challenged. Examining participant's success through a CRT lens, may shed on light on whether institutional processes and structural opportunities may have assisted participants in their academic success.

Social Capital and Cultural Capital Theory. In addition to CRT, the problem of Undermatching has also been attributed to social constructionist theories including Social Capital Theory and Cultural Capital Theory. While there are inherent problems associated with comparing educational outcomes of Mexican-American students with those of the dominant (White) cultural group based on a set of defined majoritarian "norms," (Yosso, 2005) social and cultural capital theories are nevertheless, especially practical in examining the stratification of elite universities. These constructionist theories are critically flawed in that they relegate an entire cultural group (i.e. Latinxs) as homogeneous through a master narrative or "monovocal" narrative (Solórzano & Yosso, 2002) – often attributing negative behaviors and deficiencies as causal factors associated with lower educational attainment, as a direct result of the culture. Subsequently,

attribution and responsibility for unsuccessful educational outcomes is placed with the students and their families – versus institutionalized practices within the educational institutions in which they reside. As stated by Tara Yosso:

> *Bourdieu's . . . theory of cultural capital has been used to assert that some communities are culturally wealthy while others are culturally poor. This interpretation of Bourdieu exposes White, middle class culture as the standard, and therefore all other forms and expressions of 'culture' are judged in comparison to this 'norm'. (Yosso, 2005, Pg. 76)*

In essence, while Bourdieu asserted that all social groups possess social capital, he also acknowledged the capital of lower socioeconomic groups is not valued and prized by the dominant group. However, the decision to bring in Social Capital and Cultural Capital Theory is not to validate or endorse the deficiency premise behind these theories. Rather, it is for the benefit of examining and explaining how forms of capital are *especially* necessary for students who wish to successfully navigate within the selective college arena. I argue that selective college admissions is the quintessential marker of social and cultural capital. It is within exclusive social and cultural networks where selective college going capital is developed, prized, shared, reserved, and protected by its members. Therefore, I intend to utilize both sets of theories to serve as referents – to explain how these constructions develop and perpetuate cycles of exclusivity and how LIFGHPMAS are systematically shut out.

Academic Invulnerability. Finally, the psychological theory of Academic Invulnerability is included to help explain how some Mexican-American students are able to deflect and insulate themselves from the multitude of negative forces that threaten their ability to succeed academically. The concept of invulnerability was first introduced by Norman Garmezy in 1981, as a psychological theory applied to children who, despite

experiencing significant environmental and psychological stressors, learned to thrive emotionally and psychologically. Ten years later, Latinx researchers applied this theory to help explain how some Mexican-American students who experienced socioeconomic and cultural disadvantages were able to thrive and succeed academically (Alva, S.A. 1991; Alva, S.A., & Padilla, 1995; Arellano & Padilla, 1996). Because this study examines how participants who faced many socio-economic and institutional disadvantages still succeeded academically, this theory is particularly relevant and valuable.

The mediating role of protective factors – personal and external – that define academic invulnerability certainly shed light on how striving students can successfully manage the significant educational and psychological demands placed upon them, while sustaining exceptional levels of academic achievement. For these reasons, the theory of academic invulnerability has the potential to explain and enhance our understanding of how participants successfully mitigated undermatching.

Research Questions

The overarching research question posed in this study was *how* did high performing students who lacked college going capital avoid the phenomenon of *undermatching* and matriculate at a selective university aligned with their intellectual and academic talents? In pursuit of the overarching research goal, the study posed four sub-questions:

1. ***Whom*** did participants rely upon or trusted for critical guidance and information? Whom did participants derive inspiration or support to pursue selective colleges?

2. ***When*** did participants identify and access resources, and when (if any) did pivotal moments occur that influenced selective college going behaviors?

3. ***What*** strategic behaviors and actions were employed by participants?

4. ***Where*** *did* participants find assistance or information (digital technology) along their selective college journey?

In addressing each of the sub-questions above, the three theoretical models will be aligned with analysis. The questions of *whom, when, what*, and *where* participants identified or accessed college-going information or strategies will be exampled through the lens of Critical Race Theory, Social and Cultural Capital Theories, and Academic Invulnerability Theories.

Limitations

Due to the scope of this project, there were a few limitations. The strength of the research design was also the weakness. The purposefully narrowed scope of the research topic and participant criterion allowed for rich data collection. However, because of the relatively small number of participants (30) this places significant limitations regarding the prospect of generalizability.

Additionally, the proposed sampling method was not random. The profile of the targeted participants was extremely narrow, limiting the number of students meeting the interview criterion. Third, the results of the interviews were reliant upon the participant's memory recall, accuracy, truthfulness, and openness to share honest details concerning their pathway to college.

Positionality and Reflexivity

I am aware of the potential challenges associated with personal bias and proximity to the research topic. I run a full-time business directly related to both the target demographic and the proposed research topic. Therefore, my positionality may influence the proposed study because I work closely with many low-income, first generation status, high-performing, Mexican-American students.

Additionally, in terms of race/ethnicity, I self-identify as Mexican-American, and politically as a *Chicana*. I accept that my ethnicity and political affiliation may also influence my perspective concerning the study. However, I fully acknowledge the potential for bias and took diligent efforts toward distancing myself from various assumptions. Furthermore, I am sensitive to my personal and social identity such that I took caution in "conducting inquiry, interpreting data, and constructing the final narrative." (Marshall & Rossman, 2016, Pg. 73).

Although my personal and direct experiences may be viewed by some as a limitation, I offer it as an asset in the tradition of Dolores Delgado-Bernal's model of "Cultural Intuition" (1998). Because I personally and politically identify as a Chicana. I believe I bring my connectedness to the research topic as a strength or asset and not a liability:

> *A Chicana researcher's cultural intuition is achieved and can be nurtured through our personal experiences (which are influenced by ancestral wisdom, community memory, and intuition), the literature on and about Chicanas, our professional experiences, and the analytical process we engage in when we are in a central position of our research and our analysis. Thus, cultural intuition is a complex process that is experiential, intuitive, historical, personal, collective, and dynamic. (pp. 567-568)*

Fortunately, qualitative research has evolved from an omniscient, distanced researcher/ writer purporting to objectively receive data unbiased, to a contemporary acknowledgment that, " . . . *Qualitative researchers today acknowledge that the writing of a qualitative text cannot be separated from the author, how it is received by readers, and how it impacts the participants and sites under study.*" (Creswell, page 215).

Chapter Two: Literature Review

The pool of high-achieving, low-income students who select and apply to highly selective colleges is very small. For every one high-achieving, low-income student who applies to a selective university, there are 8 to 15 high-achieving, high-income students who apply (Hoxby & Avery, 2010). It's not that low Socioeconomic Status (SES), high-performing students are non-existent (Winston & Hill, 2005) or that these students are being denied or rejected from selective colleges when they apply (Walton-Radford, 2009).

On the contrary, *when* high-performing, low-income students do apply to selective universities, they are being admitted (Walton-Radford, 2009). Furthermore, when they are admitted, they progress and graduate at the same rates as high-income students with equivalent test scores and grades (Carnevale & Rose, 2004; Hoxby & Avery, 2010; Hoxby & Turner, 2013; Pallais & Turner, 2006). And, recruitment officers at selective colleges are clamoring over this small pool of low-income, high performing students (Hoxby & Avery, 2010).

To put this in a numerical context, Walton-Radford's post hoc analysis of low SES valedictorians applying to highly selective universities determined this demographic had the highest admit rate (63%) over high SES valedictorians (54%) and middle income valedictorians (50%). More significant in Walton-Radford's overall findings, low-income Black & Hispanic valedictorians had the *highest* rates of admission to selective universities compared to applications submitted by whites (Walton-Radford, 2009).

Finally, low-income, high-performing students would typically pay *less* to attend a selective college versus a far less non-selective university (Pallais & Turner, 2006).

Researchers rely on post hoc analysis to identify this pool, assess academic readiness, and gage academic competitiveness compared to high-income counterparts. Researchers also design and utilize metrics to *project* presumptive eligibility, as a way to evaluate and assess the available pool of students who would otherwise qualify for admission to a selective university, yet do not apply.

For purposes of estimating undermatching, research studies referenced in this review were mostly derived from national and regional student data sets including the Educational Longitudinal Study, National Clearinghouse Data, National Student Clearinghouse, the National Center for Education Statistics (NCES), Consortium on Chicago School Research, Chicago Public Schools, The College Board, American College Testing Program (ACT) and the North Carolina Education Research Data Center.

Looking at this data, it is clear that although low-income, high performing, minority students are "out there" (Hill & Winston, 2010), that they will likely be admitted if they apply (Roderick, et al., 2008), that it would cost them *less* to attend a selective college (Hoxby & Avery, 2010) and that the recruitment officers are implementing strong recruitment strategies to lure this population (Hoxby & Avery, 2010), these students are not applying to *any* selective college (Hoxby & Avery, 2010) or applying to colleges significantly lower than their academic abilities (Smith, et al., 2012). And, in states with automatic admission to elite, flagship universities ("Top 10% Plan"), high-performing Latinx students who meet admission requirements are *still* undermatching by enrolling in less selective public universities or two year colleges (Black & Cortes, 2015; Black, Cortes & Lincove, 2015).

If these identified students are exceptionally qualified, highly valued, heavily recruited, and have compelling financial reasons to apply, why aren't these high achieving, qualified students applying to these selective colleges that match their academic abilities?

For ease of clarity and efficiency, henceforth the acronym "LIFGHPMAS" will be used to refer to the targeted demographic of Low-Income, First Generation, High-Performing, Mexican-American Students. The term "Latinx" and "Mexican-American" is the preferred term for this literature review, including references to previous research that may have used the term "Hispanic."

This literature review begins with an overview of significant factors that have historically contributed to LIFGHPMAS vulnerability to undermatch, including *predisposition* via socio-cultural influences, and *institutional deficiencies* localized at the school site or district level.

Following this introduction, three theoretical frameworks are discussed, to explain the context in which LIFGHPMAS are under greatest risk to undermatch. These theories include Critical Race Theory (Zamudio, et al., 2011) and Social/Cultural Capital Theory (Bourdieu, 1986; Bourdieu, Passeron, & Nice, 1977). Furthermore, to explain how some Mexican-American students (including the 30 research participants) were able to mitigate the effects addressed in CRT and Social/Cultural Capital Theory, the theory of Academic Invulnerability is included (Alva, 1991; Alva & Padilla, 1995; Arellano & Padilla, 1996; Gonzalez & Padilla, 1997). While Academic Invulnerability may explain how LIFGHPMAS are shielded by protective factors that mitigate the threat of

undermatching, this area of research focused specifically on Mexican-American students is rare, and therefore, the literature is scant.

Predisposition for Undermatching

Viewing LIFGHPMAS through the lens of a potential predisposition to undermatch may help explain the barriers and obstacles they encounter throughout the selective college selection and enrollment process.

When researchers scrutinize how social class and college choice intersect, they find significant variance in the ways high versus low SES students engage in selection and enrollment behaviors (McDonough, 1997, Rodriguez, 2013; Smith, et al., 2012). The behavioral patterns of high SES students are highly predictable in the sense their behaviors are "scripted." Researchers find that high SES students follow predetermined scripts, versus an autonomous choice associated with motivation and purpose (McDonough, 1997). Whereas, low SES students do not participate in these scripted behaviors, and instead are shaped by compounding forces that can be summarily referenced as "predispositions" (McDonough, 1997).

Researchers cite these unique "scripts" as critical in the way high school seniors map out their college options, choice, and enrollment. Because researchers investigating the topic of undermatching overwhelmingly agree that college-going information for LIFGHPMAS is heavily stratified via social class and cultural capital (Roderick, et al., 2008; Rodriguez, 2013), it is important to identify the primary informants, as well as the informant's level of college-going knowledge. For this reason, the role of parents, immediate family, peers, and close social networks as primary informants were examined.

The role of teachers and secondary counselors as informants will be addressed in the section regarding *Institutional Deficiencies.*

Research reinforces how LIFGHPMAS do not have access to social networks that serve as conduits for selective college admissions (Carnevale & Rose, 2004). These students are not receiving appropriate college admissions information from institutional agents (counselors and teachers), so they look to their immediate family and community to convey social capital (Roderick, et al., 2011; Rodriguez, 2013).

Typically, these students come from families without a college-going history (Roderick, et al., 2011). As a result, disadvantaged students often turn, unsuccessfully, to siblings or other family members as surrogates for college-going knowledge (Rodriguez, 2013). It is within this multi-layered context of social capital that demonstrates how disadvantaged students are consistently misinformed and misguided during the college selection process, unlikely to possess the social/cultural capital to help them negotiate the college choice process (Rodriguez, 2013).

Primary source of information. For LIFGHPMAS, the primary source of information gathering and decision making during the college planning, selection, and enrollment decision phase is funneled through parents (Ceja, 2004; Perez & McDonough, 2008; Rodriguez 2013). Parent encouragement has been identified as one of the most influential factors influencing a student's decision where to apply (Walton-Radford, 2009). The role of parents is highlighted in the way they encourage their children to attend college (Ceja, 2004; Espenshade & Radford, 2009), to take appropriate college classes, discuss financial aid (Walton-Radford, 2009) and, set boundaries regarding geographic proximity (Kiyama, 2010).

Several researchers have investigated the unique ways social/cultural capital, as evidenced through parents, influence the college selection and enrollment process of LIFGHPMAS (Ceja, 2004; Gándara, 2005; Kiyama, 2010; Pérez, 2008; Rodriguez, 2013). In Miguel Ceja's qualitative study of 20 first-generation, low-income, Chicana students in California, he sought to understand the college aspirations of this target group and the role their parents play in shaping those aspirations (Ceja, 2004).

Ceja found that despite the parent's *high* level of expectations and encouragement regarding college aspirations for their children, parent's ability to transmit college going information to their children was limited to encouragement and high expectations. Specifically, the majority of these parents lacked social/cultural capital due to recent immigrant status, lack of formal education (minimal postsecondary experience), lack of fluency in English, and therefore lacking general knowledge of the U.S. college system (Ceja, 2004).

While Ceja's findings help shed light on the ways social/cultural capital impact LIFGHPMAS, there were three significant limitations of this study: (1) the small pool of students interviewed (twenty); (2) the study focused on one gender (female); and (3) the broad sampling of college types the students attended (UC, CSU, and community colleges).

In a more recent study, Rodriguez (2013) also examined the primary role parents play as informants, finding that parents, siblings, and peers were primary informants for LIFGHPMAS, transmitting and assisting with the college process (Rodriguez, 2013). Based on these findings, these researchers have observed that the requisite college-promoting, social and cultural capital required to navigate selective college admissions processes was largely dependent upon student's primary informant (parents).

Institutional Deficiencies. When attempting to understand forces that guide, direct, and influence LIFGHPMAS college decision making abilities, the immediate (school) environments should be of primary consideration. Examining a high school student's choice process in the context of his or her high school environment will better inform the undermatch phenomenon (Roderick, Nagaoka & Coca, 2009).

To begin this discussion, it is important to consider how LIFGHPMAS are situated within a particular institution. Latinx students in general, as well as potential first-generation college graduates are disproportionately represented in low-resourced high schools (Carnevale & Rose, 2004; Gándara, 2005; Roderick, et al., 2008; Rodriguez, 2013).

The disproportionate number of Latinx students situated in low-performing, public high schools, can be explained through Critical Race Theory (CRT) (Zamudio, et al., 2011). CRT argues that the resources necessary to translate college aspirations of LIFGHPMAS into a reality are not equitably distributed, which further exacerbates the disparities between LIFGHPMAS and their affluent counterparts in college access. CRT sheds light on this phenomenon as researchers confirm that Latinx students are concentrated in low-performing high schools, with fewer college-going resources, and send fewer students to college (Rodriguez, 2013, Zamudio, et al., 2011).

Aside from the institutional deficits, Pierre Bourdieu (1977) introduced the concept of "habitus" – asserting that individuals within a social group develop and maintain a set of values, proclivities, tastes, expectations, and dispositions acquired through membership within this group, that are reproduced for future embodiment (Bourdieu & Passeron, 1977).

Twenty years later, Patricia McDonough re-introduced this term but adapted and applied her theory to a social structure (low-income, high-performing students within a particular high school environment). McDonough refers to this expanded theory as "organizational habitus" (McDonough 1997). In this contemporary, refined context, organizational habitus refers to an environment, or "habiti" wherein students create, frame, enable, and pursue their college aspirations (McDonough, 1997). Other researchers align habitus as a college-going culture or college-going resources, wherein college-going knowledge is shared via available resources that determine whether students match or undermatch (Roderick, et al., 2008; Roderick, et al., 2009; Rodriguez, 2013).

Whether it is referred to as "habitus," "organizational habitus," or "college going climate," research supports this space is where college decision making occurs, and is therefore dependent upon the organizational structure and resources of the high school (McDonough, 1997; Walton-Radford, 2013).

In terms of habitus as a set of resources available to a given high school community, research points to eight prominent factors that directly influence how often and to what degree LIFGHPMAS undermatch, including (1) attending low versus highly resourced high schools, (2) lack of high school counselling services, (3) lack of tailored and individualized information, (4) ineffective high school intervention programs, (5) lack of financial aid knowledge, (6) geography, (7) college recruitment efforts, and (8) lack of attention due to misguided assumptions. A ninth reason exists – lack of socio-cultural capital via social networks – which was addressed above in the predisposition phase.

Attending low versus highly resourced high schools. Much of the research on the topic of undermatching points to the high school environment and respective resources as the most predictive and impactful factor that determines a student's college selection and enrollment decision (Roderick, et al., 2008; Walton-Radford, 2013).

Low-income, first generation, Latinx students attending high schools with low college-promoting resources – referred to as low or "under resourced," are significantly more likely to undermatch (Hoxby & Avery, 2010; Rodriguez, 2013). There is a direct correlation between a school's college-going resources, the ability to produce students who can successfully navigate the college admissions process, and the likelihood students will match to a peer college(s) properly suited to their academic qualifications (Avery, 2010; Klugman, 2012; Roderick, et al., 2011; Rodriguez, 2013; Walton-Radford, 2009).

Critical Race Theorists point to how limited resources devoted to college planning efforts is not by chance and can be explained through the ways in which secondary schools are organized to perpetuate social inequality (Zamudio, et al., 2011). With particular attention to the high school environment, several researchers have examined the role high school resources play in mediating the effects of a family SES on the student's college choice (Klugman, 2012; Roderick, et al., 2008, 2009; Rodriguez, 2013).

Drawing upon case studies derived from a longitudinal, qualitative study of 105 predominantly low-income, first-generation students attending three Chicago Public Schools (CPS), Roderick and team found significant correlation between habitus and odds a student would apply and enroll in a matched college (Roderick, et al., 2008).

In another study, Rodriguez drew from three waves of data (2002, 2004, 2006) extracted from a national sample from the Education Longitudinal Study (ELS:2002) and

found that high-achieving students with low academic preparation (low-resourced school) were two times more likely to undermatch compared to students attending high resourced high schools (Rodriguez, 2013).

Conversely, students attending high schools with above average college-promoting resources – referred to as "highly resourced," are less likely to undermatch (Klugman, 2012). In highly-resourced high school campuses, three compounding factors contribute toward successful student college match: programmatic, pedagogical, and social advantages.

Programmatic resources, referred to as "marks of distinction" that positively correlate with selective college preparedness include comprehensive AP and IB programs and comprehensive extracurricular activities (Klugman, 2012). In terms of pedagogical advantages, in highly resourced schools teaching staff tend to have graduated more often from private or selective colleges versus public, less selective colleges (Klugman, 2012), and that the alma mater of teachers is correlated to their students' college selection (Klugman, 2012; Rodriguez, 2013). The net effect is that LIFGHPMAS attending low resourced high schools lack critical resources to effectively engage in the college selection and application process: ". . . *low income urban students often engage in a limited college search and tend to enroll within the traditional feeder patterns of their high schools: predominantly two-year or large public universities with lower levels of selectivity*." (Roderick, et al., 2011, Pg. 186).

The literature reinforces the theory that systemic disparities in low SES public high schools disproportionately impact disadvantaged student's college readiness, selection, and enrollment in selective colleges (Avery, 2010; Klugman, 2012; Roderick,

et al., 2011; Rodriguez, 2013; Walton-Radford 2009). This cited inequitable distribution
of resources, therefore, can explain disproportionate outcomes.

Lack of high school counselling services. Ironically, the most accessible and
seemingly appropriate resource – the high school guidance counselor, is found to be
detrimental to LIFGHPMAS students during the college selection and application phase
(Malcom-Piqueux, et al., 2014; Rodriguez, 2013; Walton-Radford, 2009). With respect
to high school counselling staff as a resource for college selection and application, this is
largely unavailable (or ineffective) at low-resourced high schools due to several reasons
including (a) high student/counselor ratios – often at three times the recommended
number (Avery, 2010; Perna, 2015; Perna, Rowan, Thomas, Bell, Anderson, & Li, 2008);
(b) overburdened responsibilities independent of college counseling (Avery 2010; Perna,
et al., 2008); (c) focus on lower-performing students, thereby ignoring the specialized
needs of high-performing Latinx students (Gándara 2005; Perna, et al., 2008); and (d)
lack of experience advising competitive candidates for selective colleges (Avery, 2010;
Hoxby & Turner, 2013).

Research indicates when low SES, high-performing students do seek help from
their high school counselors, the counselors did not provide them with appropriate or
"matched" institutions, nor the benefits of attending selective institutions (Walton-
Radford, 2009). And, relative to LIFGHPMAS, they are most likely to listen to their
counselor's advice (Espenshade & Radford, 2009; Perna, et al., 2008; Walton-Radford
2009).

The most disturbing research indicates when low-income, high-performing
students do receive college counseling, counselors are more likely to steer them toward

colleges significantly below their academic profile (Roderick, et al., 2011; Rodriguez, 2013) and/or recommend 2-year (community college) tracks, compared to their high-SES counterparts (Malcom-Piqueux, et al., 2014; Perna, et al., 2008; Rodriguez, 2013).

Considering the role of the secondary counselor as critical to establishing a "worldview" or world of possibilities of college choice for LIFGHPMAS, the counseling department structure may be viewed as a proxy for the mission and goals that drive student aspiration, selection, and enrollment in particular colleges (McDonough 1997).

Lack of tailored and individualized information. LIFGHPMAS lack *tailored* college-going information geared to their academic profile. Instead, they often receive generic, misguided information due to assumptions that low-income students are low-performing (Hoxby & Turner, 2013). Furthermore, the context in which they receive information is generally provided in a large-group setting, versus a more effective one-on-one setting, with information typically aligned with low-selectivity, public, local schools (Walton-Radford, 2009).

Additionally, college information for low-income students is typically generalized (Hoxby & Turner, 2013; Roderick, et al., 2011; Rodriguez, 2013; Walton-Radford, 2009) – steering them toward colleges significantly below their academic profile (Roderick, et al., 2011; Rodriguez, 2013). High-performing, low-income students benefit significantly from expert (tailored) college counseling, resulting in a stronger portfolio of applications and enrollment in a "most selective" college (Avery, 2010).

Lack of financial aid knowledge. Lack of financial aid knowledge is significantly linked to the degree in which a LIFGHPMAS will engage in the college choice process (Bettinger, Long, Oreopoulos, & Sanbonmatsu, 2012). Research

amplifies the extent financial aid knowledge impacts LIFGHPMAS in considering and applying to selective universities (Gándara, 2005; Nagaoka, 2008; Rodriguez, 2013; Walton-Radford, 2009).

In particular, LIFGHPMAS knowledge of the Free Application for Federal Student Aid (FAFSA) is critical during their college selection stage. This is problematic because financial aid knowledge is largely determined by class (Rodriguez, 2013; Walton-Radford, 2009). And, Black and Latinx Valedictorians were more than twice as likely as Whites and Asians to choose Financial Aid as important in terms of which college to enroll (Walton-Radford 2009).

But, it's not about simply providing basic financial aid information. Research suggests that employing *personal and tailored* assistance for this demographic will increase college match and enrollment. Two such interventions were put in place to further test this hypothesis. Hoxby & Turner used a randomized controlled trial to evaluate interventions for 39,667 students (plus 7,749 control students) in a cohort of 2011-2012 high school seniors. The interventions included semi-custom financial aid tools including a "Net Cost" estimator and no-paperwork "Fee Waiver," that positively correlated with a higher percentage of students applying to peer colleges (Hoxby & Turner, 2013).

Additionally, in a randomized field experiment with parents and students (low-income) in two states receiving a treatment of tax preparation help from an H&R Block staff member to complete the Free Application for Federal Student Aid (FAFSA) it was found to positively correlate with college selection (match), application, and enrollment for low-income students (Bettinger, et al., 2012).

Ineffective high school intervention programs. College preparation programs, otherwise referred to as "early intervention programs" or "pre-collegiate" programs have been around since the 1960's.   The names of these college-bound programs are easily recognizable including, Gaining Early Awareness and Readiness Through Undergraduate Education (GEAR UP), Advancement Via Individual Determination (AVID), Puente, and "Upward Bound," to name a few.

Generally, the overall goal of these federal and state-funded programs is to help disenfranchised or "at risk" students enroll in college, aimed at addressing college access from the bottom up (closing the achievement gap), rather than providing resources tailored for high-performing, low-income, and historically underrepresented students (Gándara, 2005; Tierney & Hagedorn, 2002).

Rarely do these programs acknowledge that *high performing* disadvantaged students need specialized support (Gándara, 2005). Research indicates that college preparation programs (intervention programs) such as Upward Bound, GEAR UP, and Talent Search have little or no effect on disadvantaged high school student outcomes (Pallais & Turner, 2007) with respect to undermatching (Domina, 2009). In other words, these programs are not designed for high achievers and the content is not appropriate for their needs.

Conversely, as evidenced in the previous section, timely and customized interventions tailored to high-performing, low-income students yielded statistically significant results with regard to selection and enrollment to peer (match) colleges (Bettinger, et al., 2012).

Geography. Geography is a prominent theme that has surfaced in recent literature regarding college choice for low-income/disadvantaged students. There are two implications unique to LIFGHPMAS and geography.

First, researchers have identified that lack of financial aid knowledge results in an incorrect perception that a *local* college campus will be less expensive than attending a *distant* college. Therefore, LIFGHPMAS do not apply to distant colleges as to avoid perceived costs (Avery, 2010; Kiyama, 2010; Pérez & McDonough, 2008; Walton-Radford 2009).

Second, LIFGHPMAS prefer to stay close to home (Avery & Turner 2008; Ceja, 2004; Walton-Radford 2009) due to a number of reasons including significant value of family unity and proximity (Gándara, 2005; Kiyama, 2010; Pérez & McDonough, 2008). This priority of family over college adds to the likelihood LIFGHPMAS will select a non-selective college within relative proximity to home.

Additionally, proximity to a properly matched private college is found to reduce the probability of undermatching when the college is within 50 miles of the student's primary residence (Dillon & Smith, 2013). As discussed in the next section, geography also plays an important role concerning targeted recruitment efforts.

College recruitment efforts. Two logistical forces guide and dictate how selective colleges will implement recruitment strategies and campaigns. The first logistical factor concerns the location of selective universities. The majority of elite college institutions in the U.S. are clustered in Northeastern states and large metropolitan areas – regions that disproportionately exclude low-income students (Griffith & Rothstein, 2007). Geographic proximity is therefore problematic as a properly matched

public university within close proximity to a student's home *decreases* the probability of undermatch (Dillon & Smith, 2013; Griffith & Rothstein, 2007).

The other logistical factor guiding where selective universities will focus their recruitment resources is based on where a critical mass of high-performing, "potential" matches reside. It is the practice of selective universities to focus recruitment efforts within a relatively small geographic radius, focused on critical mass of high performing students, therefore excluding many LIFGHPMAS (Pallais & Turner, 2007).

Researchers Catherine Hill and G.C. Winston investigated the role of geography and biases in the recruiting process as a means to explain underrepresentation at the top 28 most selective US college campuses (2010). In this study, the authors analyzed aggregate (national) data from high school students who took the ACT or SAT exam, establishing a geographic distribution of these students, weighting the percentage of high-ability, low-income students in each region with the geographic distribution to their respective enrollment at selective colleges. They determined selective college recruitment efforts focus primarily on regions with the highest quantity/quality of SAT/ACT test takers – which largely excludes large populations of high-performing, low-income students (Hill & Winston, 2005).

Therefore, because LIFGHPMAS are sparsely distributed throughout the U.S., and not clustered in one particular geographic region, it is unlikely they will receive the type of targeted recruitment efforts that would expose them to the types of universities aligned with their academic profiles.

Lack of attention due to misguided assumptions. LIFGHPMAS are at a disadvantage when it comes to receiving effective guidance to mitigate undermatching.

There are two highly inaccurate assumptions that yield ineffective coaching, counseling, and guidance for this demographic. On one hand, free online resources typically operate under the assumption that low-income students are *low-achieving* and the information and guidance corresponds to this assumption (Hoxby & Turner, 2013). Their "atypical" profile means they will struggle to find information tailored for their needs.

On the other hand, LIFGHPMAS are frequently "off the radar" and overlooked by high school administration and counseling staff because of their high performing history, largely ignored based on the assumption they can "figure it out" (Gándara 2005). Their high academic performance unfairly leads to an assumption that due to their successful navigation in high school (curriculum, test scores, and GPA), they can effectively navigate the college admissions process independently (Perna, et al., 2008).

Digital Technology. Within the last five years, consumer reporting agencies have discovered the surprisingly high rates in which Latinxs are (a) adopting smartphones; (b) going online and (c) using social media. For example, nearly 75% of Latinxs over 18 years own a smartphone – 10 percentage points higher than the national average (Elder, Jeff, 2014). In some cases, the rates in which Latinxs access and participate online has surpassed that of all other racial/ethnic groups, including Whites (Lopez, Gonzalez, & Patten, 2013). More specifically, Latinxs use smartphones at higher rates than other mobile subscribers (Katz & Gonzalez, 2015; McCabe, 2013).

The explanation for the high rate of smartphone use can be attributed to the term, "*leapfrogging.*" This refers to those who leap straight to the Internet via a smartphone, bypassing traditional broadband access via a home computer or laptop (McCabe, 2013).

For Latinxs, leapfrogging is the result of economic necessity, not technological savvy (Mossberger, 2014).

Another term closely associated with Latinx mobile phone use is, "*smartphone-dependent*." This term is coined by Nielsen consumer research as a way to define those users who do not have broadband access at home and few options to get online other than their smartphone. Smartphone-dependent users are generally younger (18-29 years), with lower incomes, limited educational attainment, and non White (Smith, 2015).

Today, nearly one in ten Latinx adults who are online use at least one of five of the most popular social media sites including Facebook, Instagram, LinkedIn and Twitter – with Facebook being the most widely used platform (Krogstad, 2015).

In addition to knowing how Latinxs are accessing digital technology, it's important to know where (types of sites) they are visiting and the length of time engaged on a particular site. Compared to non-Hispanic Whites, Latinxs spend more than 68 percent of time viewing *video* content on the Internet and more than 20 percent watching video on mobile phones (Nielsen, 2012).

Of most relevance to this proposed case study, nearly 75% of Latinx smartphone users have relied on their smartphones in the past year to seek *educational* related information (Anderson 2015). Furthermore, 44% of those identified as "smartphone-dependent" are accessing *educational* content on their smartphones (Smith, 2015).

Although most statistical data concerning Latinxs and digital technology comes from consumer reporting and analysis for marketing purposes, the data gleaned from these contemporary sources has potential for researchers to tap into this medium for sharing of educational related content. For this reason, the proposed interview questions

will be compared to the statistics from this literature review to assess whether or not participant habits are consistent with Pew Research and Nielsen Research findings.

The research findings clearly indicate dramatic prevalence of mobile technology use among Latinx families that challenges the "digital divide" narrative that has been historically synonymous with low-income families and technology. The paradigm has indeed shifted from strictly a "digital divide" issue of access, to the challenge of how to provide meaningful content to students from under-resourced communities (Katz & Gonzalez, 2015).

In terms of social and cultural capital, the use of digital technology may likely become the undisputed source of capital that connects students with critical information: "*Connecting poor students to rich social networks, institutional agents, and opportunity is one of the great challenges we face in closing America's digital, learning, and economic divides*." (Watkins, S. Craig, 2013).

Given the accessibility of hand-held mobile devices, the ability for counselors, administrators, and colleges to get information directly into the hands of their target demographic, and the relatively low cost of such communication, digital technology has the potential to circumvent undermatching.

Yet, in the context of Undermatching, there is little, if any, peer-reviewed research concerning LIFGHPMAS and use of digital technology. This gap in the research is puzzling given what is known about mobile technology usage rates among Latinx families. For example, in the 2011 College Completion Agenda (Latino Edition) the editors noted that for selective colleges in particular, digital technology is one of the

primary sources recommended to assist Latinx students in accessing information

regarding the college choice process (Lee, et al., 2011).

Critical Race Theory

Critical Race Theory (CRT) is a transdisciplinary, race-equity methodology that

provides an analytical lens to view existing power structures based on white privilege that

perpetuates the marginalization of persons of color. Therefore, CRT is acutely tied to

studies concerning Latinx students' access to higher education. CRT rigorously

challenges our nation's ideal of meritocracy – referring to this ideal as a myth, tied to a

mythological assumption that there exists an apolitical, and thus level, playing field for

racial/ethnic minority students on their trajectory to higher education (Zamudio, et al.,

2011). Critical Race Theorists question the "apolitical" neutrality of college admission

standards, challenging the notion that within this context a student's work ethic, values,

drive, and personal attributes (aptitude and intelligence) will directly determine the

success or failure of this student. They confront those who believe it is the fault of the

student (or their families) who fails to achieve meritocratic excellence.

It is difficult to dismiss the assertions of Critical Race theorists as researchers in

the fields of economics and social sciences overwhelmingly cite that class/race-based

differences do affect the stratification of selective college choice (McDonough 1997;

Zamudio, et al., 2011). Specifically, that macro-level policies negatively affect access to

higher education for Latinx students, while favoring and benefiting White students

(Zamudio, et al., 2011). An example of macro-level policies directly correlated with the

reduction of applications by Latinx students to selective colleges was the passage of

California's Proposition 209. If we view selective college admission as a proxy for

meritocratic excellence, then it is appropriate to begin this theoretical discussion with the

ways in which LIFGHPMAS are predisposed to undermatching.

Social/Cultural Capital Theory

Pierre Bourdieu's work regarding social and cultural reproduction (Bourdieu,

1977 & 1986) is often cited by scholars and researchers in the field of college access for

marginalized students (Ceja, 2001; 2004; McDonough, 1997; Rodriguez, 2013). These

theories are especially insightful within an undermatching context as they provide a lens

to understand how low SES students' access to privileged social and cultural capital

impacts their ability to navigate the selective college process (McDonough, 1997).

Cultural capital is both a set of tangible and symbolic high status signals,

knowledge, behaviors, customs, norms, and preferences, transferred from parent to child.

Researchers analyze how these signals, behaviors, and preferences contribute toward

social reproduction (Bourdieu, 1986).

Specifically, within an undermatching context, cultural capital theory serves to

help researchers understand societal inequities – specifically inequities in educational

outcomes addressing cultural competencies, knowledge, and systemic perpetuation of

power and privilege (McDonough, 1997).

Social capital is an aggregate set of tangible and nontangible resources tied to

membership within a particular social network that provides members with various forms

of capital (Bourdieu, 1986). Extant research supports that social capital is a predictor of

successful college match and enrollment because it spans social networks, peer SES, and

in-network sharing of capital that translates to greater confidence in applying to selective colleges (Klugman, 2012; Roderick, et al., 2011).

It is useful to understand how researchers validate and reconcile claims of social/cultural capital theories with statistical and empirical data. In other words, how do researchers link together theoretical ideas such as "predisposition" into quantifiable, objective, empirical data?

Economists and researchers have developed predictive models using criteria such as GPAs, standardized college exam scores (SAT & ACT), class rank, and rigor of curriculum (AP & IB courses) to gage a student's presumptive eligibility for selective college admission based on statistics from prior admitted freshman classes (Bowen, et al., 2009; Roderick, et al., 2008, 2011; Rodriguez, 2013; Smith, et al., 2013).

Having gathered empirical data, researchers then derive measures of social/cultural capital via proxies such as income, parental education level, parental immigrant status, college-promoting habitus, and composite measures of many other sets of variables (Rodriguez, 2013). Comparing objective/empirical data with proxies for social capital allow researchers to compare how these two constructs interrelate and yield correlative outcomes. While these comparisons may appropriately assert how social/cultural capital theory is applied within these contexts, this study will capture other variables in qualitative ways. The choice to pursue a qualitative study was necessary for several reasons.

First, the population for the data is not necessarily generalizable beyond a particular geographic location (Roderick, et al., 2008) and the studied population may not

be a nationally representative sample, nor may conclusions be consistently drawn for specific race/ethnicity (Bowen, et al., 2009).

Secondly, researchers question whether these predictive models are reliable as they are exclusively objective-data driven, and this limitation does not account for the holistic review process implemented by nearly all highly selective colleges (Bastedo & Flaster, 2014).

The holistic review process is highly reliant upon institutional resources such as strength of curriculum (e.g. AP or IB coursework), leadership activities, and availability of extra-curricular activities that correlate to highly resourced high schools (Bastedo & Flaster, 2014). Nevertheless, presumptive eligibility remains an empirical source of information for researchers to quantify the pool of students who may potentially undermatch.

Academic Invulnerability

The first "invulnerability" theory emerged in the early 1980's by Norman Garmezy. Later hailed as the "grandfather of resilience theory," Garmezy's research of children who escaped deficits associated with chronic environmental and genetic threats, led other researchers to study this phenomenon. Subsequently, the concept of academic invulnerability pertaining to Mexican-American students was theorized in the 1990's (Alva, 1991; Alva & Padilla, 1995; Arellano & Padilla, 1996; Gonzalez & Padilla 1997). This newly emerged theory attempted to explain why some Mexican-American sustained high academic achievement despite exposure to adverse conditions that typically place them "at risk" for academic failure.

It is important to note there are subtle differences and distinction between "academic invulnerability" and "resilience." Within the last decade, a significant body of literature concerning resilience and Latinx students has emerged. While the personal trait of resilience has been correlated with academic success of Latinx students in particular, this personal trait is distinct from academic invulnerability. For example, resilience is an internal (personal) trait, developed and sustained by the individual. Certainly, there may be biological, environmental, or other factors that help students develop and maintain resilience. However, whether it is a predisposition or the effect of adaptive personal traits, the ability to achieve and maintain resilience is incumbent upon the individual. Whereas, academic invulnerability is also an adaptive trait, but the adaptation results from active engagement from others (outside of the individual). These external "agents" serve as a protective layer, insulating the student from environmental harm that could jeopardize their academic future. Therefore, rather than the student coping with, or being required to identify coping mechanisms on a personal basis, external agents assume a form of responsibility to *actively* shield vulnerable students from threats to their academic achievement. I make this distinction here, to point out the tendency for educational leaders to place the blame of academic failure upon Latinx students – that Latinx students should *learn* how to become resilient. Viewing the active nature of external agents (providing protective factors), versus relying on and requiring the student to independently develop coping mechanisms, sheds light on how these two concepts are distinctively unique.

While there is scant research concerning Mexican-American students and academic invulnerability – and especially for students attending *selective* universities –

this theory may explain how significantly "at risk" students do overcome adversities and thrive academically, despite overwhelming obstacles and challenges.

This theory posits that academically vulnerable students (aka "at risk") who benefitted from protective factors were shielded from adversities, and therefore, thrived academically. These include personal protective factors such as the student's personal attitude, mindset and disposition; and external protective factors including social support networks (peers, teachers, counselors, family, etc.). Research has shown that the protective factors specifically associated with Latinx students are social support from institutional agents (Stanton-Salazar, 2011), and especially parental involvement (Alva, 1999; Alva & Padilla, 1995; Ceballo, 2004; Ceja, 2004; Ceja 2006; Gandara, 1995; Gonzalez & Padilla, 1997; LeFevre & Shaw, 2002; Mena, 2001; Rivera, 2014). These factors, occurring simultaneously, are positively linked to academic outcomes including higher GPA's, high school graduation attainment, and enrollment and persistence in college (Alva, 1995; Arellano & Padilla, 1996; Ceballo, 2004).

Research has also found that Mexican-American students who reported strong parental support of academic goals, tended to have higher levels of academic motivation and positive educational outcomes (Arellano & Padilla, 1996; Ceballo, 2004; Gandara, 1995; Plunkett & Bamaca-Gomez, 2003). Likewise, Mexican-American students who perceived strong support from their teachers was positively related to academic motivation (Arellano & Padilla, 1996; Gonzalez & Padilla, 1997; Stanton-Salazar & Tai.

The intersection of CRT, Social & Cultural Capital Theory, *and* Academic Invulnerability Theory (AIT) shed light on the phenomenon of selective college choice and transition. The intersection of these three theories may provide a unique explanation

for participant's selective college outcomes. To begin, CRT establishes the foundational aspect, explaining how Latinx students have been historically situated in highly racialized (segregated) underperforming schools that lack funding, programs, resources, and capital to produce college-going students; and recipients of academic "tracking" and low-teacher expectations. This situational context yields devastating outcomes for students of color – most specifically, Mexican-American students. While these students are situated in underperforming and under-resourced institutions, they also reside in communities plagued by multi-institutional racist policies and practices designed to subordinate and marginalize their parents and the Latinx community at large. The cumulative effects of these experiences effect available social and cultural capital – resulting in lack of knowledge, skills, and resources to navigate the complex college admission system. Absent this valuable capital, students and families are left to figure it out on their own.

However, despite the intersectionality of oppression via lack of capital and historical racial subordination (as explained by CRT & SCCT), there are protective agents that serve Latinx students in multiple ways, mitigating and offsetting these disadvantages. These external agents provide critical support – in traditional and on-traditional ways – shielding and insulating students from threats to undermatch or forego pursuing a four-year college degree. Combined, these protective agents have the potential to circumvent the negative effects of exclusion from higher education. Having positioned CRT and SCCT as applicable theories to explain the situational context, Academic Invulnerability Theory (AIT) provides the necessary context to explain how LIFGMAS mitigate undermatching and are able to reach their aspirational goals of

attending a selective college. The following figure illustrates how the three theories intersect:

Social & Cultural Capital Theory

Capital Required for Mexican American College-Going Students to Compete in Selective College Arena

Lack of college-going capital within home, community, and broader community result in vulnerability to undermatch.

Critical Race Theory

Equitable Tools & Resources Unavailable for Mexican-American College-Going Students

Institutionalized racist policies, funding, and practices result in vulnerability to undermatch.

Academic Invulnerability Theory

External agents provided critical support to Mexican-American college-going students

Participants were required to seek external support from caring individuals and organizations. Protective agents shielded participants from threats to undermatch.

Figure 1. Three Theoretical Frameworks

Summary

There are significant obstacles and barriers during and throughout the college choice landscape unique to LIFGHPMAS. These differences can be seen throughout the college predisposition, search, and choice continuum. The literature suggests that students historically underrepresented in higher education (similar to the demographic in this study) approach, view, behave and engage in the college choice process very differently than their affluent peers (Hurtado, Inkelas, Briggs, & Byung-Shik Rhee, 1997). Beginning with their predisposition, there are stark differences in their college choice behaviors (McDonough, 1997). This study will examine these behaviors.

In summary, multiple factors were addressed in the sections *Predisposition* and *Institutional Deficiencies*, including (1) lack of socio-cultural capital via social networks; (2) attending low versus highly resourced high schools; (3) lack of high school counselling services; (4) lack of tailored and individualized information; (5) ineffective high school intervention programs; (6) lack of financial aid knowledge; (7) geography; (8) college recruitment efforts, and (9) lack of attention due to misguided assumptions.

Identifying these obstacles and barriers only partially explain why some LIFGHPMAS are at risk for undermatching and/or selecting campuses misaligned with their academic profiles. The research also revealed insights into culturally-relevant strategies, methods, and interventions that may help LIFGHPMAS successfully navigate the college choice process (Ceja, 2004; Kiyama, 2010; Perez & McDonough, 2008. For example, LIFGHPMAS and their families do not view attending a selective university in the same way as their high SES peers (McDonough, 1997), revealing that the econometric view of benefits and cost analysis is not necessarily compelling for this demographic.

Aside from social and cultural capital factors, the research also supports that the timing of when college-going information is disseminated, the quality of that information, and especially tailored interventions, are particularly effective in mitigating undermatching for the target demographic.

In terms of timing, involving parents earlier (Walton-Radford, 2013) and in more culturally sensitive ways will help improve their children's educational processes (Kiyama, 2010; Pérez & McDonough, 2008). Specifically, the type of college a student

attends is largely solidified prior to entering high school (Moller, Stearns, Potochnick, & Southworth, 2011).

Research also illustrates that *tailored* and *targeted* college-going information for this demographic would positively impact the college choice landscape for LIFGHPMAS. This was highlighted in research that illustrated how tailored coaching as an undermatching intervention is viable and effective (Avery, 2010; Bettinger, et al., 2012; Hoxby & Turner, 2013).

When tailored and timely interventions are put in place – such as tailored secondary counseling (Rodriguez, 2013); individualized coaching (Avery, 2010; Bettinger et al., 2012), and focused guidance regarding the FAFSA (Bettinger, et al., 2012), research supports these interventions significantly impact potential undermatching for this demographic.

Finally, the prevalence of digital technology usage among Latinx youth and families may have the potential to provide timely, tailored, and real-time information to targeted students and their families during the college choice process.

Chapter Three: Methodology

Introduction

The previous chapters introduced the phenomenon of *Undermatching*, addressed how LIFGHPMAS engage in and approach the selective college choice phenomenon, presented a synthesis of the literature, and suggested three theories to explain the various ways this demographic is impacted and continue to be at risk.

While significant research has been conducted regarding how low-income students undermatch, as well as the psychological disposition of students who obtain a college degree despite obstacles, little research has addressed the specific demographic of LIFGHPMAS in their trajectory to highly selective colleges.

This leaves many important questions unanswered. For example, which types of resources (if any) do students within this demographic utilize in their college choice process? How did they learn about these resources, when did they use them, and what role (if any) did the resource play in terms of the actual college selection and enrollment process?

This phenomenological study explored these questions by interviewing students who have overcome significant obstacles and matriculated at a highly selective college in fall 2015. The purpose of the study was to explore, examine, and analyze the lived experiences of LIFGHPMAS to understand how they successfully navigated the selective college choice process. Although this select group of participants share many commonalities such as socio-economic class, racial/ethnic identification, language acquisition, educational institution, parental education level, and a superior academic

profile, the findings reveal how each participant experienced the selective college choice process.

Because I am examining students who have successfully overcome adverse socio-economic and cultural circumstances, I introduced three theories – Critical Race Theory, Social/Cultural Capital Theory, and Academic Invulnerability Theory to explain obstacles within the context of higher educational attainment.

The participants were those who recently experienced the college choice process. I chose *not* to interview high school students who were in their senior year and preparing to apply to college because I sought participants who affirmatively received admission to a selective college (the benchmark). Theorizing or speculating admission, based presumptive eligibility criteria, is a risky proposition as there is no feasible, reliable, or accurate way to predict admission. Because I chose to explore behaviors of students who received admission to a selective college, by virtue of gaining admission meant students met the benchmark.

I also precluded participants who had completed their four-year college experience at a selective college. The rationale for precluding this group of graduates was primarily based on the problematic nature of retrospective data. Using a retrospective method to interview participants *after* they graduated from a four-year university leaves much room for issues with memory recall, detail recollection, as well as accuracy. The goal of the study is to elicit *fresh* responses that are easily recalled and with greater likelihood of accuracy.

A Phenomenological Study Approach

For this study, a qualitative approach was ideally suited as the most effective design for several reasons. First and foremost, a qualitative design is suited to capture critical, robust, and complex information that may not or cannot be captured through a quantitative method. It would be quite difficult, if not impractical, to measure or quantify the complex issues impacting the targeted participants racial/ethnic and/or socioeconomic experiences.

Second, a qualitative study is necessary when the proposed research seeks to enhance understanding of a particular population – specifically, one that is often marginalized and ignored: ". . . *one chooses a qualitative approach to understand phenomena from the participants' perspectives and to explore and discover, in depth and in context . . .*" (Marshall, 2016, Pg. 85).

Lastly, a qualitative design will aid in learning more about the context in which the participants were able to avoid the phenomenon of *Undermatching*. This is particularly useful in the proposed study because of the narrow demographic criterion of the participants and how their background influenced or impacted their experiences along the college choice pathway. Although there are limitations of a qualitative design – such as generalizability, the overall benefit of utilizing a qualitative design is practical, relevant, and has the potential to yield meaningful results.

A phenomenological study is an appropriate form of inquiry to address the research questions. The objective of the study was to explore and explicate meaning,

structure, and the "essence" of a lived experience by those who have circumvented, averted, and otherwise mitigated the phenomenon of Undermatching.

The research design is defined as a phenomenon as this rare group of targeted participants are at high risk for Undermatching. This research is also defined as a phenomenon as the targeted participants *successfully* navigated through the highly complex selective college choice process and avoided undermatching. The research is therefore centered around the *successful* strategies and tools these students employed, with a keen focus on what the participants may have in common. As stated by Creswell:

> ". . . a phenomenological study describes the common meaning for several individuals of their lived experiences of a concept or a phenomenon. Phenomenologists focus on describing what all participants have in common as they experience a phenomenon." (Creswell, 2013, Pg. 76).

For this reason, the phenomenon studied is not students who undermatched, rather students who avoided undermatching by *successfully* employing certain tools, behaviors and strategies throughout their college admission process. I am exploring the selective choice behaviors of this demographic, through the lens of the undermatching phenomenon. Explicating common or shared meaning by a group of individuals based on their lived experiences is the essence of this phenomenological study.

While other qualitative research design options were considered such as grounded theory, an ethnography, or a traditional case study, these approaches were not logistically practical or feasible. For example, all three cited examples would have required extensive physical proximity to the participants (observing participants for an ethnography), or observing all participants in one setting (a case study), or data collection via repetitive interactions (as in grounded theory). Because participants resided in 10

different states (California, Connecticut, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont), the most logical and practical design option was a phenomenological study.

Participants

One hundred percent (100%) of participants self-identified as Mexican-American, socioeconomically disadvantaged, born to immigrant parents from Mexico, received Free & Reduced Lunch throughout their K-12 education, attended or resided in areas with low-resourced school districts, are first generation college-going students, and all but one student were English Learners (English was their second language). Of the 30 participants, 50% self-identified as female and 50% self-identified as male (including one self-identified transgender student). In addition, four participants were undocumented. By virtue of their academic talents, they were labeled as "high performing" (see definitions in Chapter 1).

Participants were awarded admission as entering freshman (not transfer) to one of the following highly 16 selective campuses as part of the respective Class of 2019: Barnard, Brown, Carleton, Columbia, Cornell, Dartmouth, Franklin & Marshall, Harvard, Middlebury, Princeton, Stanford, Swarthmore, University of Pennsylvania, Wellesley, Wesleyan, and Yale. Twenty-six (26) participants matriculated at a campus on the east coast, and only four matriculated at a California campus (Stanford University).

In terms of permanent residence (and location of high school), 23 were from California; 4 were from Arizona; 2 were from Texas, and 1 was from Nevada. Nearly half of participants (8 males, 6 females) did *not* enroll or attend the public high school

campus zoned for their residence. In terms of campus types, 15 attended public high schools; seven attended charter schools; four attended magnet schools or specialized academies; two attended full residential campuses; one attended a college preparatory campus, and one attended a private, parochial school on full scholarship. Half of the participants (50%) declared majors in STEM (Science, Technology, Engineering, and Mathematics), including nine males and six females. The remaining students declared majors in the Social Sciences (see Appendix H)

Most participants indicated they grew up in homes with both parents present. However, five participants indicated they were either raised by a single parent, a parent had died, or one parent was absent for a significant period of time – either due to a divorce, immigration issues, or by choice. One hundred percent of participant's parents (fathers) worked in manual labor occupations, six were "stay at home moms" and one mother was a pre-school teacher. Nearly all students expressed significant issues with poverty and financial constraints. Detailed profiles of all 30 participants (pseudonyms are used) as well as demographic summaries of the respective secondary institutions is included in the Appendix.
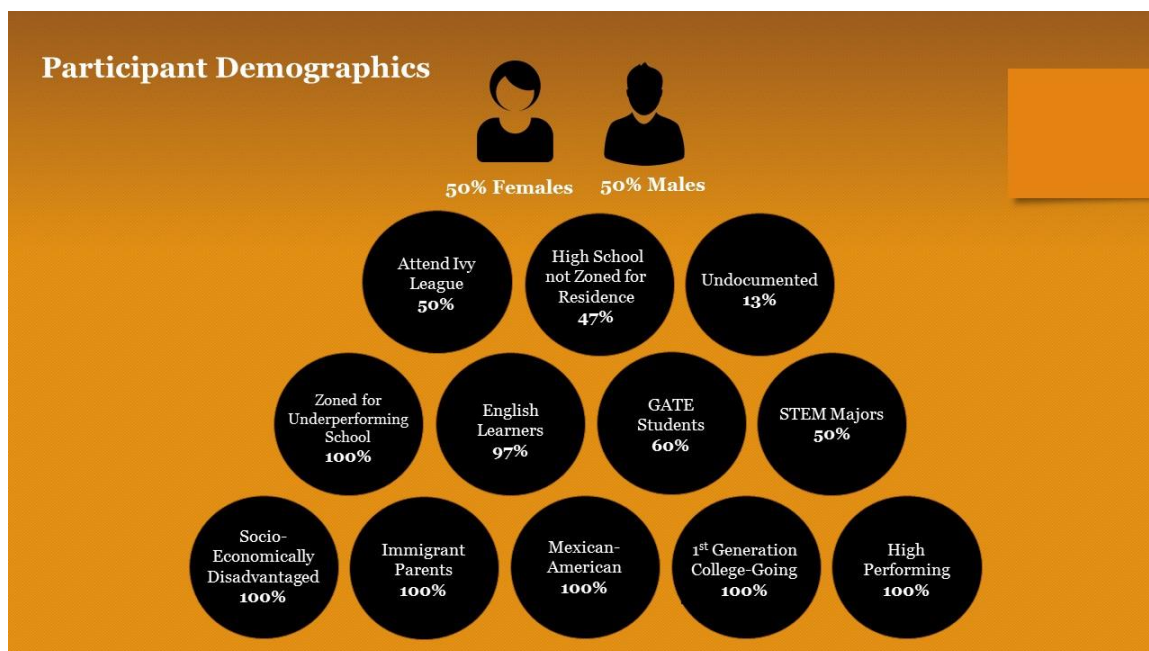
Figure 2. Participant Demographics

Recruitment. Participants were recruited through multiple channels as this demographic is rare. Two types of recruitment for potential participants were conducted. The first method was a direct recruitment campaign, sent to a list of approximately 40 college-going organizations affiliated with the targeted population (see Appendix E). After limited success with this method, a snowball sampling method was pursued – relying on participant recommendations to other students within their close network.

Participants were recruited and pre-screened based on multiple criterion (see Appendices A & C). Students must self-identify as Mexican-American; be a recent (2015) high school graduate from a public high school in Arizona, California, Nevada or Texas; have met Free & Reduced Lunch eligibility criteria throughout the majority of their K-12 experience; be first generation college status; begin undergraduate studies as a Freshman (not transfer) in fall 2015; and be at least 18 years old on or before January 2016.

Because the studied demographic is quite rare, the geographic reach was extended to include four states (Arizona, California, Nevada and Texas). These states were selected due to the demographic, economic, and educational characteristics. Specifically, the high population of Latinxs (Mexican-American) in the K-12 pipeline, the significant population of low SES residents, and the many public high schools.

Procedures. A pilot interview was conducted prior to beginning the study. The results from the pilot interview indicated the types and number of questions appropriate for the proposed interview duration; whether the scope of questions was adequately designed to elicit meaningful responses; and the order and grouping of questions was sufficiently organized to maintain an ideal flow of responses.

Participants were selected via a purposive sampling technique. Representativeness or randomness was not the goal of this study. Purposive sampling was established in order to, ". . . *deliberately seek knowledgeable respondents who can contribute significantly to enriching the understanding of a phenomenon*." (Rudenstam & Newton, 123).

All participants completed a uniform, 22-question online biographical/ demographic questionnaire via Qualtrics (see Appendix A). This questionnaire served multiple purposes including (a) confirming whether the participant met extensive study criterion; and (b) developing a set of quantitative metrics (descriptive statistics) to be compared and contrasted within the pool of participants. Thirty (30) participants met all criteria on the questionnaire and were selected for the study. Three participants were excluded from the Study because they did not meet all defined criteria.

Subsequent to survey completion, interviews were scheduled individually with each participant. Interviews were conducted by phone and the researcher transcribed the conversation "real time." Thirty, one-on-one, semi-structured, in-depth interviews were administered over a three-month period. The interviews were approximately one and a half to two hours in length, resulting in approximately 3,000 to 5,000 transcribed words each. All transcriptions were individually sent to each participant for a member check.

Research Site. Because there does not yet exist a critical mass of LIFGHPMAS at any given selective college campus, it was not feasible to identify a single physical location or site to conduct the study. For these reasons, the Study encompassed *multiple* sites.

Data Collection

Two forms of data were collected within four consecutive months, between May 2016 and August 2016, and in accordance and compliance with the Institutional Review Board (IRB) guidelines set forth by the UC San Diego. As discussed above, the data included a 22-question Qualtrics questionnaire and 30 in-depth interview transcripts.

Interviews were the primary source of data collection. There are many advantages associated with in-depth interviewing including the ability to understand the phenomenon from the participants' perception, experience, knowledge, and cultural frame of reference. As such, the interview method and protocol is central to eliciting meaningful results. Phenomenological interviewing is defined by Creswell as,

> . . .*a specific type of in-depth interviewing grounded in the philosophical
> tradition of phenomenology, which is the study of lived experiences and
> the ways we understand those experiences to develop a worldview. It rests*

on the assumption that there is a structure and essence to shared experiences that can be narrated." (Creswell, 153).

After interviews were transcribed, a "member check" or respondent validation was used to verify accuracy. This process, identified as a validity strategy when conducting qualitative research, aided in the pursuit of accurate findings (Creswell, 2012).

All participants were asked the same questions, in the same order. However, through open-ended responses, participants were allowed to share and contribute personal opinions, viewpoints, and perspectives.

Interview questions were strategically grouped into four domains, intended to elicit responses that addressed the core research questions, including Early College Formation, Technical Preparation, College Choices, and Digital Technology. The rationale for the interview questions (content and sequence) was designed to explore a complex set of factors common to the phenomenon of undermatching, and to elicit varied and detailed perspectives and meanings from each of the participants.

Data Analysis

Data analysis focuses on positive behavioral traits and strategies ("assets") participants employed – helping them mitigate undermatching and matriculate at a prestigious university. While this particular "*asset*" lens shaped the research design, investigation, and analysis of findings, this focus did not ignore, diminish, or disregard areas and issues where students indicated struggling, experiencing deficits, or hardships during their college journey.

Interview transcripts were read thoroughly and manual memos were created, documenting frequent categories and factors that emerged. After reviewing the content of all 30 interviews and subsequent memos, a broad list of 45 provisional, recurring categories or concepts were initially identified.

Using MAXQDA, open coding of each transcript was conducted, aligning selected words, sentences, and paragraphs to the 45 established categories. This process entailed both Structured Coding and Simultaneous Coding using MAXQDA. Structural coding was appropriate for this level of analysis due to multiple participants and the use of semi-structured data gathering (Saldaña, 84).

Through an analysis of frequency counts and alignment with the primary research question and four sub-questions, the 45 codes were then reduced to seven themes. These seven themes most succinctly and adequately described the phenomenon detailed via participant interviews, and yielded the following: (1) College-going brokers; (2) College-going Surrogates; (3) Internal Support from Parents; (4) Early Validation & Psychological Support; (5) Forced Completion; (6) College-Going Behaviors & Actions; and (7) Digital Tools.

Next, each transcript was re-read within the context of the seven themes, manually highlighting text (color coded) for frequencies.

Lastly, visual representations were created including flow charts, hierarchies, and descriptive statistics, manually compiled and analyzed to determine if frequencies bore out linkages to theories related to the research questions. Adding this final layer of analysis was necessary to cross-compare and analyze in both a macro and micro perspective. The triangulation of analysis gleaned from the coded transcripts, seven

themes, charts, descriptive statistics, and analytic memos yielded a complex and nuanced understanding of the ways participants mitigated undermatching. This triangulation strategy offered balanced, multiple perspectives, and a greater understanding of the research phenomenon. All visual representations are contained in the Appendices.

Chapter Four: Results

The 30 high-performing, Mexican American participants in this study managed to evade political, socio-economic, institutional and psychological factors that historically and systematically preclude Mexican-American students from preparing for and matriculating at a selective 4-year college in the US. By successfully traversing and navigating through incredible barriers and obstacles, these participants avoided the phenomenon of undermatching and indeed enrolled in a highly selective campus aligned with their abilities and potential.

The unfiltered, first-hand testimony and narratives of these high performing Mexican-American students currently attending our nation's most elite college campuses provided an authentic and *real-time* snapshot of what it means to be first in their families to attend college. All participants were low-income, first generation college bound, English learners, and born to immigrant parents. Yet, they transcended impoverished communities, low-resourced high schools, scarcity of college-going capital, and lack of socioeconomic resources, while navigating admission to highly selective colleges.

Early in the investigative phase, it became clear the participants were exceedingly appreciative to have a platform to articulate how and why their unique background and experiences impacted their college journey. In fact, at the conclusion of nearly every interview, the participants expressed their appreciation and excitement to have been part of the study. They wanted the investigator to understand and appreciate the significance of being part of such a study, and the reasons why participating was so personally important to them.

Each participant made a point to share their eagerness to read the published dissertation and asked to be notified immediately upon publication. From their eagerness, the investigator appreciated how these participants understood their rarity as a collective group, and how this study could provide a platform to share their unique background and experiences to inform universities, educators, counselors, school administrators, college going organizations, and educational leaders.

The overarching research question posed in this study was *how* did students who lacked college going capital avoid the phenomenon of *undermatching* and matriculate at a selective university aligned with their intellectual and academic talents? In pursuit of the overarching research goal, the study posed four sub-questions:

1. *Whom* did participants rely upon or trusted for critical guidance and information? Whom did participants derive inspiration or support to pursue selective colleges?

2. *When* did participants identify and access resources, and when (if any) did pivotal moments occur that influenced selective college going behaviors?

3. *What* strategic behaviors and actions were employed by participants?

4. *Where did* participants find assistance or information (digital technology) along their selective college journey?

The following themes addressed the overarching research question and sub questions.

Table 1. Summary of Research Questions & Emerging Themes

Primary Research Question	
How did students who lacked college going capital avoid the phenomenon of undermatching and matriculate at a selective university aligned with their intellectual and academic talents?	
WHOM *Sub Question #1:* Whom did participants rely upon or trust for critical guidance and information? Whom did participants derive inspiration or support to pursue selective colleges?	1. **College Going Brokers** Institutional Brokers (Teachers/Counselors/Intervention Programs), Local & Community Based, Regional, National, Discipline-Based, and Fly-In Programs. 2. **College Going Surrogates** Mentors, Peers, and Siblings 3. **"Internal" Support from Parents**
WHEN *Sub Question #2:* When did participants identify and access resources, and when (if any) did pivotal moments occur that influenced selective college going behaviors?	4. **Early Validation & Psychological Support** Parents & Teachers 5. **Forced Completion** Point in Time Behaviors & Actions
WHAT *Sub Question #3* What (if any) strategic behaviors and actions were employed by participants (yielding positive outcomes)?	6. **College Application Behaviors** Types & Number of Colleges Applied Financial Aid Geographic Preferences Diversity and Inclusive Campus Climate
WHERE *Sub Question #4* *Where did participants find resources (specifically digital technology) or "tools" that influenced selective college decisions?*	7. **Digital Tools** Social Media & Peer Testimonials (Blogs), Websites, and Apps

Although this select group of participants shared many commonalities such as socio-economic class, racial/ethnic identification, immigrant status of parents, parental education level, first generational college going status, and a superior academic profile,

this study explored how each participant avoided undermatching respective of their unique personal traits, family dynamic, upbringing, and resources available.

"*WHOM*" Participants Relied, Trusted, or Derived Motivation and Inspiration

This first section analyzes the sub-research question, namely – *whom* participants relied upon or trusted for critical college-going guidance and information. The interview protocol was intentionally designed to identify who or whom may have served as critical "agents" or college-going "brokers" or "surrogates," that positively impacted participant's access to college going information or positively shaped their college choices.

College going brokers and/or surrogates were defined as any resource leveraged by participants at any point in their trajectory to a selective college, including but not limited to resources within their immediate family, peer group, local community, educational institution, regional, state, or national community. To best explain "whom" assisted participants, it was necessary to segment (by group) the types of assistance received and the venue in which participants obtained it. Situating the venue in which participants received assistance highlights the underlying theories of Critical Race Theory (CRT) and social and cultural capital, such that quantity and quality of college-going assistance was proven to be associated with race and social class.

College-going "Brokers" are defined as formal and traditional agents, providing college going knowledge to participants in this study. Brokers may be institutional, local or community based, regional or national. In addition, they may include "Fly-In" programs, or be classified as a discipline-based resource.

College-going "Surrogates" are defined as informal networks (peers or siblings) who served as agents providing college-going knowledge or advice to participants. Both types of resources – Brokers and Surrogates – are discussed in detail below.

Institutional Brokers. The term, "institutional broker" refers to an individual who possesses critical college-going resources within the participant's respective secondary campus, and shares or "brokers" this knowledge to students. Brokers included teachers, counselors, or individuals serving in the capacity of on-campus intervention programs such as AVID, GEAR UP, Upward Bound, and TRIO. Dr. Ricardo Stanton-Salazar refers to these types of brokers as *institutional agents* and defines them as:

> *an individual who occupies one or more hierarchical positions of relatively high-status and authority. Such an individual, situated in an adolescent's social network, manifests his or her potential role as an institutional agent, when, on behalf of the adolescent, he or she acts to directly transmit, or negotiate the transmission of, highly valued resources . . ."* (Stanton-Salazar, 2011).

While these agents are not typically afforded to all students from low-resourced communities (Stanton-Salazar, 2011), participants in this study were atypical beneficiaries of support from *many* institutional agents.

Teachers. The first resource analyzed was traditional teaching staff. Although teachers worked closely with participants on a daily basis, they were not frequently identified by participants as being instrumental in providing college going strategies, or connecting participants to programs or services linked to selective college admissions.

The majority of participants did not reference teachers as being instrumental in their selective college choice process. However, three participants recalled how some

teachers indirectly influenced their selective college behaviors by either suggesting

campuses or discussing their alma maters. The finding that alma mater of teachers is

correlated with students' selective college selection is consistent with the literature

(Klugman, 2012; Rodriguez, 2013). The following statements highlight how participants

were exposed to selective colleges by their teachers:

> *My teachers also had a role in that. I would talk about teachers depending on what school they went to. They'd be like, "Oh, I went to Boston University. This is my experience going to this school." (Xochitl)*

> *I had a teacher and she would talk about how she went to USC, and her friend went to UCLA, and they were both teachers at our school, so we went on a trip to both campuses. (Lizeth)*

> *I had a 7th grade teacher who I would always visit, and he would tell me, oh you should go to a private college, like Occidental, or he knew the counselor at my high school and he'd say talk to this person. (Lizeth)*

> *". . . and sometimes I'd go into teacher's offices and have conversations with them, they'd say a smaller liberal arts college would be a better fit for me, because of the type of person I was." (Lizeth)*

> *I remember being in 4th grade. And my teacher went to UC Santa Barbara. I didn't quite understand where that was. I knew it was a college, but I only had an idea of it. (Xochitl)*

> *Then when I started middle school and high school, my teachers went to different universities I didn't hear of. Then I started thinking I could go to universities further from home. Some of the schools were UC Davis, UCSD, Berkeley and Brown and University of Pennsylvania. One of them went to Wesleyan and Stanford so that's when I started thinking about them. At the time, I didn't think they were competitive universities, I just thought they were cool because the teachers expressed positive. (Socorro)*

In addition to exposing students to their alma maters, teachers were also

instrumental in providing support and encouragement to participants in middle school

and throughout high school. Examples of this support were evidenced in the following

statements:

> *I had a really good psychology teacher. She really encouraged me to apply to not just the University of Arizona, but colleges outside of the state, pretty prestigious institutions. (Omar)*

> *I'd say that all these teachers each mentored me in their own unique way. With their knowledge, they mentored me and gave me advice. (Ramon)*

> *I had a middle school teacher who, she's always helped me through the years, she's the person that kind of led me through it as well, through the essay portion as well. She also wrote my letters of recommendation. (Maricela)*

> *I definitely think that my teachers in high school, were the most influential factors deciding to go to college and staying on it. I think that those were the factors that were the most important. Being surrounded by teachers who cared, and that I had a lot of support. (Gabriela)*

> *I was Valedictorian of my high school and my counselor and teachers really encouraged me to apply to higher, more competitive schools. (Socorro)*

> *"He told me, 'Marina, you know that I'm retiring, but I wanted to do something meaningful the last couple of months I'm here. It would be great if you gave me the time each Wednesday morning and we'll look at colleges together and we'll decide where you'd like to go and where to apply.'" (Marina)*

> *I remember going to my teachers and asking them about the process: how do I prepare? How do I fulfill all of the requirements? Going to my teachers because I felt comfortable with them. (Socorro)*

The limited references by participants (only 8 out of 30) regarding teachers as a

primary source of information or guidance for selective colleges is consistent with the

literature. The literature cites parents, not teachers, as being the most influential and

accessible source of information (Ceja, 2004; Gándara, 2005; Kiyama, 2010; Pérez,

2008; Rodriguez, 2013). Further discussion of the ways teachers validated students will

be addressed in the section "Early Validation & Psychological Support." Additionally, there were also instances where teachers required students to complete a college related task in class. These assignments were positively linked to behaviors associated with avoiding undermatching and will be addressed in the section "Forced Completion."

Counselors. It was hit or miss in terms of the way participants described the role of their counselors –whether or not they were considered helpful, instrumental, or advocates for their college goals. There were distinct differences between the efficacy and roles of secondary counselors, depending on the institution. Four types of counselors were described: (1) traditional secondary counselors assigned to public high schools; (2) secondary counselors assigned to charter high school campuses; (3) secondary counselors or advisors assigned to private high school campuses; and (4) counselors assigned to college intervention programs.

As illustrated in Table 3 below, the average number of "Full-Time Equivalent" (FTE) secondary counselors assigned to each participant's campus was 3.5 FTE. The average was elevated due to some private and preparatory campuses that had six or more counselors for their student body. Comparatively, six campuses only had two counselors, and four campuses only had one counselor for the entire student body. Due to the lack of secondary counselors assigned to the participant's respective campuses, as well as lack of selective university counseling, many participants received counseling exclusively via participation in a college intervention program.

Table 2. Number of Secondary Counselors for High School Student Body
(Schools Listed in Alphabetical Order)

Type of High School	# Counselors	# Students	Counselor Student Ratio
Charter (ABC)	2	612	306:1
Charter (Amoeba Science)	2	529	265:1
Charter (Bud)	1		Unavailable
Charter (Air College)	1	450	450:1
Charter (Big College Prep)	1	248	248:1
College Prep (Tree Top)	1	145	145:1
Magnet (Able)	3	1841	613:1
Magnet (All)	2	1763	882:1
Magnet (Ask)	3	1998	666:1
Magnet (Beat)	3	Unavailable	Unavailable
Private (Nor Cal College Prep)	5	200	50:1
Private (Beta College Prep)	7	1327	190:1
Public (Ace High)	4	1322	331:1
Public (Apple High)	8	3240	405:1
Public (Bar High)	Unavailable	Unavailable	Unavailable
Public (Betty High)	3.6	1105	307:1
Public (Big High)	7	2811	402:1
Public (Boat High)	4	1940	485:1
Public (Bond High)	6.2	2460	397:1
Public (Car High)	3.4	1460	429:1
Public (Cat High)	4	1608	402:1
Public (Central High)	2	799	400:1
Public (Dog High)	4	1765	441:1
Public (South Gate High)	8	2832	354:1
Public (Valley High)	2	777	389:1

Enrollment numbers and # of counselors obtained from public data

As illustrated above, under-resourced, public high schools had significantly fewer counseling staff (a low of 307:1 to a high of 485:1), compared to the higher resourced high school campuses (private or college preparatory) with a low of 50:1 to a high of 190:1. The discordant student/counselor ratios at under-resourced campuses – often at three times the recommended number, is consistent with the literature regarding overburdened responsibilities of counselors resulting in lack of available counseling

services for this demographic (Avery, 2010; Perna, et al., 2008; Perna, 2015; Perna, Rowan, Thomas, Bell, Anderson, & Li, 2008).

The campuses with a majority White student body had significantly lower counselor-to-student ratios, as well as expertise (capital) in counseling/ advising for selective colleges. In comparison, the campuses with a majority Latinx student body had higher counselor-to-student ratios, lacked experience with selective college advising, and coached students toward open access colleges. For example, at NorCal College Preparatory (a private school), the college counselor – as distinct from traditional secondary counselors – was a former admissions representative from Stanford. Accordingly, she had formal expertise in which to guide students applying to highly selective colleges.

The distinct contrast in counseling services based on race/ethnicity and socioeconomic class is consistent with CRT and social and cultural capital theories of reproduction. The distinction illuminates how institutional policies, funding, and practices surrounding student to counselor ratios at campuses with high percentages of Mexican-American students negatively impact college-going outcomes. CRT enables us to see how these institutional practices and policies (such as severely limiting counseling services) perpetuate racial subordination (Villalpando, 2004).

CRT aids in interpreting these inequitable and unequal outcomes. For example, one participant described the lack of appropriate counseling advisement available in the South Central Los Angeles community. While he utilized a local organization called "A Place Called Home" he said the extent of their college services were, unfortunately, insufficient: "*They have this whole college trailer type thing going on. Their program*

isn't as developed, so they couldn't help me out past a certain point." Therefore, the

participant paid $500 (out of his own money) to participate in a program offered by the

National Association of College Advising. CRT provides a model to understand why the

participant was required to go outside of his community, and pay a significant fee, in

order to secure services typically offered to more affluent white students (Zamudio et all,

2011).

To investigate counselling services further, the following question was asked, "*At*

any time during high school did you meet with your counselor to discuss college options?

If so, how many times and for how long per session?" The purpose of this question was

to quantify and qualify the role secondary counselor's may have played in the college

selection process.

It was "hit or miss" in terms of frequency and quality of advising by secondary

counselors. Of note, participants who spoke negatively about their counselling

experience tended to have enrolled in public high schools zoned for their residence

(versus a charter, magnet, or private school). The following represents highlighted

comments from participants who attended public schools.

Arturo said, "*No, my counselors were very, like I didn't have the best counselors*

at our school. They weren't very responsive so I didn't talk with them, no." Likewise,

Maribeth – who attended the public high school zoned for his residence, recalled how her

early experience with her secondary counselor began negatively and she never went back:

> *I remember one time, freshman year, she called me in regarding my*
> *sophomore year schedule . . . I told her I would like to go out of state. She*
> *said, "it's really expensive." I told her I would apply to as many colleges*
> *as I can. She was like, "OK, but realistically, what's plan B?" Once she*
> *said that I said, "OK I guess ASU."[Arizona State University] After she*

> *made that comment I stopped going to her to talk about college.*
> *Originally it wasn't even an appointment to talk about college, so after*
> *that I never went back.*

By participating in several intervention programs, and obtaining support from external resources, Maribeth eventually matriculated at an Ivy League institution. Maribeth's experience is consistent with the literature. Specifically, when low SES, high-performing students do seek help from their high school counselors, counselors do not provide appropriate or "matched" institutions, nor the benefits of attending selective institutions (Walton-Radford, 2009). Consequently, they steer them toward colleges significantly below their academic profile (Roderick, et al., 2011; Rodriguez, 2013).

Luis – who attended the public high school zoned for his residence, noted how his secondary counselors did not have experience to guide students like him to selective (private) colleges. "*The counselors didn't help me as much as other students, because they're not used to working with students applying to private universities. They weren't used to the Common Application.*" Luis' experience is aligned with the literature regarding counselor's focus on lower-performing students, thereby lacking experience advising competitive candidates for selective colleges (Avery, 2010; Hoxby & Turner, 2013) and ignoring the specialized needs of high-performing Latinx students (Gándara 2005; Perna, et al., 2008).

Nayeli – who attended the public high school zoned for her residence, stressed that she only met with her assigned secondary counselor *once* throughout four years of high school. Whereas, she frequently met with her counselor from a regional college going program and credits this counselor with college knowledge and strategies. "*Mostly*

I met with the College Match counselor, not my high school counselor. I think I met with her fall of senior year. But pretty much not previous to that time.”

Overall, participants attending lower resourced high schools expressed how counseling staff were inaccessible, lacked experience or were unqualified (or unwilling) to properly guide them toward selective or competitive universities, or that counselors guided them toward non-competitive campuses. Furthermore, when participants took initiative to inquire about selective colleges, their response was often negative or dismissive. This finding is consistent with the literature regarding accessibility, quality of advisement, and college-going outcomes of low-income and first-generation college-going students (Avery, 2010; Hoxby & Turner, 2013; Gándara 2005; Perna, et al., 2008).

Aside from traditional public high schools, participants who attended charter or magnet campuses tended to comment positively on the quality and frequency of counselling services. For example, Jesus was grateful for his charter school counselor and credits her with pushing him to apply to top colleges, “*Yeah, she was a big part of it. I think once she started seeing how well I was doing, she really pushed me to apply to schools that no one else had applied to before. In my senior year I’d just walk into her office every day, and talk with her about something regarding the process.”* Julio’s counselling experience at a charter school was similar to Jesus:

> *Yeah, my counselor would always talk with us. She would come to our classrooms. When she first told us about Questbridge, that was mid to late 11th grade. From then on, I started meeting with her. I would say it was like once a week at first, but by senior year it was twice to three times per week.*

Marcos (who attended a Medical Magnet School) also spoke positively of his secondary counselor:

Yeah, when you become a sophomore or junior, everyone in the class meets with the counselor for an hour. You can ask her anything about college. She'll kind of like interview you a little bit. She was like, "tell me about your life." Any time before that you could go, but it was mandatory in my junior year.

But Emilio (who attends a public magnet high school) joked about the negative reaction he received from his secondary counselor when he took initiative to approach her about taking rigorous Advanced Placement courses:

I remember in my freshman year of high school I walked up to the counselor and asked, "Hey do you have any AP's? I want to take AP's now as a Freshman." The counselor told me, "You'd better calm down, you're just a freshman!

Emilio's experience is similar to other high-achieving Mexican-American students who wish to engage in accelerated programs, but do not possess the social capital to navigate a selective college pathway.

In comparison to the "hit or miss" experiences of students from public, charter, and magnet schools, the experiences of participants attending private campuses was significantly different in terms of accessibility, frequency of contact, and quality of advising. For example, Carlos said, "*So we made a list, with our college counselor, and she was really well known, she worked for Stanford, highly acclaimed, she helped me pick the schools that I should be applying to.*" Similarly, Juan – who attended a private Catholic High School – described the high ratio of counselors to students: "*We had our advisors who helped. Our advisors were pretty accessible. It was a small school, we probably had 5 counselors for a 200 person student class.*"

Overall, participants attending college preparatory charter or magnet schools expressed satisfaction with the quality, accessibility, and frequency of counseling staff.

In this context, their experience with college guidance was not exclusive to their counselor, but rather, the result of the overall college-going climate at their college preparatory institution. And, in the context of highly resourced private campuses, participants were highly tracked by counseling staff to ensure they would apply and enroll at a university aligned with their academic profiles. This "bird-dogging" of counselors – ensuring their students are prepared to compete in the selective college arena – highlights the social and cultural capital entrenched in these institutions. These behaviors are cited in the literature as effective means for elite status groups to manipulate and maintain their position in order to secure valuable resources (Bourdieu, 1977; McDonough, 1997).

Lastly, one in five (20%) of study participants participated in the regional college going program, College Match. In this program, participants received intensive counseling services that were accessible, frequent (Sophomore through senior year), and tailored for highly selective colleges. Therefore, one in five study participants received *exceptional* counselling services by virtue of participating in the College Match program.

The clear distinction in terms of access to and quality of counseling services can be explained via social and cultural capital theory, as well as CRT. Participants attending private high schools were afforded exceptional access to quality advising. Whereas, participants attending low-resourced public high schools received little counseling (if any) and their advisement was tailored to open access colleges and non-selective universities. This phenomenon is explained in CRT as part of a larger system of higher educational oppression – a subordination of racial and ethnic groups through institutional practices

(such as lack of counseling), resulting in White privilege (Yosso, Parker, Solórzano, & Lynn, 2004).

On-Site Intervention Programs. Aside from secondary counselors, the most intuitive and obvious college going brokers were programs designed to provide college going information intended for the participant's demographic. Therefore, Question #35 asked participants, "*Throughout your middle and high school years, did you participate in any college-going programs like Puente, Upward Bound, AVID, or GEAR UP?*"

These programs are considered "intervention" programs because many serve as an intervention to increase college enrollment for underserved communities. They are funded by state or federal grants, and participants receive services at no cost. And, while these programs are not necessarily intended to mitigate the phenomenon of undermatching, they may be instrumental in positively affecting undermatching due to their timeliness, assigned activities, and potential peer-networking opportunities.

While there are many such programs hosted by school districts throughout the Southwest, *very few* study participants participated in college intervention programs hosted at their respective secondary campuses. Only one student (male) participated in AVID & Upward Bound; one female student participated in AVID; and one female student participated in Upward Bound & TRIO. No students participated in other on-campus intervention programs. The full list of all college intervention programs is detailed in Figure 3.

AVID stands for Advancement Via Individual Determination. Five participants stated their campus did not offer such a program, or they were unaware of such programs.

However, 10 participants stated they were aware of AVID, but chose not to participate for various reasons. One participant stated that she was not "recruited" for AVID.

The lack of interest noted by participants was largely due to two issues. The first issue was course scheduling. As summed up by Diego: "*I looked at AVID like a class that would be filled up with another requirement (like an AP course)."* In other words, participants did not want to give up one course (potentially an AP or IB course) for an AVID course. Pedro stated his counselor advised him against participating in AVID:

> *Our counselor did not like AVID. She saw it as, we offered it as a class,*
> *not a club, so she saw it as taking away a lot, from pursue AP Psychology*
> *or something else, but she was talking to me about it and she was glad that*
> *I didn't do it because it was not for me.*

The second issue noted by participants was that they perceived these intervention programs as being tailored to low-performing students. For example, Maribeth shared, "*AVID was more geared toward students who were doing poorly in high school and need support to graduate."*

Surprisingly, several students expressed negative feelings associated with these programs. For example, Arturo had strong feelings about AVID after participating in the 8th grade: "*I did AVID for 8th grade. I hated it. I didn't do it ever again. It didn't provide me much help*." Pedro expressed the same sentiment about AVID: "*We offered AVID as a program, but I hated what it stood for, not what it stood for, the procedures and the way they did things, so I never really sought it after that."*

Nayeli did not participate in Upward Bound because she was advised by her College Match program counselor that she could not participate in two intervention programs simultaneously. She chose College Match. Pedro, on the other hand,

attempted to apply to Upward Bound, but could not be admitted to the program due to his undocumented status. He stated, ". . . *with Upward Bound I tried, they asked for a Social Security Number and everything because it was a commission being received. With Upward Bound I wasn't able to apply and follow through.*"

Like Pedro, Juana wished to participate in Upward Bound, but didn't learn about it before the application deadline passed. Two female participants stated they were not recruited or they applied and did not get accepted. Lizeth commented that she applied to AVID and Upward Bound and did not get in. She said, "*Another friend of mine also applied. I had straight A's in freshman year, we were like, 'how come we didn't get in?' We both didn't get in.*"

While the candid and negative responses from participants were surprising (specifically regarding AVID), their lack of interest and engagement in these programs was consistent with the literature regarding on-site college intervention programs. Specifically, the goal of these programs is to help disenfranchised or "at risk" students enroll in college, addressing college access from the bottom up (closing the achievement gap), with content aligned with low-selectivity, public, local schools (Walton-Radford, 2009). And, the content is not generally designed for high-performing, low-income, and historically underrepresented students who require specialized support (Gándara, 2005). In other words, these programs are not designed for high achievers and the content is not appropriate for their needs.

Local, Regional, and Community Based Brokers. Local and community based brokers refer to any service or program available to participants *outside* of their respective secondary campus, but based in participant's local community, city, or region.

These assets are defined as directly or indirectly related to college-going resources and include formal intervention programs, mentorship programs, workshops facilitated at local colleges, or community based services. Most programs typically require a nomination, or at minimum a comprehensive application. Participants were asked seven questions concerning involvement with any of these types of programs. The programs cited by participants, in alphabetical order, included:

Breakthrough Silicon Valley (San Jose)
César E. Chávez Leadership Institute (Arizona)
College Match (Los Angeles Unified)
College Spring (Bay Area & Los Angeles)
Emerge Scholars (Houston)
Ivy League Project (CA/AZ)
One Voice LA (Los Angeles)
Phoenix Scholars (California)

Scripps College Academy Scholars (LA & Empire Region)
South Central Scholars (South Central Los Angeles)
Sponsors for College (Phoenix, AZ)
STEP College Prep Program (Arizona)
TELACU (California & Texas)
UC Scholars (McFarland, CA)
UCLA College Readiness Program

On average, study participants participated in 2.25 local, regional, or community based programs. With exception of two participants (one who attended a college preparatory high school), the remaining participants participated in *at least* one of these programs. Based on gender, 100% of females participated in at least one of these programs (average was 2 programs); and 13/15 males participated in at least one of these programs (average was 3 programs). Their participation was *in addition* to other resources they utilized including national programs. These programs were most closely aligned with mitigating undermatching for the participant's demographic because (a) they exclusively recruited high-performing students from historically underrepresented backgrounds; (b) they were a *local* resource, accessible to students; and most importantly, (c) they were free of charge*. *Note: All programs were free of charge except the Ivy League Program (ILP). This program charges students approximately $2,800 to participate.*

National College Intervention Programs. There were five (5) national college going brokers for study participants including College Match, College Spring, Johns Hopkins Center for Talented Youth, Posse Foundation, and Questbridge. The most utilized national college intervention programs noted by participants was the Questbridge program (11 participants out of 30).

Questbridge is a national non-profit program that provides low-income, high-achieving, students throughout the U.S. with "full rides" through their partner colleges and universities. This program is unique in that the partner colleges are ranked as the most selective colleges in the U.S. Examples of partner colleges include Yale, Princeton, Stanford, and MIT to name a few. One in three participants participated in either the Questbridge College Prep Scholars, or the Questbridge College Match program. Participants who did not participate in Questbridge stated they would have, had it not been for competing programs that did not allow concurrent participation. In other words, 17/30 participants knew about Questbridge and were eager to apply to the program. However, six participants could not apply to Questbridge due to their enrollment in a competing program (College Match).

The high participation rate of participants was not surprising given that Questbridge works *exclusively* with high performing (eligibility based on SAT & ACT scores, GPA), low-income, first generation students throughout the U.S. The 2016 academic profile of Questbridge College Match finalists held an average of a 3.87 GPA, SAT score of between 1840—2120, ACT composite score 28-32, median family income of $35,005, and nearly 90% were ranked in the top 10% of their graduating class. Thirty-one percent of Questbridge finalists were Hispanic/Latino.

Many participants commented on the way Questbridge served as a "virtual" college informational broker of *selective* college knowledge for low-income, first generation college going students. It was virtual in the sense that the program is not physically present on high school campuses, nor are there "live" representatives that provide counselling or guidance to students. Instead, Questbridge offers a hub or resources via their online portal. They reach students through their website where students apply to their matching program. In many cases, Questbridge was the exclusive broker of college knowledge informing participants of the benefits of a selective college, how financial aid works, and how to prepare very early (September) to be considered for early consideration.

The success rate of Questbridge may be due to their aggressive recruitment campaigns. Javier – who attends an Ivy League campus on a full ride from Questbridge, noted how he received repetitive emails from Questbridge, inviting him to apply to their program. Initially, he thought the emails were "bogus" and deleted them:

> *My senior year they kept bugging me, and I thought if it's a scam, I'll figure it out. They kept spending me emails. I couldn't ask anyone because there were no Questbridge scholars at my school. I didn't really know if it was real.*

Javier is an excellent example of the effectiveness and value of the Questbridge program for students at risk for undermatching. Javier was unfamiliar with the selective college he was matched, and had no idea it was an Ivy League campus. In fact, one of his classmates researched the school and informed Javier that it was an Ivy League campus: "*I got my acceptance last period, and my friend showed me that it was an Ivy League, from then I researched it.*"

Julio's experience was the most remarkable and incredible testimony regarding Questbridge:

> *Well, what happened with me is that I first went to Questbridge. The first school I got into was Princeton. I didn't even know what that was, just that it was a college. When I got into Princeton, my counselor was there when I read the email. She just started crying, tears coming out of her eyes . . . I didn't even know Princeton was an Ivy League. I just knew it was a non-binding school.*

Because the early admission process has statistically yielded higher odds of admission, the Questbridge program offers an added benefit for early applicants. However, only 9 participants out of 30, indicated they applied as an Early Action candidate. Of those 9, two were Questbridge "match" applicants and 7 participated in various college intervention programs. That the early action candidates were either involved in a college going program and/or participated in Questbridge, suggests that without such mitigating forces, participants would not have known about the benefits of an Early Action option.

Discipline-Based Programs. The remaining resources mentioned by participants fell into the category of discipline-based college going resources. These are discipline-based program (math, science, etc.) whose mission or program goals are not exclusively or directly related to selective college going admission. However, they indirectly functioned as a college resource for participants.

These were competitive or somewhat competitive programs that recruited students regionally or nationally. Some programs were discipline-based (e.g. engineering or medicine) and facilitated at selective college campuses – such as Stanford, MIT, and UCLA. Other programs hosted a weekend or week-long program at a college or university

– such as the CLYLP and the Hispanic Scholarship Fund. The list of discipline-based

programs follows:

Table 3. Discipline-Based Programs

Cal Poly's EPIC Program	Chicano/Latino Youth Leadership Program (CLYLP)
University of California COSMOS	Hispanic Scholarship Fund Youth Leadership
SMASH *(Summer Math and Science Honors*	Institute)
Academy)	San Francisco State Summer Engineering Institute
Stanford Institutes of Medicine Summer Research	Stanford Medical Youth Science Program
Program	UCLA Summer Research Program
MIT Weekend Immersion in Science &	USC STAR Program
Engineering (WISE)	
MIT's MOSTEC Program	

Fly-In Programs. Outside of discipline-based national programs, many

participants associated matriculation at a selective university with a sponsored national

Fly-In Program. Fly-In Programs are hosted by private colleges who wish to diversify

their incoming freshman class. In doing so, they seek to recruit students from

underserved communities who are first-generation, low-income, and historically

underrepresented at these campuses. The sponsoring campus covers the student's travel

costs (airfare and lodging). Throughout the U.S. there are approximately 65 such

programs – ranging from moderately selective to highly selective campuses.

It was at these Fly-In Programs participants obtained detailed information about

the respective financial aid programs – which was *the* most important aspect about

college choice declared by all participants. Half (50%) of the participants attended at

least one Fly-In program and several participated in multiple Fly-Ins. Participants

attended the following campus Fly-In Programs: Barnard, Bowdoin, Carnegie Mellon,

Colby, Columbia, Cornell, Dartmouth, Emory, Franklin & Marshall, Harvey Mudd,

Johns Hopkins, MIT, Notre Dame, University of Pennsylvania, Stanford, Williams, and

Yale.

Aside from learning about financial aid, participants also expressed the benefit of physically visiting a campus versus watching videos or seeing photographs online. However, participants noted that costs involved in traveling to east coast campuses rendered travel an unfeasible option. Campus visits either solidified participant's desire to enroll, or negatively swayed their opinion of the campus – causing them to decline an offer of admission.

Maribeth valued her Fly-In Programs because she could ask questions of other students, as well as meet students with whom she identified:

> *When I visited in the fly in program, they had students sitting at tables and we could ask questions. One of the students was from El Paso. He also grew up in Mexico. He is from Juarez, and moved to El Paso. He finished school there and is a Questbridge Scholar at [Ivy League campus]. It was cool to see someone who was just like me, but a year ahead, it was inspiring, and it was welcoming.*

Certainly, these visits allowed participants to explore the physical campus (many had never flown on an airplane before), to meet and talk with current students, and to learn more about the resources (including financial aid) offered by the campuses. Some participants received fly-in benefits from their respective college going programs (for example College Match & OneVoice LA). Citlali did not participate in a formal Fly-In Program, but all of the colleges she was accepted to offered to fly her out to their campuses free of charge:

> *When it came down to make a decision, I was lucky to have the schools fly me out. I got flown out to all the schools. So I think that was a really big factor in picking the campuses, when I'd probably never had the opportunity to go there.*

The following table illustrates all college-going organizations that served participants in some capacity along their college journey – including institutional, local

and community based, regional, and national resources. Of importance, with exception

of AVID, TRIO, and Upward Bound, *none* of the organizations were funded, sanctioned

or facilitated at their respective high school campuses.

Table 4. College Going "Intervention Programs" Serving Participants

Program Name	Program Name
AVID (Advancement via Individual Determination)	Questbridge
Breakthrough Silicon Valley	Questbridge College Prep
Cesar Chavez Leadership Institute	SMASH *(Summer Math and Science Honors*
Chicano Latino Youth Leadership Program	Academy)
College Match	South Central Scholars
College Preparatory High School	Sponsors for College
Emerge Scholars	Stanford Medical Youth Science Program
Hispanic Scholarship Fund Youth Leadership Institute	STEP (Student Expedition Program)
Ivy League Project	Subiendo Academy
Johns Hopkins Center for Talented Youth	TELACU Education Foundation
MIT Weekend Immersion in Science & Engineering (WISE)	UC Scholars
MIT MOSTEC	UCLA College Readiness Program
One Voice Los Angeles	Upward Bound
Phoenix Scholars	U of Arizona Program for HS Students

Several findings emerged from analyzing participant's involvement with college

going organizations. First, it was evident many participants relied on not just one, but

several college going organizations in order to receive adequate help with college

preparation and knowledge.

Second, study participant's knowledge of these off-campus and/or summer

programs was typically the result of either a "random" hit-or miss event or occurrence.

They were random and chance (fortuitous encounters) in that participants learned of these

programs through a recommendation by a peer, a teacher or counselor showed preference

to them (and nominated them), or they learned of the program by participation in a

different program. In other words, it was not typically something advertised at their high

school campus, informed via their secondary counselors, or organic to the communities

they resided. These fortuitous moments – where participants received effective guidance

from informal mentors and caring institutional agents proved to be a significant factor in

their ability to mitigate undermatching. (Stanton-Salazar, 2011; Stanton-Salazar & Urso Spina, 2003).

Third, many of the programs cited by participants were not traditional college intervention programs, per se. Rather, they were academic (discipline-based) or leadership platforms that either (a) contained a helpful college component such as a designated college related workshop; or (b) provided an outlet for networking where students talked to each other and learned about college behaviors and strategies. Stated another way, the programs themselves did not provide students with intentional, selective college strategies, yet students still gained valuable and timely information.

Overall, while the various community-based, regional, and national college going programs were very helpful for study participants, it wasn't just one or two brokers, but several brokers, systematically, that provided college going assistance. Ultimately, the compounded efforts of multiple college going programs positively influenced appropriate college choice behaviors and helped participants avoid undermatching. This was evidenced in Figure 4, highlighting the fact that 93% of study participants utilized *at least* one college going intervention program. Moreover, the average participation rate of these programs was 2.25. The following diagram illustrates the diverse and many brokers, or "compounded resources" that were instrumental in helping participants mitigate undermatching.
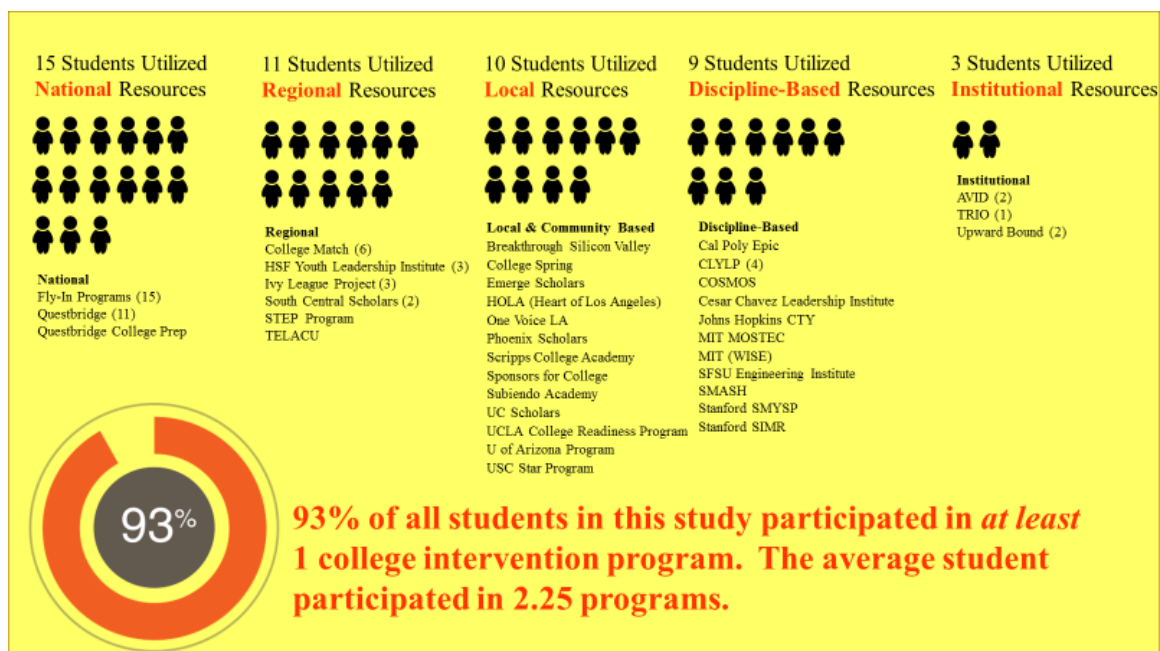
Figure 3. Multiple Resources Utilized by Study Participants

The findings suggest the net effect of college intervention programs were especially helpful for obtaining and leveraging resources, specialized knowledge, and experiences that empowered participants in their selective college goals. These intervention programs provided a form of institutional capital missing from their high school campuses, as well as critical sources of social capital, instrumental in mitigating under-resourced institutional resources, creating peer-networks in which college-going capital was shared, and generating opportunities for participants to receive encouragement and support from peers. Within these college intervention programs, participants learned how to navigate a complex system of timelines, strategies, and deliverables.

In more practical terms, the ways these programs related to participant's success included but were not limited to counseling and guidance (creating "shortlist" of matched colleges), informal mentorship, tangible resources (such as the Fiske Guide to Colleges),

and financial resources (fee waivers, free ACT or SAT prep courses, and lists of colleges that meet 100% of financial need).

An important and unique dimension of these college intervention programs was the inclusive community of peers. Because these programs recruited and qualified students based on socioeconomic, racial/cultural, and first generation status, participants expressed how this homogeneous environment was validating, supportive, and encouraging. Many participants noted that within these spaces, was the first time they encountered other Latinx students who shared a common academic profile and aspiration to selective colleges.

These rare experiences provided an escape from deficit-focused environments where Mexican-American students are often viewed as not possessing valued capital, and where expectations for their college-going success do not mirror those for White and Asian students. In these homogeneous communities, participants entered a transformative space (Yosso, 2005) in stark contrast to their respective institutional spaces where they expressed feeling ignored, devalued, excluded, and isolated. By entering these intervention programs with Mexican-American (and other historically underrepresented) peers, they entered a transformative space, where their abilities, knowledge, culture, and aspirations were highly valued.

Within this transformative context, the concept of a 'community culture of wealth' emerged. In this case, the community represented valuable partnerships between participants and local, regional, and national organizations and universities. The wealth was acquired through the critical capital offered through these partnerships – allowing participants to mitigate the effects of low-resourced and under-performing schools and

anti-social messaging. The combined forces of participant's aspirational and navigational capital, and a community culture of wealth developed by community based organizations, challenges traditional interpretations of social and cultural capital. Relying upon personal strength and supportive strength from protective agents, participants were better equipped to deal with the racial inequities that continue to plague their secondary educational campuses.

However, of the 30 study participants, there were two participants who did not participate in *any* type of college going program. These two students (both males) still matriculated at an Ivy League institution.

The most extreme example was Arturo – clearly a statistical outlier in many ways. Of all participants interviewed, he had the least amount of resources and guidance throughout his middle school and high school tenure. Arturo identified as being transgender and queer, and grew up with a single parent (his father died when he was in the 3rd grade). He overcame significant hurdles to get to college –yet he didn't participate in *any* college going program or organization. Arturo's strategy to earn admission to an Ivy League institution was described as "winging it" because he didn't have college guidance or resources within his immediate family, community, or high school campus:

> *Yeah, no, I really had no idea. I just went over and kind of like, it was pretty much time to apply to college. I was really lost. My school doesn't have the most amount of support in this area, I didn't get a lot of support from my school. My mom didn't know what to do, so I had to go outside to get help. My teacher didn't really give me help.*

Since Arturo did not participate in any college going programs, a follow-up question inquired as to whether his high school offered any workshops or services for aspiring college students. Arturo responded, *"No. It was really under-funded, our*

school was severely under-funded. We had the lowest test scores in our district, and typically they gave us less funding. He also ranked himself very low when asked to rank himself on factors informing his decision regarding *which types* of colleges he would apply: *I think I just applied to schools, like, um, I didn't really look at things like whether I could get into the school. I just looked at it as oh, I have fee waivers! (laughter)."*

Arturo's general knowledge and ability to muddle through important college components was extremely pragmatic and logical. For example, when asked why he applied to 12 colleges, he responded, "*. . . because, however much fee waivers I was given, I applied to that many.*" When asked if he had any particular strategy to decide which types of colleges he would apply, his response was very common sense, "*Not actually. Really, the only thing was if they had the major that I was interested in."*

When asked about how he maneuvered through the financial aid process, his response summed up his general, self-sufficient (but painful) approach to gaining college knowledge:

> *What? I had no idea. That was awful. None of my friends did it. My mom didn't speak English. My friends were all going straight to work or to community college. One friend's mother said there was a video that explained it, and I watched it. It was OK. It didn't explain a lot, but it was something. Other times I just cried and tried to figure it out. I kind of grew up in a self-sufficiency manner, just get through it.*

Diego was the other male student who did not have access or participate in any formal or informal college going programs. However, Diego described himself as being incredibly inquisitive and asking the right people the right questions. For example, he learned of (and ultimately participated in) an engineering summer research program at UCLA. During this program, he asked about other programs and learned of (and

ultimately participated in) an engineering program at MIT. He felt these two programs were instrumental in gaining admission to selective colleges.

Through these connections, Diego networked with other students who discussed critical college going practices (that he used to his advantage). Without his inquisitive nature, and/or attending these pivotal engineering programs held at selective universities, he believes he would have ended up at a trade school or community college:

> *My school – lots of trade schools came around to talk to my campus. So that was an option, maybe to be an electrician or go to ITT Tech. I didn't focus on higher education until the end of my sophomore summer, my junior year.*

That these two students (Arturo and Diego) were required to manage the selective admission process independent of any formal resources illustrates how social capital and cultural capital theories are closely related to the study findings. It appears their personal disposition (resilience, pragmatism, inquisitiveness) helped them get the right information, at the right time, and avoid undermatching. Their examples are typical of LIFGHPMAS who are left to "figure it out" on their own (Gándara 2005). However, their examples also support the theory of academic invulnerability, whereby their personal disposition served as a protective factor, helping them mitigate threats to their academic potential (Alva, 1991; Alva & Padilla, 1995; Arellano & Padilla, 1996; Gonzalez, R., & Padilla, A. M. (1997).

College Going Surrogates – Mentors

While the topic of mentorship arose frequently as an important resource for both validation and practical necessity (51 such references), formal or traditional college mentorship occurred very infrequently for study participants. In the context of this study,

mentors are classified as "surrogates" because they occurred mostly as the result of indirect mentorship versus formal or "traditional" college mentorship; and functioned as college guides in absence of formal college advisors or mentors.

There were very few examples cited by participants – regardless of whether the mentorship was formal or informal, and/or organized through the school, community, or an external organization. When mentorship was cited, it was typically happenstance, through mentorship programs not designed or intended for college mentorship. In terms of when mentorship occurred, participants rarely described instances of formal or informal mentorship occurring in either primary or middle school years. Most mentorship relationships occurred during high school.

This lack of mentorship aligns with theories of CRT and Social & Cultural Capital. In this mentorship context, Latinx youth lack institutional agents who serve as conduits to rich knowledge and resources – essential knowledge and skills necessary to navigate the selective college process (Stanton-Salazar & Urso Spina, 2003). The lack of institutional resources (mentorship) for Latinx youth, that results in inequality and exclusion is expressed here:

> *The real problem is that the mechanisms and institutional resources necessary for systematically generating these connections for large numbers of youth do not exist in these communities. That is both a tragedy and a fundamental definition of social inequality and exclusion as played out in the lives of urban adolescents throughout the United States. (Stanton-Salazar & Urso-Spina, 2003).*

For participants, mentorship occurred in either indirect or random ways. For example, Miguel was one of the few participants who took part in a formal mentoring program. However, the program was not a *college* mentoring program and did not focus

on helping students with college going aspirations (let alone applying to selective

colleges). Yet, Miguel used the opportunity to obtain SAT preparation:

> *So I, when I was in middle school, there was a program called Youth*
> *Mentoring Connection (in Korea Town here, East LA). They aren't set up*
> *for educational things, but my mentor was very dedicated and he*
> *understood my situation, and he knew what I was going through. We*
> *would sit down and do SAT Prep (he went to college). I was having*
> *trouble with the critical reading section, so he helped me out a lot. He*
> *wasn't an educational mentor, he was there to help at risk youth, to take*
> *them out of the hood for a while, give them a chance to be part of the*
> *bigger community.*

Carlos recognized that although he was not part of a formal mentorship program,

he appreciated the opportunity for informal mentorship "*But, there were informal*

mentors. Mr. Smith, was a foster parent for one of my friends. He got involved in our

school, and he became our scout master and I got close to him."

Javier (who attends an Ivy League campus) met someone who would become his

mentor through a leadership program: "*At Subiendo, I met a guy who eventually became*

my mentor, and he attended Harvard." Luis (who also attends an Ivy League campus)

met his mentors through Stanford's Summer Institutes of Medicine Summer Research

Program (SIMR). Luis credits their influence as guiding him to an Ivy League:

> *I was mentored by 2 researchers at Stanford who talked to me about*
> *careers, and being there I got to observe what it was like, because I want*
> *to do research. It made me think about academia, and that I wanted to go*
> *to one of the best schools so I could be at a campus where they do the best*
> *research.*

Juana also participated in the program, College Match. She related how this

program provided much needed (informal) mentorship: "*I was in College Match, and*

that was a mentorship program, kind of. Having someone say you can do this, not

limiting myself, and step outside of my boundaries that I set for myself."

Marina – who attends a private women's liberal arts college on the east coast,

recalls how her involvement in the two-year college preparatory program Student

Expedition Program (STEP), provided her with indirect mentorship. As well, she worked

for a local mentoring program where she mentored young girls in elementary school. At

this program, her manager provided valuable mentorship that Marina referred to as very

significant: "*She served as a huge resource to ask the questions that I was too*

embarrassed to ask the formal questions in STEP or even my English teacher."

Yulisa's mentorship opportunity came in the form of a female neighbor who was

instrumental in getting her into a local, private, college preparatory high school:

> *The mentor – She lived in the same apartment complex as me. She was*
> *older, already graduated, and was working. Once she moved to New*
> *York, we stayed in contact. In 8th grade I didn't go to the best middle*
> *school. I don't know if she thought I was smart, but my personality. I*
> *would always go and hang out with her, go to museums. I think she saw*
> *that I had an interest to learn. I think she kind of took it upon herself to*
> *open my eyes a little bit. I mean, even if she didn't see that I wanted to*
> *pursue something bigger, I think she would have still pushed me, to at*
> *least show me, given the type of person that she is.*

Socorro was fortunate to have initiated a relationship with a Board Members from

her charter college preparatory high school. She credits his mentorship with being

instrumental in the types of colleges she applied:

> *His parents went to Ivy League institutions, and he went to Ivy League*
> *institutions. Now he is a professional. He is very successful so he really*
> *wanted me to apply to more competitive schools because potential in me.*
> *I would say he was the mentor who really encouraged me to apply to more*
> *competitive institutions.*

Marcos was fortunate to have a mentor from a private, very selective university in

Northern California, whom he credits with helping him obtain admission to said

university. "*So, I think that because I was with a Stanford mentor, it pushed me to go to a private college.*"

Juana – who attends an Ivy League institution, was one of the few participants who received mentorship during middle school, although it was not focused on selective college advising: *Yeah, so I think it started with a program called WISE in middle school. Girls from Occidental College would come to our middle school and give one-on-one mentorship.*"

Overall, participants valued formal and informal forms of mentorship received during high school. While the mentors did not provide much technical guidance regarding selective colleges per se, they provided encouragement and served as role models. Yet, some mentoring was formal. Marcos, for example, was part of a program at Stanford entitled, the Phoenix Scholars. This formal mentoring program connects a Stanford undergraduate with a high school student to conduct mentoring remotely (over Skype). Marcos felt this mentoring program was instrumental in selecting appropriate college campuses.

That participants lacked formal mentorship within their social networks is aligned with social and cultural capital theories. Specifically, that appropriate mentors to guide them within the selective college process is typically absent for Mexican-American youth: *"Yet given the fortuitous nature of informal mentorship, founded primarily on the lack of systematic channels for connecting youth with caring and available adults, the likelihood of multiple instances of informal mentorship is usually quite low." (Stanton-Salazar & Urso Spina, 2003).* The absence of this highly-valued resource results in limited opportunities for selective educational attainment (McDonough, 1997).

College Going Surrogates – Peers

The topic of 'peers' has been cited numerously by researchers as a primary broker for college going information for students in the demographic studied (Gándara, 1982; Gándara, 2005; Grubb, Lara, & Valdez, 2002; Rivera, G., 2014; Stanton-Salazar, 2001; Venegas, K.; & Tierney, W. (2005). There were 84 references where "peers" was mentioned as either influencing, assisting, or mitigating college choice behaviors. Peers were defined as either similar aged friends, classmates, cousins, or neighbors. Peers played a significant role in validating participant's journey to higher education, as well as recommending or introducing participants to special programs or resources.

Subsequent to early college "thinking," many participants noted specific ways peers influenced their trajectory to a selective college by recommending or encouraging them to apply to college preparatory programs, academies, or specialized high schools. Additionally, participant's knowledge of off-campus and/or summer programs was typically the result of a recommendation by a peer – not typically something advertised at their high school campus or informed via their secondary counselors.

For example, Carlos recalled how he learned of a helpful college going program: "*There was this kid from my middle school and he went to Breakthrough, and he was applying. I went to check it out.*" Javier also recalled how he learned of a 5- day summer leadership program focused on college. This program was called Subiendo Academy for Rising Leaders: "*I heard about it from my friend and mentor, who was a year ahead of me, and she went to the program and recommended to me.*"

And, in terms of deciding which types of campuses to apply, peer influence had a strong influence on these participants:

I know this guy who got into Stanford and is majoring in Econ. That's what I want, a PhD in Econ at Stanford. (Carlos)

I knew some upperclassman that attended some liberal arts schools, so I contacted them. They just talked to me about their experiences. (Sofia)

The valedictorian of the grade before me (graduated a year before me), she currently attends MIT, so she told me about the Common Application. Then I just kind of decided to try it and see where it leads. That I would try to apply to an elite school. (Javier)

One of my friends – he goes to Bowdoin now; he went to my school. He's like dude, you should check this out. I applied and I got in. (Carlos)

There was a girl in my high school that applied and got accepted there, and she told me, "You should look at Penn." (Omar)

That was the first time I actually met students who were interested in science. That were serious about applying to top schools. In my high school I didn't really know anyone else. (Luis)

Other times, participants referred to camaraderie and group validation from peers that significantly influenced their determination to pursue a college degree. Sofia – who attends a small liberal arts college on the east coast – spoke of the "pact" made in her Freshman year by 12 classmates (including herself). She described this group as one of the strongest and consistent influences in her pursuit of a college degree:

There were about 10 to 12 of us, we had a big clique. We were in the same honors classes, we'd also coincidentally in cross country – which was supposed to be the nerd team. After spending so much time in classrooms and races, you get to know each other really well and we started hanging out together. We all went to college. They influenced me because we all struggled since Freshman year, and seeing that we lived in a poor neighborhood, and we all saw that we wanted to something better for ourselves. (Sofia)

Like Sofia, Maricela spoke about her peers being very influential. However, the peers in Maricela's middle school were from highly affluent families:

I think I was 12 or 13. I was in middle school and met, who are now, my best friends, like, very affluent kids who were very motivated. They kind of told me about college, and I thought I should go to college. My middle school we went to a school that leads into the IB program. That school, that's where I had all the classes with them, because I qualified because of GATE. Because we had the same classes I got a little closer to them and slowly realized I needed to do more to get into college. I started doing better in school because I hung out with them. For example, I didn't know what Valedictorian meant, and was like, "what's that?" I learned you had to do well in school to do that, and it got me thinking I've got to get a step forward. I was Valedictorian! (laughter).

The influence of peers and college-going outcomes among Latinx youth has been well documented in the literature (Perez & McDonough, 2008). However, there is little research concerning peer influence and selective college admission practices of LIFGHPMAS. The research tends to focus on 2-year or non-selective college choices among minority peers (Alvarado & Turley, 2012).

College Going Surrogates – Siblings

Many participants noted how siblings influenced and/or played a significant role in their college going behaviors and decisions. Twelve participants had older sibling(s) who were either attending college or had graduated from college, and 18 participants did not have older siblings who were currently attending college and/or had graduated. The following table illustrates the number of study participants who had at least one sibling who attended college and who they stated influenced their decision (early on) to pursue admission to a selective university.

Table 5. Participants Who Had Older Siblings in College

Gabriela	Ivy League	Older brother (unknown college)
Xochitl	Selective	Older brothers at University of California
Luis	Ivy League	Older Brother University of California
Joaquin	Selective	Older brothers University of California & Ivy League
Citlali	Ivy League	Older half-sister (unknown which)
Miguel	Ivy League	Older Sister at selective liberal arts college
Nayeli	Selective	Older sister at selective liberal arts college
Yadira	Selective	Older sister at University of California
Monica	Ivy League	Older sister at University of California
Marcos	Selective	Older sister went to California State University (CSU)
Diego	Ivy League	Older sisters California State University (CSU)
Juana	Ivy League	Older sisters CSU & University of California

Participants shared how older siblings played a key role in helping them prepare for selective colleges. This finding is consistent with research concerning the role of siblings and college choice for Latinx students (Ceja, 2006; Pérez & McDonough, 2008). For example, Nayeli credits her older sister as being the most influential in her quest for a selective college degree:

> *My sister . . . she was the most influential of them all. She was already three years older than me, and began the process before I even thought about what colleges to go to. She said, 'Do well, I'll be here to help you no matter what.' She is applying right now to graduate school . . .*

Yadira also had an older sister who attended college, and whom she felt was the greatest influence in strategizing entrance to a selective college:

> *I would say my sister, my older sister. I mean, she went off first, so, you know, she saw the applications when she was in her senior year, and she'd say, you should do these things since you have a long time, get more involved. She was like my counselor, in that way, she was like go try stuff, go apply for things, the worst they can do is say no. I guess seeing her go to (selective University of California campus).*

Diego mentioned his older sisters – both college graduates – as being influential in solidifying his college aspiration, and especially the networking at selective colleges:

My family influenced me to pursue higher education because that's where you make the connections, and where you network, and get so much opportunity. The greatest factor was the networking – I saw that through my sisters and my mom, that you can get a stable job.

Joaquin fully gave all the credit to his two older siblings:

When it came down to who was the biggest influence, it was my two brothers. The older brother went to [extremely competitive UC campus], and then to law school and now he's in training in San Francisco federal courts. My younger brother went to [highest ranked Ivy League]. My parents, my mom only graduated from 2nd grade, and my dad only went to 1st grade. So they didn't have any great formal education and what not, but they always took it upon themselves to put that on my brothers. I had the strongest connection with my two brothers.

Marcos described an older sister who attended a state college in California, as being positively influential:

Yeah, I think the first time I realized I was thinking about college at all, was when my sister went to college. That was the first time I heard about college. She was far away, and she would sometimes take me. I would go for the snacks (laughter). Yeah, at some point, I was like, 'Yeah, I'm going to go there.' I would say, 'I'm going to go to college.' Because, other than my sister, everyone just finished high school and, and all the males in my family are gardeners.

While many of the above examples were highly positive and influential, some participants attributed their motivation to pursue college from *negative* sibling behaviors witnessed, or examples they wished to avoid. Carlos attributed his motivation to pursue college from the negative behaviors he saw in his sister. He already understood the difference between a selective college and a community college or CSU:

Like my oldest sister, she didn't even study in high school. She went to High School and got in trouble, and did independent studies. She didn't have enough credits to apply to a CSU or UC. She went to Community College, and she had a baby. So I lived with my nephew. Seeing the path she took, or was going down I guess, I don't want for myself, or for my parents.

Whether positive or negative, the issue of sibling influence is significant in the findings. As part of their social network, participants relied upon sibling relationships to gain information, advice, and encouragement. Here again, the theory of social capital enhances our understanding of the role of siblings during the college choice process for LIFGHPMAS. In this context, older siblings functioned as "protective agents" with limited capacity, to transmit valuable information and resources to participants (Ceja, 2006; Stanton-Salazar, Ricardo, 1997).

Informal Ways of Supporting

While participants cited college going brokers and surrogates as those they relied upon for critical (technical) college going guidance and information, there was a third source of support that was not technical (coaching or guidance) or related to strategic selective college preparation strategies. This third type of support was psychological – from parents of participants. This informal, but valuable support yielded strong, positive outcomes.

Much historical literature has focused on the ways in which Mexican American parents are "deficit" in modeling cultural norms aligned with positive "college going" cultural values. These cultural values have been traditionally constructed to privilege White, middle-class norms (Valencia & Black, 2002; Lopez, Scribner & Mahitivanichcha, 2001).

The presumed deficit stems from their absence in "visible" activities such as membership in Parent Teacher Associations (PTA's), participating in parent advisory groups, chaperoning events, hosting fundraisers, being a "Room Mom," or volunteering in children's classrooms. However, many Mexican-American parents are unable or

uncomfortable with traditionally-defined means of support. Much of this is due to language barriers, lack of knowledge regarding the American K-16 system, nonflexible work hours, or feeling uncomfortable or unwelcomed at the school campus. (Auerbach, 2006; Gándara, 1995).

Yet, Latinx parents are participating in their children's education and nurturing their college going aspirations. However, their participation is often "invisible" because their contribution is informal, outside of institutional walls. Their support happens within the home residence or through behaviors not visible to the larger school community. These informal and "invisible" behaviors often include nurturing through verbal encouragement, modelling behaviors, or establishing educational priorities (Auerbach 2007; Ceballo, 2004; Gándara, 1995; Kiyama, 2010; LeFevre & Shaw, 2012; Valencia & Black, 2002).

In this study, participant's parents exhibited, demonstrated, or modeled support through verbal encouragement and "*consejos*," monitoring homework and grades, making financial sacrifices, supporting their extracurricular activities, establishing priorities, and utilizing unconventional ways to support their students.

In terms of verbal encouragement, Xochitl said her parents constantly gave her verbal messages of support: "*It was like "you have to go to college, you have to go to college!"* And Socorro's mother constantly reminded her of the value of college:

> *So, my mom I love my mom, she's always been so supportive and encouraging. She always reminded me to try hard in school, to get an education, so that when I'm older I can be an independent person to travel and can enough money to support myself and not have to depend on anyone.*

Jesus reflected on the incredibly impactful verbal encouragement he constantly received from his father:

> *So he'd have a weekly conversation with me – he'd get really angry if I got an A- in a class. He'd push me to do well in high school. He knew in the long run, even though he didn't know the way the college application worked, he knew grades were a big part of it. He wanted me to be at a place and not have to worry about grades. He really played this important but passive role, he never told me go here or go there, he just pushed me to do the best I could do.*

Many participants discussed how their parents gave *consejos* (cultural narratives or storytelling) or stated phrases frequently, to reinforce the idea of getting to a good college. They also spoke with their students about the value of education, or validated their ambitions. For example, Joaquin spoke of his parent's stern, cautionary message that if he went to a prestigious college on the east coast, that he'd better excel:

> *My parents would say, wherever you go, make sure you don't f*!k up. "Cuando vayas, no te chinges." My parents always felt that if it was best for us, go, just don't f**k up. I don't want you saying you came back because you dropped out.*

Juana also recalled the frequent *consejos* by her father, as a cautionary, but encouraging message about going to college:

> *My dad would talk about my mom being tired, and he'd say, 'That's why you have to go to school, so you can get a good job, and you don't have to be fatigued and you can enjoy your job.' Because I enjoyed school, he was always pushing me. I would say they were always pushing me, going beyond the little area that I lived in, the low expectations of a lower income community.*

Parents also exhibited informal behaviors such as monitoring their student's school related activities. For example, Javier's mother consistently monitored his progress: "*She [mom] would, during the night time, she would ask me if my homework was done. When my progress reports came out she would look at them. She has been the*

biggest influence there." Likewise, Socorro found her father's monitoring support very

helpful: "*He would sit at the kitchen table until I read all of the stories and did my*

homework. My dad helped me throughout all of my education, especially during the

early stages." Jesus laughed as he recalled his father's vigilance in tracking his academic

performance via an online app:

> *. . . his process in my education was a weekly thing because of the grades.*
> *He had the app where you could check my grades, so he had 24/7 access.*
> *Even when I was doing homework, he would come in my room and say,*
> *"hey, this is coming up, so what are you doing?*

Lastly, Juana described her mother's unconditional support as she monitored her

homework completion:

> *I remember in the first two years of high school, and I'd procrastinate,*
> *and she'd stay up with me until 3 or 4 in the morning. She was always*
> *there, very supportive. She knew it would pay off in the future. Every 10*
> *or 15 minutes I'd tell her to go asleep. But she would just stay in the*
> *living room and try to stay awake. I'd say, "mom, it's OK, it's OK." She*
> *would say, 'no, just do your work.'*

Although participant's families struggled financially, their parents still made

sacrifices they believed would help their child get into college. For example, Omar

shared how his father would make any sacrifice related to his education: "*He [Dad] was*

really so supportive in so many ways. Like when something was related to school, he

would do anything, like money or time." Although Citlali's father couldn't afford pricey

accommodations such as SAT or ACT prep courses, he provided whatever resources he

could to help his daughter: "*My dad brought me home an ACT study book from Costco*

(laughter)." Marisela shared how her father sacrificed so she could attend a prestigious

pre-college camp: "*When I wanted to go to Stanford for a summer program, my dad*

saved up for me to go."

And, Miguel – who attends the most competitive Ivy League campus, shared how his mother could not lobby for changes in his curriculum, but found the means to ensure her son was on track to be a competitive applicant for the most selective colleges:

In high school I really wanted to take AP Calculus BC. But the timing didn't work because they only offered algebra in my middle school. I went to Santa Monica College to take AP Calculus, so I could advance. The class cost about $1,600, but my mom was like, no, we'll take care of it. My godfather let me borrow the money, so I just paid him off with a summer job. My mom's always been there for me.

Likewise, Emilio's mother learned of the John Hopkins Center for Talented Youth program from a neighbor. She obtained the application and encouraged her son to apply: *"My mom found out about the opportunity and signed me up. I had to take the ACT and some placement test."*

Miguel emotionally recalled the sacrifices his father made to ensure their family had financial resources to support his college goals: "*He's been saving up money for college education ever since I can remember. He'd be like, "How about we forego those shoes, so that we can save money for your college."* Likewise, Jesus' father also supported his son in the way he could, with the means he had. Jesus' father told him, "*If I have to work a double shift, or three shifts, I'll do it just as long as you can finish college or a university.*"

In addition to verbal encouragement, monitoring, and making financial sacrifices, parents also contributed informally by supporting their student's extracurricular activities : "*Whenever I needed to go anywhere for school activities, my dad would always be there and so would my mom. They just kept taking me to places, like libraries, take me to the best schools, and yeah, like when I was school they helped me out a lot.*" (Miguel).

Similarly, Marisela's father also supported her extracurricular activities: "*I'd had to say my dad because he drove me to everything. I knew he was tired. He was like, "If you want to do this, we'll do this*." And, Yulissa shared the same sentiment: "*they were supportive of me, whether they were giving me rides to events, especially when I was applying to college, like college fairs.*"

An exceptional example of a parent who supported his daughter's extracurricular activities was Juana's father. Her father displayed incredible devotion to his daughter's educational goals. Although he didn't speak English, he was the "team dad" for her high school's Academic Decathlon team – even throwing them a party to acknowledge their strong efforts. Involvement with extra-curriculars such as Academic Decathlon has traditionally been associated with selective universities. For that reason, her father's involvement was especially significant:

> *He was the one who would give us rides everywhere, take us to competition. He would get up really early, like 6 or 7 o'clock, and after school pick me up at 7:00pm also. He would take snacks to all of my friends on the team. Not a lot of families go, but my family would be there with matching t-shirts (laughter). Like during the last session, like a bowl, they'd ask questions and my parents would be there cheering us on.*

Parents also supported participants by eliminating distractions and establishing education as the number one priority. They chose to place priority on homework or school projects versus time consuming activities such as chores. For example, Miguel said, "*. . . she thought it [college] was the most important thing in the world. Sometimes she would be like, "Miguel, you don't need to do any chores. I just want you to focus on your school."* And, Joaquin said his parents made priorities crystal clear by saying, "*I only have one job, that is to do well in school, everything else came second.*" Nayeli's

parents also placed education as the priority over others: "*They would always tell me I need to go to college; it's not an option. If I don't go, then all their hard work would be for nothing. That was the reason they came here; to seek a better life.*"

"Clearing the path" and eliminating barriers or domestic obstacles is one of the ways participant's parents demonstrated their moral support and commitment toward their college seeking goals. For example, Arturo stated, "*My mom wouldn't allow me to do chores at the house –she was like no, you're not going to do chores as long as you are getting A's in school.*" As well, Diego conveyed his parents priority of education for him and his siblings: "*She told us we didn't really have to work, to focus on school. To have that high value on education.*"

Some participants spoke of unconventional ways their parents demonstrated support. These parents took a "showing versus telling" approach, to emphasize the negative consequences associated with not attending college. For example, Pedro spoke of his father taking him frequently to his job site:

> *. . . my dad . . . would always bring me to his construction job, from when I was 8 . . . It was kind of like eye opening in a sense. I really valued it, in a sense, he was trying to put me in a position where I could see for myself what it was, first hand, the kind of situation that he has to deal with. You get a lot of exposure of the type of work and how it's done, and the way that people treat you. For you being the laborer, the hired people, there is a sense of like, this classism, like who is the one hiring, who is the one doing the work, and the fact being brought along, it helped me in the sense that my dad conveyed certain details, like we can't do this.*

And, Juan's mother simply showed her hands to her son – the visible scars serving as visual testimony for pursuing a college degree:

> *She'll show me her hands from work, she has cuts and grease burns (and so does my dad). She's constantly reminding me, "get an education because you don't want to be doing what I'm doing.*

Lastly, parents were also involved in their student's pathway to a selective college by enrolling them in a charter school or college preparatory high school, or in special programs. As demonstrated below in Table 3, nearly half of participants (8 males, 6 females) did *not* enroll or attend the public high school campus zoned for their residence. Their enrollment in a charter, magnet, college preparatory, or private high school was the result of their parents participating in a lottery, pursuing an intra or inter-district transfer, or applying for a full scholarship. Participants felt that their attendance at these college-focused campuses was instrumental in their college-going strategies and success.

Table 6. Parents Elected to Enroll Students in Campus Not Zoned for Residence

Gender	Residence Zoned	Zoned	Transferred	Gender	Residence Zoned	Zoned	Transferred
Male	Public	No	Charter	Female	Public	No	Private
Male	Public	No	Private	Female	Public	No	Charter
Male	Public	No	Magnet	Female	Public	No	Charter
Male	Public	No	Charter	Female	Public	No	Magnet
Male	Public	No	Private	Female	Public	No	Charter
Male	Public	No	Charter	Female	Public	No	Charter
Male	Public	No	Magnet	Female	Public	Yes	
Male	Public	No	Magnet	Female	Public	Yes	
Male	Public	Yes		Female	Public	Yes	
Male	Public	Yes		Female	Public	Yes	
Male	Public	Yes		Female	Public	Yes	
Male	Public	Yes		Female	Public	Yes	
Male	Public	Yes		Female	Public	Yes	
Male	Public	Yes		Female	Public	Yes	
Male	Public	Yes		Female	Public	Yes	

The parent's strategy to enroll their students in schools not zoned for their socioeconomically disadvantaged community proved to be an advantage. As presented in the 2016 National Student Clearinghouse, the current college going rates of high poverty schools (where 75% of students are eligible for Free & Reduced Lunch) compared to

high income schools (where less than 25% of students are eligible for Free & Reduced

Lunch) represented a 25 percentage point gap – 76%, 51%, respectively. And, as

presented in the 2016 California Charter School's Association, charter districts appear to

be closing the gap with regard to low-income, Latinx students and admission to

University of California campuses (Zarecki, D., Martinez, E., Xiao, S., Kenda, A., &

Robitaille, E. (2016).

      The cumulative effect of parent's informal and "invisible" behaviors yielded

exceptionally strong academic results for their students. The following illustration

compares traditional support (parental behaviors visible and recognizable) to non-

traditional and "invisible" support of parents occurring outside of institutional walls.

These important findings are aligned with CRT as CRT redirects the historical deficit

perspective of Latinx parents, and instead calls for a reimagining and redefining of their

roles:

> *Narrow definitions of parental involvement must be changed and*
> *redefined by the parents themselves. We must start from the premise that*
> *parents are our strengths. Drawing on the experiential knowledge of*
> *Chicana/o students and parents is crucial to teachers, administrators, and*
> *researchers if social justice education is truly the goal." (Solórzano &*
> *Yosso, 2000, P. 58)*

Informal & "Invisible" Forms of Support
Outside of Institutional Walls

Traditional Support

Parent Teacher Associations (PTA's)
Parent advisory groups
Chaperoning events
Hosting fundraisers
Room Mom
Volunteering in child's classrooms

Invisible or Informal

Verbal Encouragement & *Consejos*
Establishing Educational Priorities
Monitoring Homework & Grades
Financial Sacrifices
Supporting Extracurricular Activities
Enrolling in charter or magnet campus

Parental support ranked as *the most* influential factor
impacting participant's aspiration to college

Figure 4. Informal & Invisible Forms of Parental Support

The illustration above must be analyzed through a CRT lens. This lens exposes the ways in which Latinx parents have been historically excluded and marginalized from educational institutions, and largely viewed from a deficit lens. Aligned with CRT, the study findings expose the undervalued source of wisdom, psychological support, and logistical support Latinx parents provided their students. CRT also exposes the ways in which Latinx parents are required to diligently pursue non-traditional and alternative methods to mitigate the effects of racialized policies and practices that often render their children unable to navigate the selective college admissions process.

In addition to CRT, Academic Invulnerability Theory (AIT) must also be a lens to appreciate and recognize the functional role of parents as protective agents – shielding their students from the institutional effects of low teacher and counselor expectations, combating the effects of antisocial messaging, and providing long-term inspiration. Parents as protective agents instilled in their children aspirational qualities that helped

them develop and maintain confidence in their long-term selective college goals. As described above, it is clear how the two theories intersect. CRT explains and establishes the necessity and function of AIT – where parents are required to mitigate the historical racist effects their children endure throughout the P-20 pipeline.

Derived Motivation and Inspiration

In addition to the previous themes that emerged in this study, the issue of motivation and inspiration also emerged as an important theme. The following table provides a breakdown of participant's response to the questions (1) *Was there any particular person(s) who influenced your decision to pursue a college degree?*; and (2) *Considering all influences in your life (to date), what or whom was the most influential factor in your decision to pursue higher education?*

Table 7. Parental Influence to Pursue College Degree

Question – Considering all influences in your life (to date), what or whom was the most influential factor in your decision to pursue higher education?			
Jesus	Parents	Mayahuel	Sister
Ramon	Parents	Nayeli	Sister
Joaquin	Parents	Yadira	Sister
Miguel	Parents	Sofia	Peers (friends)
Juan	Parents	Maricela	Peers (friends)
Emilio	Parents	Xochitl	Community/Environment
Pedro	Parents	Gabriela	Teachers
Omar	Parents	Maribeth	Poverty
Diego	Parents	Carlos	Poverty
Citlali	Parents	Javier	Poverty
Lizeth	Parents	Marcos	School Environment
Juana	Parents	Julio	Chemistry Teacher (11th grade)
Yulisa	Parents	Arturo	Interest in Psychology & Therapist
Monica	Parents		
Socorro	Parents		
Marina	Parents & siblings		
Luis	Parents & Science Teacher		
Question – Was there any particular person(s) who influenced your decision to pursue a college degree?			
Pedro	Parents	Maricela	Mom
Miguel	Parents	Maribeth	Mom
Juan	Parents	Arturo	Mom (+ Neighbors)
Jesus	Parents	Gabriela	Mom (+ Various influences)
Ramon	Parents	Marcos	Sister
Citlali	Parents	Yadira	Sister (older)
Xochitl	Parents	Javier	Peers (friends)
Socorro	Parents (+ Cousin)	Marina	Peers (older high school student)
Luis	Parents (+ grandparents, & brother)	Lizeth	Teacher (Math 7th grade)
Joaquin	Parents (+Older brothers)	Mayahuel	Teacher (6th Grade & AVID)
Omar	Parents (+ Teacher)	Monica	Teacher (2nd grade) identified as GATE
Carlos	Mom	Juana	College Intervention Program
Emilio	Mom	Yulisa	Mentor & Circumstances
Diego	Mom	Julio	High School environment
Nayeli	Mom	Sofia	Uncertain (Conflicted)
Maricela	Mom		
Maribeth	Mom		

The findings above are significant in that 70% of participants stated their parents were *greatest* influence impacting their pursuit of a 4-year college degree. And, 56% of participants stated their parents were "*the particular person(s) who influenced your decision to pursue a college degree*."

Parental encouragement and involvement has been a strong indicator of college going outcomes for low-income, first generation, Latinx students (Alva, 1995; Arellano & Padilla, 1996; Ceballo 2004; Ceja, 2004), as well as one of the most influential factors influencing a student's decision *where* to apply (Ceja, 2001; Walton-Radford, 2009). The role of parents is highlighted in the way they encourage their children to attend college (Ceja, 2004; Espenshade & Radford, 2009),

The fact that most participants cited their parents as having a significant (if not the "greatest") influence regarding their college degree aspiration aligns well with what research about Mexican-American students (Alva, 1995; Arellano & Padilla, 1996; Ceballo, 2004; Ceja, 2004; Gonzalez & Padilla, 1997). Many studies highlight the ways in which immigrant parents from low socioeconomic backgrounds place high value on education, though their families demonstrate different ways of being involved in their student's education (especially those whose children were very high performing). Yet, the academic challenges for low-income Latinx students are extraordinary, particularly for those of immigrant parents.

It was not surprising most participants indicated one parent (or both) were the greatest influence regarding their college goals and aspirations. In terms of which parent (mother or father), the distribution of responses were fairly similar for males and females.

7 male participants stated that their mother was the greatest influence and 7 stated it was their father. 1 stated it was both mom and dad equally influential.

Of the two parents, participants were asked, "*Which of the two parents had the greatest influence over your educational goals*? The distribution of responses was fairly similar for males and females. They were split 50/50 between "mom" and "dad" (13 said mom and 13 said dad). There were also three participants who indicated "both" played an equal role, while one student gave credit to her sister. Of note, there were five students (3 females; 2 males) who did not grow up with both parents, hence, only one parent was described as being most influential.

For female participants, 6 female participants stated the greatest influence was their mother, while 6 stated it was their father. Two females stated both parents were equally influential, and one female stated it was her sister.

Table 8. Greatest Influence Stated (Mother of Father)

Both		Father		Mother	
1	Both	1	Father	1	Mother
2	Both	2	Father	2	Mother
3	Both	3	Father	3	Mother
		4	Father	4	Mother
Sister		5	Father	5	Mother
1	Sister	6	Father	6	Mother
		7	Father	7	Mother
		8	Father	8	Mother
		9	Father	9	Mother
		10	Father	10	Mother
		11	Father	11	Mother
		12	Father	12	Mother
		13	Father	13	Mother

The comparisons (based on gender) between which parent bestowed the greatest influence, were nearly identical. Nearly all male participants identified

about 50% mom and 50% dad. Likewise, nearly all female participants identified

about 50% mom and 50% dad. The findings are below.

Table 9. Greatest Influence Stated (Mother of Father) by Gender

Male Responses		Female Responses	
M	Both	F	Both
M	Dad	F	Both
M	Dad	F	Dad
M	Dad	F	Dad
M	Dad	F	Dad
M	Dad	F	Dad
M	Dad	F	Dad
M	Dad	F	Dad
M	Mom	F	Mom
M	Mom	F	Mom
M	Mom	F	Mom
M	Mom	F	Mom
M	Mom	F	Mom
M	Mom	F	Mom
M	Mom	F	Sister

However, a pattern emerged as to the role of each parent, from the participant's

perspective. Most participants stated their father was the most inspirational in terms of

being the psychological force that inspired them to push further. Whereas, most

participants stated their mothers were inspirational in terms of logistical involvement.

Pedro summed it up best:

> *In terms of inspiration and drive, it was my father. Just in terms of*
> *support and who was present in the moment, it was my mother. Different*
> *roles in terms of supporting me. My father provided me the reason of why*
> *we are doing this every day, and my mother was supporting me*
> *throughout all of this.*

Yulisa also recalled her father's diligence in ensuring she and her siblings were on

the right path to college:

My dad was just very, he always pressed the issue. He was always bringing it up, reminding me to do better. For him it was more like it wasn't enough. We would go to parent meetings. Everything would be good, but he would be like, you have to do more. He was trying to make us not go down the wrong path.

Juana also cited her father's influence to push her farther:

My dad because he influenced me more. My mom was more like you have to do this to help people, and social justice issues. My dad has been the one to push me and to get a good degree, and keep learning. He would just come up to me randomly, and tell me how important college is.

Monica also cited her father's hands-on approach: *My mom is more, try as hard as you can, like if you fail a test it's OK, but my dad tries to help me learn the concepts and do better.* Maricela was also aware of her father's influence, especially after her mother passed away:

When my mom passed away, my dad put all this work to get me into college. I'd see him get home from work, and it's like 100 degrees outside and my dad's outside working. I'd had to say my dad because he drove me to everything. I knew he was tired. He was like, "If you want to do this, we'll do this." When I wanted to go to Stanford for a summer program, my dad saved up for me to go. My dad was more logistical and was also hopeful through the whole process. He never said no through the whole process.

The findings here are significant because mothers are traditionally associated with being influential due to their physical "presence" and nurturing behaviors. However, it appears that while participants valued and appreciated their mother's involvement, many perceived their father's involvement (albeit less intrusive) as more influential, overall, toward selective college goals.

Aside from siblings, parents, teachers, or counselors, there were also more abstract, yet prominent, themes that emerged as influential or motivational college-going factors.

For example, Miguel felt his undocumented status served as an extreme motivator to pursue the highest level of education. He recalls this motivating force as early as four years old:

> *My parents brought me to this country when I was 10 months old. I'm a DACA, . . .So I thought, oh my god, I'm going to have to get super educated and be smart enough so the US really wants me. I knew from kindergarten that I had to get educated. I knew that ever since I was a kid, I don't know, 4, 5, or 6 around there.*

While Miguel focused on his undocumented status, Marina was inspired to pursue college at a young age due to the environment she saw:

> *I saw the struggle and financial burdens they [parents] were under and it was something that I think that I grew up seeing because the kids around me didn't have that. And so I think a large part of what influenced me to go to college was I would hear about how college would make you an educated person and make money and be someone. I think a lot of my inspiration was to help my family get out of, I wouldn't say, I guess the cycle of not knowing, that there are other things out there and that there's opportunities even if you don't have the resources. So yeah, I think that the way my family, they always encouraged a strong work ethic.*

Xochitl also viewed her immediate community – teenage pregnancy and gangs – as a negative influence that inspired her to "*Get out of here*":

> *I was always surrounded by "Oh you don't need to do that. Get out of here. That's the way you are going to help your family and your community." I've seen how teen age pregnancy, gangs, how that affected my generation, but it's always been that I don't want to be part of that where I would be another statistic. It's kind of like being an outlier in a good way. So I think my community has a lot to do with me getting out of here and doing something.*

The concept of poverty and disenfranchised communities was also a motivating factor for many participants. Several participants honed in on this negative, yet powerful motivating source: Javier stated, "*I would definitely say, poverty. Poverty can be very motivational.*" Carlos said, "*I think I'd say poverty. Om, you know it's just tough like*

dealing with it." And Maribeth said, "*During the middle school and high school years where we were living paycheck to paycheck*." And Yulisa put it bluntly, "*I live in a neighborhood that used to be the murder capital of the world*."

Overall, in terms of "whom" participants felt influenced, impacted, motivated, or inspired them along their college journey, several findings were revealed. First, this study punctuated the ways parents of Mexican American parents indeed valued education, highly supported their student's educational goals, and validated their student's aspirations. Parent's involvement was informal, internal, and mostly invisible – yet, it was ranked by participants as being the *most* influential factor in their selective college aspirations. These findings are consistent with the literature regarding informal involvement of Latinx parents and student's positive educational outcomes (Auerbach 2007; Ceballo, 2004; Gándara, 1995; Kiyama, 2010; LeFevre & Shaw, 2012; Valencia & Black, 2002).

It was apparent participant's parents provided key validation at "pivotal" *early* moments in their child's academic career and that these early validation experiences significantly impacted participants' decision to strive for academic excellence and pursue selective college admission.

Lastly, parents were perceived as the strongest source of inspiration, and identified as the greatest motivating influence in participant's trajectory to a selective college.

In summary, it was the role of parents that emerged in three out of seven themes, significantly affecting participant's ability to self-identify at a very early age as selective college-bound students, as providers of informal, but especially helpful and important

psychological and logistical support for their students, and as the most impactful source of inspiration for participants.

WHEN, Sub Question #2 (Point In Time)

Having discussed "*whom*" participants obtained valuable and critical resources or knowledge that guided their pathway to a selective college, this section addresses the second research question, "*when*." Specifically, "*At what point in time were participants exposed to primary sources of information that influenced college choice behaviors*."

The issue of "when" instrumental college information or experiences occurred was one of the most highly cited themes in this study. A special code was created and labelled, "point in time," due to the high frequency of this concept. In fact, there were 134 direct references to a "point in time" event or experience.

A very diverse set of factors, events and experiences were highlighted by participants as playing a significant role in influencing their decision to pursue a selective college. Many of these events occurred *very early* in their academic careers– when participants first began to conceptualize and contemplate possible college futures. A cluster of seven questions that focused on early college formation guided the interview. This section will address how early influences were instrumental in establishing the psychological foundation to help offset the potential vulnerability of undermatching.

The question – "*at what point in time did you self-identify as a college bound student*" was the first question asked in a series of 41 questions. This question was intentionally positioned first, to become an anchor or reference point for subsequent

questions. It was also chosen to understand whether an early experience or event may have served as a critical factor impacting selective college aspiration.

The following table illustrates the point in time ("earliest memory") each participant stated they were either introduced to the concept of college, began contemplating college, and/or took an important step toward being "on track" for selective college admission.

Table 10. Earliest Memory Participants Were Introduced to Idea of College

MALES		
Student	**Point in Time**	**Event or experience that prompted college thinking**
Miguel	1st Grade	Parents instilled idea
Joaquin	2nd Grade	Teacher (Latina) went to Stanford (inspired him)
Carlos	2nd Grade	Teacher asked students to write name of college their parents attended
Marcos	2nd Grade	Older sibling took him to her college
Arturo	4th Grade	Fijian/Indian family introduced him to the idea of college
Jesus	5th Grade	Prominent Banners in Auditorium served as visual reference
Ramon	6th Grade	Summer math program at local community college
Luis	6th Grade	Teacher told parents he was "college material"
Emilio	6th Grade	Parent reinforced idea of college
Juan	7th Grade	Teacher took him to private Catholic High School; Understood connection between HS prep and college.
Diego	8th Grade	Graduation Ceremony – made connection between strong grades and college options
Julio	9th Grade	Freshman year, went to his cousin's graduation from selective UC campus
Omar	9th Grade	Visited local university and learned about entrance qualifications
Javier	10th Grade	As a Sophomore, mom took him to basketball game at local university
Pedro	10th Grade	Sophomore in AP World History class, connected AP coursework as relevant to college aspiration.
FEMALES		
Maribeth	Kinder	Aunt told her about relatives who went to a prestigious college.
Nayeli	3rd Grade	Conversation with Father
Gabriela	3rd Grade	Talks with mom about college
Lizeth	5th Grade	Teacher took her class to UCLA and USC campus
Juana	6th Grade	Older sister began college
Xochitl	6th Grade	Small college prep middle school visited Berkeley & Santa Clara Univ.
Socorro	6th Grade	Middle school teachers discussed alma matter.
Citlali	7th Grade	Older half-sister received admission to selective UC campus
Maricela	7th Grade	Attended middle school with affluent families who discussed college.
Yadira	7th Grade	Presentation to her school from local college going organization
Sofia	8th Grade	Alumni from her school did a presentation about UCLA
Monica	8th Grade	Class project that required research for colleges
Yulisa	9th Grade	Attended college prep high school – first introduced to concept
Marina	9th Grade	Freshman year participated in college "club"
Mayahuel	9th Grade	Saw college presentations at her high school

These time references are significant because more than 75% of participants stated the point in time they began thinking about college (and making the decision to pursue higher education) occurred *very early* in their academic careers – namely during elementary school or middle school, rather than later in their academic careers. This mirrors research that found 87% of Hispanic Valedictorians acknowledged their college-going aspiration by the 6th grade (Walton-Radford, 2009). Furthermore, nearly all influences that occurred during primary years (elementary school) were either (a) associated with a sibling or parent; or (b) a random activity initiated by a teacher. In other words, 27/30 study participants did not engage or participate in intentional or purposeful college promoting strategies initiated by their academic institutions.

The three exceptions noted were Lizeth, Xochitl, and Carlos. Two of the teachers at Lizeth's elementary school attended selective colleges (UCLA and USC) and organized a field trip to these campuses. Xochitl's college prep middle school took them to local (competitive and selective) campuses including Berkeley and Santa Clara University.

For the males, there was one exception – Carlos. Carlos' mother had demanded an intra-district transfer from his zoned campus (very low performing), to a high performing campus in an upper middle class suburb. At this campus, Carlos' 2nd grade teacher asked the students to write down the names of the colleges their parents attended. Carlos recalled how this experience planted the seed about pursuing a college degree:

> *. . . the teacher told us to write down the name of the college where your*
> *family went. I remember going home and asking my mom, 'Hey mom,*
> *what college did you go to?" And the next day I told my teacher my mom*
> *didn't go to college. So she asked me where I wanted to go, and I asked*

her where she went? She said San Jose State University. So, I said I want to go to San Jose State.

However, this deliberate college related activity was conducted at an institution with significant college going capital (affluent neighborhood in Silicon Valley).

Early Validation and Psychological Support. Overall, the theme of *early validation and psychological support* from teacher and parents emerged prominently. Instances of validation were typically described as being nurturing and positive – something that, apparently, remained with the student for many years. Teachers and parents validated the participant's academic and intellectual abilities, encouraging the participant's pursuit of college. Participants referred to these influences as being either positive *or* negative – both acting as a catalyst for pursuing a college degree.

The Role of Teachers. It is not surprising that early validation from highly respected individuals might yield significant and long lasting impact for the demographic studied. As evidenced in the literature, Latinx student self identify is related to teachers' perceptions concerning their academic potential (Gándara & Contreras, 2009; Stanton-Salazar, 2011). Given the reverence and high regard for teachers by Latinx students (Auerbach, 2007), it was understandable that many participants could still recall the degree in which a teacher positively impacted their early college aspiration and continued academic resilience. As highlighted in chapter 3, academic invulnerability was highly correlated with external protective factors, most notably, teachers (Alfaro, J., Umaña-Taylor, A., & Mayra Y. Bámaca, M. (2006).

Luis recalled one of the earliest memories of positive validation of his intellectual abilities. He credits this validation with connecting his abilities with college aspiration:

I think I had the idea that college was important, maybe around 5. Maybe 6. Because I started elementary school, and . . . the teacher was really nice, and told my parents, 'Luis is a fast learner.'

One of the most emotional and inspirational responses came from Jesus. His vivid recollection of a pivotal moment that likely changed his academic future and – according to him, was one of the most influential factors that impacted his selective college outlook – occurred when he was in the 5th grade. His teacher (a Latina) validated his academic abilities and future:

Elementary school the teacher I had for 5th grade, I had a teacher named Mrs. [extracted]. And, one day she pulled me to the side and wanted to talk to me personally. At that age, I didn't know what was going on, and she pulled me aside and showed me this folder, and she tells me, she asks me if I know what it is? And, I tell her 'no' (and I'm super scared). And she tells me it's like, that I'm like a gifted student, and if I knew what that meant, and I tell her no, and she starts explaining. From then on, the way she treated me, and talked to me changed, and she expected more from me. She told me, 'This folder is always going to follow you,' so that really motivated me, and the fact that she was expecting more from me every day, and she really wanted me to continue on this path, and to go to college. I was really pushed to it.

Another pivotal moment, initiated by a teacher, occurred when Juan's 7th grade teacher introduced him to the possibility of attending a private, all-boys high school:

In 7th grade this teacher took me to this private, all male, Jesuit school. In 8th grade she helped me with the application, and my middle school principal helped me with the application. I got financial aid because of my family's income.

Monica also recalls an early incident that validated her intellectual giftedness and set her on a pathway to pursue college:

The person was Mr. [extracted], my 2nd grade teacher. He said, 'not everyone is gifted.' Because you are gifted, you should participate in an after-school program that was part of getting kids to college.

As a recent immigrant, Mayahuel recalled how her 6th grade teacher inspired her

through his words of positive encouragement:

> *In 6th grade I came to the US and had a teacher in 6th grade who instilled the seed in me. He was the one who was like, 'you can do it, you can make it.'*

And, Lizeth also had a middle school teacher who encouraged her to pursue a

selective, competitive university:

> *I had a 7th grade teacher who I would always visit, and he would tell me, oh you should go to a private college, like Occidental . . . he would tell me, 'Oh you're a smart kid, do better in high school so you can go to college.'*

These findings are aligned with the literature, suggesting that student validation

from teachers serves as a strong predictor of academic performance of Latinx students

(Alva & Padilla, 1995; Cohen & Garcia, 2014; Gándara & Contreras, 2009). The

positive results of *early* recognition and validation by teachers suggests future

interventions may yield long-term positive association with college-going rates for Latinx

students.

The Role of Parents. Encouragement and validation for Latinx children by their

parents (both in verbal form and through specific actions) has long been established in

research as significantly impacting Latinx students' trajectory to college. Research

suggests that Mexican-American students who perceived their parents as providing

educational encouragement and high expectations had stronger positive academic

outcomes (Alva, 1995; Arellano & Padilla, 1996; Ceballo, 2004; Ceja, 2004).

Furthermore, the literature regarding academic invulnerability cites parents as an

important protective factor that shields Mexican-American students from threats to their

college-aspiring identity (Alva, S.A. 1991; Alva, S.A., & Padilla, 1995; Arellano & Padilla, 1996).

However, the broad topic of parental support in general by Latinx parents is quite distinct from the following examples that occurred at a specific point in time – that is, very *early* in their children's academic careers. These early "pivotal" moments were expressed as very impactful for participants, as they recalled these examples often more than a decade later.

For example, Luis' recalled a very early memory (four or five years old) when he received validation that a selective university was not only in his path, but that he rightfully deserved a place at "one of the best schools":

> *My mom really liked education for us. She really encouraged it. I guess she, she really believed that we could, like my brother and I, and I have a younger sister too, but she really thought we could get into any school that we wanted to. Her telling me that, gave me the confidence, to say that I'm going to one of the best schools, and get the best grades, and go wherever I want. Her attitude was like, she really believed in us. Her attitude toward college education was you deserved it, that's where you belong.*

Luis' father also conveyed an early message to him, specific to pursue the "best schools" possible: "*. . . he made me believe I deserve to get anything, that I should pursue the highest degree, challenge the best, go to the best schools and all that. He's the one that made me believe that.*"

The adults in participant's lives – whether respected teachers or parents, functioned as *early* signifiers and validators of participant's talents and abilities. That this validation was recalled by participants more than 10 years later signifies the crucial power of early validation for students within this demographic.

Forced Completion: In addition to identifying the pivotal moment participants began contemplating college aspiration, the completion (meeting deadlines) of college components was an essential task for selective university admission. These pivotal moments occurred at specific times and for different reasons. However, the overriding theme that emerged regarding successful completion of components was labeled, "Forced Completion."

The term, "Forced Completion" will refer to mandated completion of curriculum or activities related to selective college admissions. These mandated tasks could have been associated with the type of colleges applied, the number of applications submitted, or qualifying criteria for a selective college (e.g. SAT or ACT prep, or AP courses). Forced completion tasks were mandated by an institutional agent, during either instructional time, at a college-going workshop, or assigned in order to receive a grade or comply with a college going program. Nine examples emerged, specifically related to "forced completion":

> *Yeah, we had this class called Senior College Prep (SCP), so essentially we did our financial aid in there, scholarships, and we met three times per week for an hour and a half. (Carlos)*

> *Well, honestly because my high school forces us to apply to 8 UCs and Cal States. (Julio)*

> *I started researching, not because I wanted to, because I was forced to. (Joaquin).*

> *Our English teacher would be like hey, we're going to the library and filling out the application. (Javier)*

> *We had a class called Guidance, and it was mandatory you had to take it junior year. (Gabriela)*

> *The class was a graduation requirement, so we had to do the project in order to graduate. (Monica)*

> *I remember once we did the questionnaires we had to research types of institutions. That's when I first started thinking about it. (Soccoro)*

> *In my high school they make you apply to a lot of colleges, so I never thought of what college was the right one. (Mayahuel)*

> *So, junior year we had this thing in English class where we had to research colleges, and that's where I learned about the college I'm currently attending. (Ramon)*

Since the selective college admission cycle is aligned with critical deadlines (Questbridge, Early Action, Regular Decision, FAFSA, CSS Profile, etc.), participants were asked about tools to help them stay on track for deadlines. The findings revealed that participants did not utilize tools, and instead, relied upon reminders from institutional agents.

Participants commented on why "forced completion" worked: "*That's why I was so organized with my college applications because it was homework, not me in my own time*." (Mayahuel). Participants who attended a college preparatory charter campus shared how "forced completion" was embedded into their campus structure: "*When something needed to be done, we were given time allotted during school hours to meet with our counselors so that everyone could take care of business.*" (Socorro).

To illustrate the significance of "forced completion," the following table represents participant responses to question, "*At what point in time did you investigate your potential college choices*?"

Table 11. Point in Time Participants Investigated Potential College Choices

MALES

Student	Point in Time	Impetus
Jesus	Junior year during winter break; summer break between junior and senior year.	Used Edupass to create and rank 30 schools. Took initiative because he feared time constraints in fall of senior year.
Joaquin	Second semester of junior year.	Forced to complete list of colleges and other components, required by peer program.
Pedro	Fall of senior year	Questbridge application
Marcos	Summer after junior year	Was required to compile list via program at Stanford called the Phoenix Scholars
Juan	Late junior year	When we did college time readings in our high school (required)
Diego	Spring junior year	Heard seniors talking about what schools they got into.
Ramon	Junior year	Required college research activity in English class.
Emilio	Senior year	One Voice LA program required list
Miguel	Sophomore year	Visited College Board site to compare costs of colleges (build list)
Luis	Freshman year	Brother was senior, applying to colleges. Made a "mental list."
Javier	Early senior year	Questbridge
Julio	Early senior year	Personal statement workshop at magnet high school
Omar	Late sophomore year	Counselor recommended he look at campuses
Arturo	Sophomore year	Investigating campuses that had his intended major
Carlos	Summer prior to senior year	Counselor at private school led discussion

FEMALES

Student	Point in Time	Impetus
Nayeli	Middle of junior year	Part of College Match program where they visited college campuses.
Yadira	Toward end of junior year.	Participation in Questbridge
Yulisa	Sophomore year	Visits from college reps to her high school.
Juana	Junior year	College Match program required draft of college list.
Gabriela	Sophomore year	Class required them to research colleges.
Citlali	Senior year	Questbridge
Mayahuel	Fall of junior year	AVID requirement and Questbridge participant.
Monica	Spring of Junior year	After the College Match tour
Socorro	August of Junior year	Personal interest in determining which campuses might yield admission outcomes.
Marina	Second semester of Junior year	Retiring teacher organized days to conduct college campus research.
Maricela	Summer of junior year	Visited college campuses as part of IB club
Xochitl	August of Junior year	Filtered searches through Naviance and CollegeBoard
Lizeth	Summer prior to junior year	Meeting with College Match counselor
Maribeth	Sophomore year	Google searches
Sofia	Junior year	Saw the Forbes List of Colleges

What is significant from this illustration is that *most* participants began investigating potential colleges as a direct result of either a "forced completion" activity in class, a requirement of their college going organization (meeting with counselor or completing a task), or participating in a timely college event (workshop, college visit). Only six participants (3 males; 3 females) recalled *independently* or randomly investigating potential college choices. These findings suggest that incorporating "forced completion" activities for college eligible high school students may potentially yield positive outcomes regarding college completion (as well as more informed college campus decisions).

WHAT Strategic Behaviors They Employed

Aside from participating in multiple college going programs, seeking guidance from peers or siblings, taking advantage of mentorship opportunities, attending Fly-In programs, and utilizing "internal" support from parents, there were other strategic actions or behaviors employed by participants. These behaviors included the types and number of colleges applied, and geographic preferences.

Types of Colleges Applied. An unusual finding in this study was that all participants (100%) applied *exclusively* to selective colleges. With exception of colleges strategically deemed by participants as "safety" campuses, all match and reach campuses were exclusively highly selective colleges. Furthermore, with exception of the "safety" campuses, all other colleges were *private* (versus public). This veers away from an undermatching study that reviewed "income typical" college choice behavior of high-achieving, low-income students. As well, it also veered away from "odd" college

application behavior where high-achieving, low-income students apply to one non-selective, public/open-access colleges, and one extremely high "reach" campus on the other extreme, with nothing in between (Hoxby & Avery, 2011). This extreme college choice behavior is also consistent with the researcher's background in coaching low-income, high-achieving Latinx students. Many of these students mimic these "income typical" and "odd" behaviors as noted above. And, this finding veers from a recent study where low-income, Latinx student application behavior was studied, indicating this demographic did not apply to selective colleges, even when they were qualified and/or guaranteed admission (Black, Cortes, & Lincove, 2015).

Number of Colleges Applied. In addition to the findings regarding types of colleges applied, study findings were also *highly* unusual in the number of applications submitted by participants. On average, study participants applied to 16 colleges – spanning a low of seven applications to a high of 27 applications submitted. This average is significantly higher than the national average number of colleges applied by students in the U.S. According to the most recent survey by the National Association for College Admission Counseling, only 29% of students (nationally) applied to seven or more colleges. Gender differences in application behavior were not significant as both males and females applied to similar number of colleges.

There were slight differences in the average number of college applications submitted based on high school campus type and immigrant status. However, there were no discernible differences between participants who utilized many college going resources and those who utilized few (or none). On average, participants who utilized at least *two or more* college going resources applied to 10 or more colleges. And,

participants who utilized *less than two* college going resources (or no resources at all), still applied to 10 or more colleges. In other words, regardless of the number of resources utilized, participants still applied to 10 or more colleges.

The relationship between the total number of colleges applied and the type of high school campus attended was only marginally significant. For example, participants attending private high schools applied to an average of 14 campuses. Participants who attended magnet campuses applied to an average of 15 colleges, while participants attending public high schools applied to an average of 15 colleges. However, participants who attended charter high schools applied to an average of 18 colleges.

The subgroup with the highest number of applications submitted (on average) were undocumented participants. Of this group of four students, their average number of applications submitted was 19.5 – higher than any other subgroup. Participants explained their rationale for the number of applications was due to their immigrant status. Namely, they expressed vulnerability and uncertainty as to whether any college would assume 100% of tuition and fees on their behalf. Because undocumented students are not currently eligible for Federal student aid, this factor impacted their college selection phase. One undocumented participant who held DACA status believed colleges would not view him favorably, and therefore would likely deny him admission. Another undocumented participant applied to 27 colleges, for fear that no school would take on his financial "burden."

Top 3 Reasons for College Choices. Participants were asked, "*What was the number one criteria that determined where you would apply and where you would enroll?*"

Financial Aid. Although varied and diverse reasons given for applying and enrolling, most participants cited financial aid as the most important reason. In other words, many participants cited reasons such as ranking of the academic major or campus climate as important reasons to apply. However, when it came to decision time, it was nearly always financial aid. In fact, more than half of participants cited financial aid as the number one reason. This is understandable, given the socioeconomic background of the study participants. And, more than half of participants enrolled in an Ivy League institution, where a "full ride" is common due to the large endowments.

Omar put it bluntly, "*Like, I wasn't going to waste my time filling out an application for a school that at most would give me half tuition, when tuition was $50,000*." Similarly, when Javier was asked if he engaged in any type of selection criteria to determine which colleges to apply? He said, "*No, not really (laughter). The only criteria was financial aid. That was my only thing*."

Several students talked about a list they were given (by an intervention program) that listed college campuses covering 100% of aid for students. Many others talked about Questbridge partner colleges that offered a "full ride." Overall, the finding that financial aid was critical is not new or unusual for this demographic. Ultimately, financial aid was more important than all other decision-making factors including location, diversity, or college ranking.

Geographic Preferences: Given that Mexican American families tend to have strong familial ties to their children and typically prefer their children stay close to home, it was surprising that the topic of "distance" was not a significant finding. Many participants described their defiant and steadfast attitude toward their goal of attending

colleges on the east coast (synonymous with "highly selective campuses"). While many participants stated their parents objected to their decision to enroll at a college on the east coast, their responses represented their determination to matriculate at a college outside of their geographic region. The following statements capture this determination:

> *I was prepared for my parents not letting me go somewhere. I told them, 'You don't have to pay anything, so you have no voice.'* (Julio)

> *My sister wanted me to go to a school close, but I didn't really care.* (Arturo)

> *Early on, I knew I didn't want to be home.* (Sofia)

> *No, we didn't discuss locations. Well, at least not, it wasn't' much of a discussion I would say. It was just, 'I want to go to the east coast.' That was probably sophomore year of high school.* (Juan)

> *I just told my parents I was going to the east coast. They were like anxious for me of course, nervous for me, it was a big change. They were supportive. They didn't try to stop me or change my mind.* (Jesus)

> *It was a topic of discussion because she did not want me to go away. But I don't think that influenced me.* (Maribeth)

> *I feel like we had one conversation when my oldest sister said she was going to apply to Berkeley. My parents were like, 'No, you are not going to apply there.' When it came to me, I just applied and didn't ask for permission either. I think if I had to ask them in advance, I would have been scared, and they would have been scared to let me go.* (Juana)

Most participants also indicated they knew fairly early they would matriculate at an east coast campus:

> *Like I knew I wanted to go to the east coast. That was probably the #1 thing that I was focused on. I was looking for small schools on the east coast. I knew I didn't want to stay in California.* (Xochitl).

> *I kind of knew I wasn't going to stay because there's a lot more to see and experience, and the academics are better elsewhere.* (Marina)

*I saw on TV that a lot of kids were graduating from high school and leaving out of state, even though I didn't know anyone who went out of state, I started to think about going out of state. (*Gabriela)

Sophomore year is when I told my parents, 'Oh, I might go to a college outside of California.' They laughed at me. (Ramon)

However, there were a few exceptions. For example, Marcos got into a heated argument with his mother just prior to application deadlines. His mother did not want him to apply to colleges out of state, and for this reason, Marcos did *not* apply to any Questbridge partner colleges. Fortunately, he was admitted to an extremely selective private college only 5 hours driving distance from his home.

Similarly, when Julio began to receive admission offers from east coast colleges, his father began putting pressure on him to remain in the Los Angeles region. In fact, he bribed him with a brand new car: *Even when I was choosing the schools, he told me, "hey, look outside!" It was a car dealership across the street. It was a brand new Camaro. He said, "Go to UCLA, and you can have that brand new car."*

The findings of geography are inconsistent with the literature regarding Latinx students and proximity to the familial home. This is also inconsistent with Latinx students in my practice, whose parents often insist they remain close to home (despite compelling financial aid packages). Additionally, this finding is inconsistent with historical gender differences –where Latina students tend to experience greater pressure from family members to remain close to home (compared to Latinx males).

However, the findings were aligned with *recent trends* in geographic proximity of colleges and Latinx students. For example, the number of Latinx students who choose to enroll in college campuses more than 50 miles from the family home has risen from 46%

in 1975 to 59% in 2006. Likewise, the number of Latinx students who enrolled in

colleges within 10 miles of the family home has dropped from 30% in 1975 to only 15%

in 2006. The proportion of White freshmen students who attend college campuses far

from home has remain unchanged, at 66%. (Hurtado, Saenz, Santos & Cabrera, 2006).

The extension of geographic reach is a promising trend, as research confirms

LIHPFGMAS do not tend to reside in areas near selective colleges. By extending their

geographic reach, LIHPFGMAS may increase odds of persistence, stronger financial aid

packages, and odds of matriculating at a campus aligned with their academic potential.

Diversity and Inclusive Campus Climate. Campus climate and racial hostility –

vis-à-vis diversity and inclusion, was raised as a concern by participants as an important

or very important consideration in their college choice behaviors. Throughout the

interviews, this issue was raised *60 times* by participants. Given that all participants

matriculated at predominantly White institutions, it was important to analyze whether

perceptions about diversity and inclusion may have influenced the decision-making stage.

During the college application and enrollment phase, participants responded

negatively to experiences perceived as hostile or unwelcoming to students of color

(specifically, Mexican-American students). These perceptions negatively impacted their

college application and enrollment decisions. Experiences were based on campus visits

to colleges and perceptions were altered through peer testimonials on social media.

For example, Carlos did not accept an admission offer from Bowdoin due to the

hostility he experienced at this campus while participating in their Fly-In Program. His

decision was partially based on the events he witnessed while visiting. However, he

placed more importance to the events that occurred *after* the incident (which impacted his

decision to enroll at a different campus):

> *When I was at Bowdoin, this group of rowing team dressed up like cholos in bandanas, and sombreros, and I was like, man, this is not a good way to visit a school you want to go to. In the following weeks, the administration didn't do much in terms of punishment, or addressing it, or the President of the school sent one email and said it wasn't appropriate or mature. It wasn't a good response. It didn't seem like a place that fosters a safe place for Latinos or first gen. Two weeks later, another group of students went to the dining hall in do-rags, and bandanas. At the end of the day I'm glad, everything is for a reason.*

Marina also mentioned racial climate regarding potential college campuses. She

gave consideration to comments by peers on public forums in gauging the climate at a

particular college:

> *There were super aggressive comments. They were talking about privilege and you have to own up to your privilege, and going back and forth between a few students who were white and students of color. I remember thinking to myself, "If these people are going to be my classmates, I don't want to be at that school."*

Javier discussed lack of cultural sensitivity during the financial aid process:

> *"This is something that I got really mad at Yale for. I used the non-custodial waiver and Yale was very upset about it. When he asked where my dad was, I told him he was in Mexico, and he told me, "Well, go get him in Mexico then." I didn't feel welcomed. Yes, it was a pretty discouraging experience.*

Several participants also expressed the ways in which diversity and inclusion (or

lack thereof) was an important factor in their application and enrollment decisions:

> *I visited Yale and I didn't like how students were condescending. I wasn't comfortable with schools that didn't have a balance." (Monica)*

> "*My kind of people don't go there."* (Pedro)

> *"I didn't pick them because their campus was in a rural area in Indiana, a very white population."* (Citlali)

"I wanted to go to a university that had some type of Latino population – like I didn't want to be like 1 of 2 in the entire university." (Gabriela)

"When I visited in the fly in program, they had students sitting at tables and we could ask questions. One of the students was from El Paso. He also grew up in Mexico. He is from Juarez, and moved to El Paso . . . It was cool to see someone who was just like me, but a year ahead, it was inspiring, and it was welcoming." (Maribeth)

"What other stuff is available for culturally, like Latino culture, Black culture, things that people find comfort in, whether they are available in those colleges." (Miguel)

"Brown also had a good welcome for students of color, so I got to talk to a few people." (Javier)

"Once I had all the colleges I was considering applying to, I used Excel and created a spreadsheet. I organized the colleges by financial aid, or by location, if that was a factor, or I'd organize it by the percentage of minorities that go to that school." (Joaquin)

"I got an excel spreadsheet and ranked the factors that were most important to me. Financial aid, diversity, electives, class size." (Yulisa)

"Every time I would visit the colleges, I would visit their cultural campuses because diversity was really important to me." (Marcos)

"I know that Brown had a mariachi (laughter), so I went to Brown and spent time on admitted students' day." (Javier)

"Columbia prides themselves on diversity. But I like experienced that first hand when I visited." (Maribeth)

"So like diversity was an 8, I really wanted diversity. I know that if I had gone to a school with 2% diversity, that wouldn't work. Diversity goes far beyond race, income diversity, ethnicities, beliefs." (Yulisa)

"One of the things I was looking for, like a Trans friendly campus, I went to an alternate database. It was pride campus by college (campusprideindex.org). They list all of the universities at least in the US, colleges that would give, schools that were LGBTQ friendly." (Arturo)

One campus in particular – Princeton University – was raised by several participants as being an unwelcoming campus for students of color, particularly Mexican American students. A few comments shared by participants follow:

> *When I visited Princeton, it was not diverse at all. You could tell the people there had a lot of privilege, but that wasn't the factor, it wasn't something I could describe, it was just not for me."* (Maribeth)

> *"How minorities don't have a good experience in those schools. I also had the experience of my brother who went there, and he didn't like it. Not a good support group, for minority students."* (Joaquin)

> *I went to the pre-med meetings at Princeton. I guess the people they chose to host the presentations seemed kind of "cut-throaty" it wasn't really meant to appeal; it wasn't really appealing to me. They were just showing off, it seemed like. When I was talking to the counselor herself, she wasn't really telling me how great Princeton was, she was like "oh, what other school are you thinking about." She was like, oh, it's going to be harder, but not telling me great things about Princeton.*
> (Marcos)

Julio's comments about Princeton were especially significant, given he was offered a "full ride" but opted for Harvard instead:

> *I hated Princeton. I don't know if it was, partially because I had the mindset . . . I didn't like the attitude of the students. The school didn't do much to make you feel welcome. You know how Sonia Sotomayor, she had the exact opposite that I thought. I always tell people that.* (Julio)

These overall findings suggest that participants considered more than just location, majors offered, "name" and prestige, or financial aid provisions. The findings also revealed the importance of diversity and inclusion, as participants "ranked" this topic in their decision-making process. This finding is especially insightful for those in recruitment, outreach, and enrollment.

WHERE – **Digital Technology**

Digital technology resided in an exclusive category as it related to one of the three research sub-questions: To what extent, if any, did various digital technology resources or "tools" influence college choice? This separate question was tailored to address the potential of digital technology tools – namely websites, Smartphone apps, or social media sites that may have influenced, impacted, or provided participants with selective college going guidance. This research question focused on "where" participants obtained critical selective college information.

Participants were asked six questions specific to digital technology usage. Throughout the interviews, there were 183 coded segments that emerged related to digital technology. The following represents the names of these tools, as they were referenced by participants in the interviews.

Table 12. Digital Tools Utilized by Participants

Digital Tools Utilized by Participants		
Facebook (22)	Questbridge (4)	Chat Rooms & Forums
College Board Big Future (13)	College Website (3)	College Rail
Google (13)	College Prowler (2)	College Weekly
College Confidential (10)	EduPass (2)	Forbes
Niche (9)	Net Price Calculator (2)	High School had tool to filter
YouTube (9)	AboutCollege.com	colleges
US News & World Report (7)	Allen's Test Prep app	Posse Foundation
Cappex (6)	App for Test Prep	Smartphone to complete
Blogs (4)	Campus Pride	application
Naviance (4)	Cathy in College (via Stanford)	Top 100 Colleges
		Top 50 Schools for first gen students
		Yahoo Answers

Social Media. Participants utilized social media to achieve different college goals. The most common reason given for using social media was to learn about a specific campus in a more passive way. Meaning, participants acted as voyeurs,

"following" campuses by reading blogs, watching videos, or reading reviews on various media. While they did not *actively* engage in discussion with other candidates on social media, they relied significantly on testimony from what they considered to be a trusted source (their peers). Frequency and exclusivity of social media usage is documented below.

Table 13. Frequency & Exclusivity of Social Media Usage

Number of Social Media Sites Used by Participants			
Only 1 Source	**2 Sources**	**3 Sources**	**4 Sources**
(11 Participants) Facebook 10 Twitter 1	(8 Participants) Facebook & Twitter 3 Facebook & Snapchat 2 Facebook & Instagram 3	(5 Participants) Facebook, Instagram, & Snapchat 4 Facebook, Instagram, & Twitter 1	(4 Participants) Facebook, Instagram, Twitter, & Snapchat 4

The few participants who used Instagram and Snapchat stated it was limited to seeing pictures students were posting about the campus. One participant used Twitter to follow campuses he had an interest, or to follow specific hashtags. Lastly, two participants did not utilize *any* form of social media.

Facebook. The social media site of choice for most participants was Facebook. Seventy-three percent (22 participants) used Facebook at some point in their college search, investigation, and decision phase; 11 participants used Facebook *exclusively*. In terms of a "point in time" when participants either created a social media account and/or were actively engaged on these sites, most participants stated it was during the decision-making phase.

The "Admitted Students" Facebook forum was a form of a blog, in that students posted/shared personal information or testimony. Twenty-two (22) participants joined "Admitted Students" Facebook pages to get acquainted with peers who would potentially

become part of their incoming freshman class; or to learn more about their peer's
experiences at the campus. Some of these Facebook forums were formally sanctioned by
the university, and others were unauthorized. This is an interesting platform because
many participants had multiple offers of admission, and therefore could join multiple
"admitted students" forums. Luis recalled joining the Princeton admitted students group
and became annoyed with the "bragging" as he called it:

> *The one thing that was negative, for me at least, was being told about*
> *scores, or other schools kids got into, that kind of people showing off.*
> *That was annoying. There were people posting about other schools they*
> *got into, and would talk about their SAT scores or AP scores. It was a lot*
> *of bragging. Yeah.*

Marina received admission to several campuses. While in the decision-making
phase, she followed all of the campuses Admitted Facebook pages to hear directly from
students. The personal testimony in fact influenced which campuses she eliminated from
consideration:

> *I remember joining all of the schools that had one, that I got accepted to.*
> *I think it was interesting to see how students interacted. I know that it's*
> *silly, but when I look back it's interesting to see what influenced me. I*
> *remember seeing on a student's posting, 10 facts about me. There were*
> *super aggressive comments. They were talking about privilege and you*
> *have to own up to your privilege, and going back and forth between a few*
> *students who were white and students of color. I remember thinking to*
> *myself, 'If these people are going to be my classmates, I don't want to be*
> *at that school.'*

Javier used the admitted Facebook page for his campus (an Ivy League school) to
gain first-hand testimony from low-income students like himself:

> *There was a Facebook group for low-income students, and they were kind*
> *of, they were like information passed down in that group, explained in*
> *simpler terms, and we used that to fill out our papers.*

Many students stated they did not use social media at all, up until the last 30 days before the Statement of Intent to Register (SIR) was due. At that time, participants created accounts and began visiting social media sites to learn more about particular campuses. Regardless of the amount of information already obtained (financial aid, research about majors, etc.), participants still wanted to gain personal, first-hand testimony from their peers.

It is clear most participants relied exclusively upon Facebook (as a social media tool) during the college search and decision phase. And, most participants stated they either (a) had a Facebook account but did not use it; or (b) did not open an account until after admission decisions were sent. The findings are consistent with the scant literature that exists regarding Latinxs and digital technology usage. For example, that most Latinxs who are online will visit Facebook, Instagram, LinkedIn, and Twitter – with Facebook being the most widely used platform (Krogstad, 2015).

College Board. It makes sense participants would use the College Board website. This site is run by the organization that created the SAT suite of products. Because students are required to log into their site to register for their exams (SAT, Subject Tests, and AP exams), to obtain test scores, and to send test scores to colleges, they have a built-in audience. The College Board hosts a college search platform called, "Big Future." Thirteen (13) participants stated they used this site to search and filter potential colleges.

Google. As evidenced by the distribution of tools above, a simple Google search was a popular tool participants utilized during their college searches. In some cases, Google was the only digital resource utilized. Participants cited using Google for several functions including looking up a specific college, comparing one college against another,

or learning about their financial aid programs. Nayeli said, "*I remember I would go online and search colleges, just to see what they would say. I would do a Google search.*" Likewise, Pedro shared, "*So senior year was really time to figure it out. It was a lot of Google. I just didn't have an understanding.*" And, Pedro offered advice to future students, "*Number two would not be a afraid of Google. Google is a good tool to use.*" Mayahuel echoed that sentiment, "*It was mostly Google. I mostly don't like looking at videos or Youtube. It was more looking to get help on a topic, Google search.*"

College Confidential. The website College Confidential was also very popular with the study participants. One in three participants utilized this site at some point during their college application process. College Confidential is a public, message board based, online forum where students post questions, comment, or respond to various college related topics of particular concern regarding selective colleges. Participants cited using this site to learn more about their odds of gaining admission to specific campuses.

However, the overall opinion expressed by participants was that the site was too negative, and that it was tailored for the top 1% of high achieving students in the nation. Because of the typical profile of students utilizing this tool, participants stated they felt inferior, demoralized, and underqualified. Participant experiences on College Confidential illuminated how social and cultural capital is indeed maintained and reproduced – where knowledge of certain programs and strategies, as well as performance in college entrance exams, is valued and coveted. The College Confidential site also reinforces the tenants of Critical Race Theory – that due to the historic academic

inequities resulting from institutionalized racism, it has rendered marginalized youth unprepared to compete in this echelon of selective colleges. (Zamudio, et al 2011).

Understandably, many students expressed feeling intimidated and demoralized about their odds of admission after reading profiles of candidates with perfect SAT or ACT scores, or those who had earned international status. Miguel shared his thoughts: "*College Confidential, in retrospect, it's not good to be looking there. It gets you really stressed out. People post insane qualifications, perfect SAT scores*." The stress factor from this site was also referenced by Marcos: *There were a lot of websites and stuff, one is very popular [College Confidential], that in retrospect made me anxious and stressed out. It wasn't a good experience.*"

Emilio's comments represented his awareness of how certain students with social capital dominate the selective college arena. Although he would visit College Confidential to get a sense of eligibility for programs, he also acknowledged the distinction between social capital and extraordinary merit:

> *Whenever I was trying to get into a specific program, I'd go to College Confidential and look up summer programs to see qualifications for specific schools. I would kind of gage where I was. The kids on College Confidential were like amazing Nobel Prize Laureates.*

It was interesting to learn the process of how participants ended up at the College Confidential site. They explained that they initially conducted a Google search to answer a particular question related to selective college admissions. Due to the nature of the question, the College Confidential site would most frequently appear in the results page. Being driven to the site, participants reviewed the information posted, but left feeling demoralized and inferior.

Niche: The website, "Niche" was referenced as a digital tool utilized by nine participants. Niche is a public website that ranks colleges, provides statistics, and conducts college reviews. However, the appeal for applicants was the student-written reviews, the polls, and the detailed statistics on non-academic factors such as "diversity" or "campus life." In other words, the appeal is consistent with participant's desire to hear first-hand testimonial from peers (versus subjective national college rankings). For example, Carlos spoke about the influence peer testimony had over his final college decisions:

> *I would use Niche as well, for student reviews on like, there are different categories, like housing, food, diversity, there's off campus scenery, library, or programs, stuff like that. Students put summary of what it's like there. . . . If I saw a trend, like this school sucks at math, and like everyone put that, I'd be like, no, never mind. If it was just one student, it wouldn't really affect me. Unless I saw a lot of people say the same thing.*

YouTube. Only nine participants referenced utilizing YouTube as a tool to learn more about specific colleges or to gain information about selective colleges. Participant's engagement rate is significantly lower than the average YouTube viewer – at 74% for Latinxs (Anderson, 2015). However, metrics for average engagement rates are focused on general video watching, not for college admission information gathering. Although the rate was moderately low, it was still an interesting finding. The finding suggests that participants within this demographic do seek alternate sources of information online, and that videos are a preferable way to gain information.

Various College Websites. From the figure above, it is clear participants visited several "one-off" websites during this phase. Many different websites were mentioned by participants as sources utilized at some point during the college application process.

Participants stated they visited websites at two critical points in their college selection journey. First, when they were considering which campuses to apply during the investigative phase (as they narrowed down their college choices). And, second, while they were weeding out campuses and identifying their top choices (and ultimately, the campus they would enroll).

While perhaps counterintuitive, only 2 participants indicated they visited a college's website to learn more information. This number seems very low since a college website would seem to be a most obvious source for first-hand information. Unfortunately, there was little follow-up or expansion about this behavior by participants.

Blogs: First-hand student testimony – in the form of blogs, was a very popular information source for participants. Some of the blogs were sanctioned by the university, and often linked to a Facebook page for admitted students or their admissions website. Other blogs were private, run by students to share personal testimony. Finally, other blogs were commercialized, and embedded in a major college forum – such as Niche and College Confidential.

Participants relied heavily on the comments and opinions of their peers who posted on these blogs. Many students spoke of how reading a student blog did influence their opinion regarding a particular university. Notably, a few participants stated that the opinions and comments of other students positively or negatively impacted their college choice behavior. Often, the comments impacted their decision to accept or reject an offer of admission. Gabriela discussed her personal experience with blogs, and how she used this tool to make decisions about colleges:

I'd google student's Tumblr's and student's blogs, and look at their experiences at the universities. It was generally just blogs and stuff. That also influenced why I didn't go with Brown. I remember coming across a blog post about some students saying they had certain experiences. It was actually their freshman dorms, and students talking about their open curriculum. For another university I was going to apply to Carnegie Mellon, but eventually decided not to apply because I read a lot of blog posts about how students said it was very competitive and cut throat, and saw these comments repetitively from other websites.

Marina spoke about the influence peer testimony had over final college decisions:

I remember joining all of the schools that had one [Facebook page], that I got accepted to. I think it was interesting to see how students interacted. I know that it's silly, but when I look back it's interesting to see what influenced me.

Emilio was one of the few participants who intentionally sought out unauthorized college websites to gain "inside" information: "*I looked at unofficial websites about colleges. I used College Prowler.*" The site he referenced was bought out by Niche, and hosts a review and ranking system from student responses. He said, "*So, College Prowler, is going to be your best friend.*"

The blog, Cath in College, is run by a current Stanford student. Maricela referenced this site: "*Stanford has this girl that blogs, Cathy in College, so I looked at that.*"

Aside from personal blogs, another type of blog was mentioned by participants – the Questbridge blog entitled, "The Bridge Blog." This digital tool is more of a magazine style (article based) platform, versus a traditional blog with personal anecdotes. However, because there were many Questbridge Scholars or Match candidates, this site was referenced by participants as a useful and intuitive information source.

Apps: The concept of an "app" (a software application on a mobile device) seemed to be an intuitive resource for participants based on function (ease of use), practicality, and cost. This was especially true since 100% of participants owned a smartphone. However, *only one participant* (a female) used this tool for any college related function including researching campuses, comparing campuses, or during the selection and enrollment phase. Although two other participants did use an app, the purpose was not regarding college selection. One participant used an app designed specifically for financial aid purposes for international students. The participant was undocumented, and therefore seeking information about FAFSA for students considered "international" applicants. The other student used an app for SAT test preparation – *not* as a tool or guide during the college application nor selection process.

College Cost Tools. It is interesting the actual behaviors of participants (digital tool usage) were not necessarily consistent with their stated priorities. For example, most students stated *financial aid* as being the most critical factor determining their application and enrollment behavior. However, as evidenced above, the Net Price Calculator tool was only referenced twice. It unknown whether the students found financial aid information on the college websites or whether they knew this tool existed.

Finally, after inquiring about any type of digital tool used during the college research, selection, application, and enrollment phase, a seventh question was posed as a theoretical inquiry. This question was designed to understand participant's views, in retrospect, concerning tools that *would have been* especially helpful for them in their selective college search. The question follows:

As a recent high school graduate, and considering all of the knowledge you've accumulated in the last four years, I'd like to chat with you about an "ideal" world of technology. In this ideal technological world, there are tools that exist to help students, like yourself, navigate the college admissions process. Keep in mind, this is an imaginary world, so technology can solve many problems. Imagining this world, please share with me how you imagine technology would help you learn about college.

The responses from this question revealed that many participants shared the same preferences in terms of ideal resources to support them in the selective college search phase. One in four participants described a "virtual" tool that would have served as a virtual campus visit. They believed this digital tool would be ideal for low-income students because it would eliminate the cost of a round-trip airline ticket. By having a virtual means to experience the college campus, participants felt this would be an ideal way to gain the experience without the cost of travel.

As Carlos described it, "*You know where you can do teleportation, go straight to the school and check them out, physically, be there and experience the school.*" Maribeth gave a vivid description of what this tool would look like:

So a virtual tour of the campuses, and having that experience of being on campus and interacting with students, like a virtual campus tour. The screen would be like a 3-d representation like you're there, you'd walk on campus, you'd visit the dining halls you'd visit the dorm rooms the lounges where students hang out, the library where student's study, the classrooms and might peek at a lecture happening, just so you know what kind of environment it is.

According to Jesus, in the ideal world, *"every college or university would have some type of virtual tool."*

Overall, in terms of all digital technology usage, two important findings emerged. First, that in the investigative and application phase, the College Board's "Big Future"

site was the most popular tool utilized. Participants reported going to this site to compare and contrast campuses, thereby creating their "shortlist" of colleges. It is unknown whether participants utilized the filtering tools on this site, or simply plugged in a list of existing colleges to compare (without considering test scores). As stated earlier, this tool has promise in an undermatching context because student's college entrance exam scores are accessed on this site. Therefore, for those high performing students (similar to study participants) with strong test scores, the filtering tool may direct them to more selective campuses aligned with their academic profiles. Future research conducted by the College Board may help determine whether their filtering tools could mitigate undermatching of LIFGHPMAS.

Next, after learning of admission decisions, participants utilized "Admitted Students" Facebook pages to learn more about the college, obtain testimony from peers, and gain an authentic (what they felt was unbiased) sense of the campus culture. The findings make it clear that participants valued, preferred, and relied on peer testimony *over any other source* during their final college decision making phase. This was reflected in the frequency and exclusivity of forums visited (Niche, College Confidential, Facebook Admitted Students pages), and in the medium preferred (blog style, first-person testimony).

This finding is significant for several reasons. First, it validates the extent "peers" trump all other objective or subjective sources of information for the demographic studied. Based on the intellectual capacities of participants, they certainly had the wherewithal to identify other sources of legitimate information. Yet, when it came down to the final decision-making stage, they relied on peer testimony. Second, it suggests

participants *trusted* testimony of their peers – perhaps over the stated mission and values posted on university websites or the rankings posted on annual reviews (US News & World Report, Forbes, etc.).

Lastly, the overall findings of digital technology usage by LIFGHPMAS bring up the concept of *familismo* – the valuing by Latinxs of family over the individual. In the context of this study, the online community may serve as a proxy for the extended *familia*, where individual members of this inclusive community entrusted the opinions and values of overall group or family. As evidenced by the preferred platforms and content of participants, it was clear the most popular and highly used digital tools had an element of *familismo* embedded into the medium's core platform. These types of sites were exemplified by an open forum, shared venue, and communal space, including Facebook (22x), College Confidential (10x), Niche (9x), Prowler (2x), and various blogs and forums (6x). What is common about these sites is the way in which the opinions and contributions of the community have value. Trust is given, shared, and reciprocated within these digital communities, versus an individualism approach. The concept of *familismo*, represented in digital forums, may prove to be an effective platform to mitigate undermatching.

On the surface, the availability of digital tools may appear to be a promising avenue for marginalized students to mitigate undermatching. Foray into this digital realm, as an open and accessible platform, seemed an obvious way for participants to combat lack of social capital in order to navigate the complex world of selective college admissions. However, in many contexts, this proved to be a stark reminder of participant's critical lack of social and cultural capital.

For example, when participants visited sites such as *College Confidential*, it was clear the community of students who posted in this forum had access to highly valued resources such as key programs, knowledge, and strategies – all of which highlighted the compounded effect of belonging to privileged and affluent communities. Furthermore, visits to these sites highlight the critical dependency upon which social networks or connections between and among individuals or communities inform *which spaces* to enter.

In other words, while digital technology is theoretically available to any student with access to the internet, knowing which space to enter (among the billions of informational sources) exemplifies the essence of social and cultural capital theory. While participants had access to any (public) online site, they did not possess the capital to narrow their digital technology usage. Participants lacked insider knowledge to inform and acquire strategies to use digital technology as a form of capital for social mobility. This lack of capital was limited to and resulted in independent Google search terms directing them to random sites. Absent a vetting process informed through close social networks, participants did not have a shortlist of timely, applicable, and helpful sites that could supply critical knowledge in their college search process.

On the other hand, digital technology allowed participants to join several virtual communities that were previously hidden or unavailable to them. These communities included the "admitted students" Facebook pages (a closed community by invitation only); online organizations catering to first-generation college-going students; Questbridge's "Bridge Blog" and other personal blogs written by college students. However, without exception, these resources were only made available by invitation

only, and to participants at the tail end of their college search journeys. Without *early* membership in relevant social networks, the capital gained from these communities was secured very late in the application and/or enrollment process.

In addition to social and cultural capital theory, the lens of CRT exposes vast inequalities that exist along racial lines. Participants who entered these privileged digital spaces immediately experienced the manifestation of historical racialized institutional policies and practices. They experienced how racialized practices have (and continue to) oppress and subordinate marginalized students – making them poorly equipped to compete with their White and Asian counterparts. In these spaces, the reproduction of racial and social division is still shaped and designed by racism. Digital communities, such as *College Confidential*, refute the utopian theorization of digital tools as racially neutral and instead, create and maintain digital segregation. These highly segregated digital spaces represent a micro level of analysis into the larger, sociological aspect of current racially segregated educational communities. In effect, instead of serving as an "open gate" to permeate the digital divide, many forms of digital tools serve as a structural subordination of students of color. Digital tools, therefore, serve as another representation of the systemic oppression of Latinx students that benefits and privileges Whites (Yosso, Parker, Solórzano & Lynn, 2004).

Summary of Findings

Conducting comprehensive interviews with 30 participants revealed many themes and patterns. The findings analyzed how participants mitigated undermatching – how they navigated complex institutions, when they engaged in particular behaviors, where

they identified resources, and how they derived inspiration and encouragement. Despite lack of capital, lack of resources, and lack of college-going knowledge, participants indeed avoided undermatching and successfully enrolled in a highly selective academic institution aligned with their intellectual abilities and potential.

The study revealed the magnitude of resources utilized – outside of their respective institutions –to successfully navigate the complex world of selective college admissions. Participants did not rely on traditional, institutional resources (e.g. AVID, GEAR UP, or Puente), conveniently located at their high school campus. Instead, they were required to identify local, regional, or national college going programs that were more aligned with their academic profiles and selective college goals.

The study also revealed that early influences by teachers and parents were the most influential in terms of their long-term selective college admission goals. While teachers validated participants early on – validating their intellectual potential as candidates for selective colleges, parents served as the strongest psychological force, above all other influences.

Siblings and peers were also prominent themes. Older siblings influenced participants by providing knowledge and support about selective college admissions, while peers functioned as sources of information for college going programs and activities. Peer-related testimony was proven to be a highly-trusted source during final college enrollment decisions, more so than any other sources of information.

Self-Doubt and Lack of Confidence. While the psychological concept of self-esteem and confidence was not part of the research questions, this theme emerged prominently. Findings are included to illustrate the significance of participant's self-

perceptions concerning admission outcomes respective of their talents and abilities.

Given the extraordinary accomplishments and intellectual capital of participants it would

be assumed most would be confident about their college prospects. However, more than

half of participants expressed they were underqualified, or "lucky" to garner a spot at a

competitive college. There were 72 instances where "self doubt" emerged in the

interviews, typically followed by the inquiry, "*Prior to your decision regarding which

colleges to apply, how did you decide whether or not you were a strong candidate for a

particular college?* Participants were self-deprecating, expressing reservations for their

academic qualifications and competitiveness in the selective college admissions arena.

The following represents a sampling of the responses (organized by females and males):

> *"I didn't think I would get it; I was an average potato."* (Citlali)

> *"Actually, I didn't think I was a high candidate. I didn't think that I could get anywhere in the Ivy Leagues."* (Sofia)

> *I only applied to 4 Ivy Leagues because I didn't feel I would get into most Ivies.* (Monica)

> *I lost hope and felt I had zero chance through regular admissions.* (Mayahuel)

> *I don't think I ever really decided I was a strong candidate. I don't think I ever felt certain I was.* (Nayeli)

> *I didn't think at all that I was good enough to get in. I didn't think I would even get Waitlisted.* (Juana)

> The male participants responded to this question as follows:

> *I mean, I didn't think I was going to get into any schools, just because of who I am, I doubt myself a lot.* (Carlos)

> *Like I guess I underestimated my performance, my qualifications.* (Omar)

> *Honestly, I didn't think I was a strong candidate.* (Julio)

Oh God (laughter) I would say I didn't know if I was a good academic fit. I would just try all of them. (Javier)

I felt I was lacking, I was so scared that I wouldn't get in anywhere, that I would apply to programs that had no relevance, I was just doing too much. (Miguel)

I didn't feel that I was desirable. (Pedro)

Well, I personally didn't think I was a good candidate. (Ramon)

I applied this many (27), because part of it was I was scared I wouldn't get into anywhere. So, if I applied to a bunch of schools someone would accept me. (Jesus)

In addition to self-doubt, many participants chalked up their admission offers (positive outcomes) with "luck." For example, Citlali stated, "*I guessed and hoped and prayed! (laughter). Jesus was watching over me, and did some magic with la Virgincita, so here I am.*" The prevalence of these statements highlights how participants viewed themselves in light of their intellectual giftedness, exemplary academic profiles, and exceptional accomplishments. Yet, all participants applied exclusively to extremely selective private colleges. Stated another way, their espoused perspective concerning college choices was inconsistent with their college choice behaviors. Future research could address this unusual finding, in order to better understand the psychological disposition of students within this rare demographic.

Overall, the findings supported the psychological theory of academic invulnerability of Mexican-American students (Alva, 1991; Alva & Padilla, 1995; Arellano & Padilla, 1996; Gonzalez, R., & Padilla, A. M. (1997). The findings revealed how participants benefited from many protective factors including environmental – parents, siblings, extended family, teachers, counselors, as well as personal factors – high

motivation, strong sense of self, and attitude, that protected them from the threat of undermatching. Ultimately, the strongest protective factor was parents, whose early and long-term influences yielded the most impactful and long-term benefits.

To illustrate this chapter's findings, the following representation highlights and synthesizes the research questions and subsequent themes:
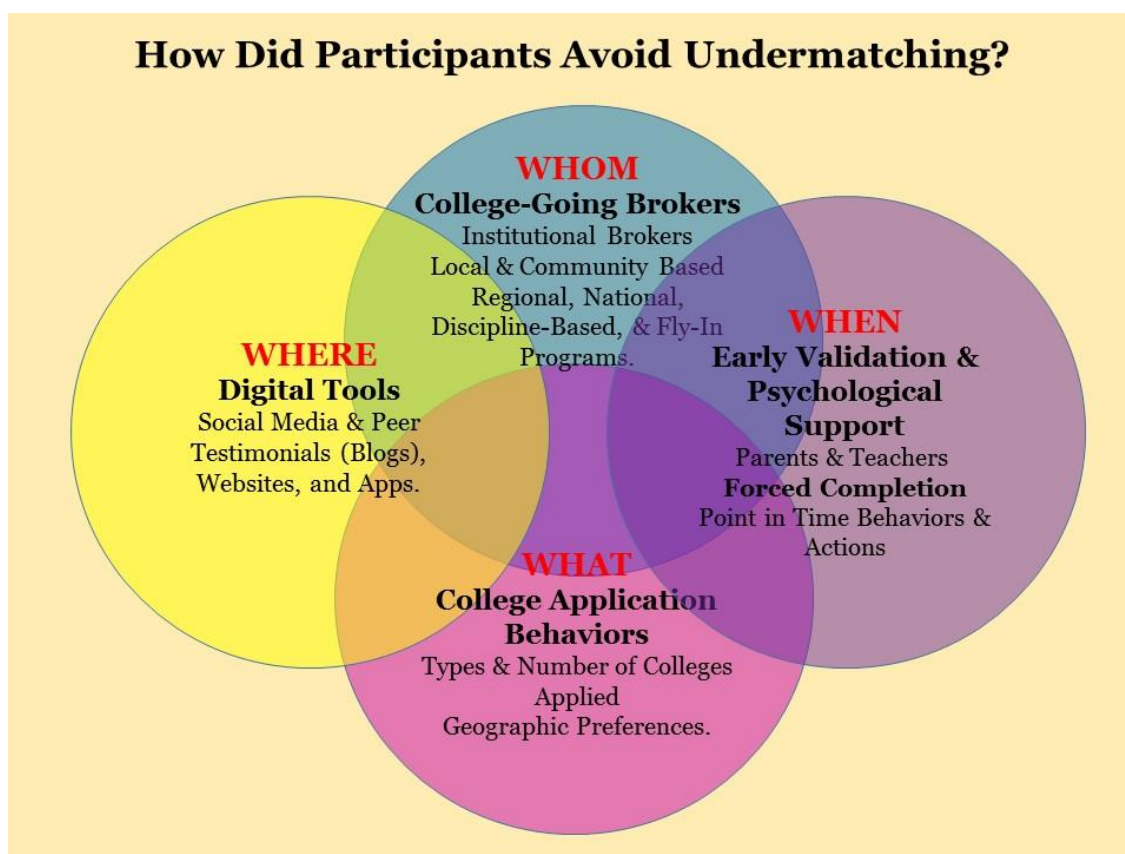
Figure 5. How Did Participants Avoid Undermatching?

Chapter Five: Discussion

This chapter provides a summary of study findings, linkages to research and theories cited, a brief discussion regarding study limitations, questions to consider, as well as implications for theory, policy, practice, future research, and social justice.

Overview & Purpose of Study

The purpose of this study was to examine the experiences, perspectives, patterns, and decision making behaviors of low-income, first generation, high performing, Mexican-American students who recently engaged in the selective college choice process. In pursuit of this goal, 30 students were interviewed at length, describing their personal and unique perspectives, processes, methods, guidance, and obstacles throughout their journey to a selective college.

The findings revealed *how* participants leveraged scarce resources, identified critical brokers of knowledge, and utilized rare and often "random" programs or tools. It also revealed *when* these resources were identified and accessed, and when pivotal moments occurred that influenced selective college going behaviors. Additionally, the findings analyzed *whom* participants relied upon or trusted for critical guidance and information. Lastly, the findings revealed *what* strategic behaviors and actions were employed as well as *where* participants found assistance or information (digital technology) along their successful selective college journey.

Key Findings of Study

That 30 students from underserved communities, who attended under-resourced high schools, who were English learners and first-generation college-going, from socioeconomically disadvantaged households, with immigrant parents, arrived at selective universities like Harvard, Stanford, and Yale, was certainly not by design. Students from South Central Los Angeles to East Palo, San Ysidro to McFarland, El Paso to Houston, Tucson and Tempe, and Las Vegas, managed to divert a system designed to funnel them into community colleges and other "open access" campuses, for-profit non-competitive campuses, or to forego college altogether.

There were many influential factors that impacted how and why participants avoided undermatching and enrolled in a selective college. As a result of personal and environmental protective factors (especially parents), utilization of *multiple* resources outside of participant's high schools (often outside of their communities), a combination of fluke and random events, and many fortuitous encounters (aka "luck"), the 30 participants successfully navigated a pathway to a highly selective college.

The findings revealed several successful behaviors and actions as well as resources that helped participants avoid undermatching and matriculate at a university aligned with their strong academic portfolios. By examining comprehensive interview transcripts, a layered coding process, conceptual illustrations, and descriptive statistics, seven major themes emerged as follows.

College-Going Brokers

The first segment of resources examined were college going brokers – specifically, institutional brokers. Institutional brokers included teachers, secondary counselors, and on-site intervention programs. These brokers were not identified as strong brokers for college-going knowledge or assistance for participants. With exception of a handful of early validation experiences by teachers, most participants did not find teachers or secondary counselors to be helpful in their selective college process. While secondary counselors appeared to be the most intuitive and accessible source of selective college knowledge, participants did not report this as an effective or helpful resource.

To be fair, counselors were analyzed within each respective context including traditional secondary counselors assigned to public high schools, secondary counselors assigned to charter high school campuses; secondary counselors or advisors assigned to private high school campuses, and counselors assigned within a college intervention programs. The most effective (positively ranked) counselors were those working at a private high school, followed by counselors assigned to a college intervention program, followed by secondary counselors within a charter campus. These findings positively correlate with the ratio of students assigned to each counselor, where private schools had a low of 50:1 to a high of 190:1, compared to traditional public high schools with a low of 307:1 to a high of 485:1. As well, these findings are consistent with the literature regarding counselor-to-student ratios at low resourced high schools where student/counselor ratios – are often at three times the recommended number (Avery,

2010; Perna, 2015; Perna, Rowan, Thomas, Bell, Anderson, & Li, 2008); counselors are overburdened with responsibilities outside of college counseling (Avery 2010; Perna, et al., 2008); that they focus on lower-performing students, thereby ignoring the specialized needs of high-performing Latinx students (Gándara 2005; Perna, et al., 2008); and they lack of experience advising competitive candidates for selective colleges (Avery, 2010; Hoxby & Turner, 2013).

In terms of on-site intervention programs, most participants had either a negative perception of such programs, or did not report participating in these programs. Only one student (male) participated in AVID & Upward Bound; one female student participated in AVID; and one female student participated in Upward Bound & TRIO. That participants mostly viewed these programs negatively, and/or did not participate, is aligned with research concerning the efficacy of these interventions for *high-performing* Latinx students. Research indicates these programs are not effective for this demographic because they tend to focus on college access from the bottom up (closing the achievement gap), rather than providing resources tailored for high-performing, low-income, and historically underrepresented students (Gándara, 2005), ignoring the fact that *high performing* disadvantaged students need specialized support (Gándara, 2005).

The overall findings concerning the lack of institutional brokers afforded to low-income, Latinx students at public high schools, can be explained via a Critical Race Theory (CRT) perspective. This was evidenced by the way these high-performing participants were zoned for and placed into racially segregated and low-resourced schools, making them especially vulnerable to the threat of undermatching. That they independently sought out resources to mitigate lack of college knowledge (and impact

future college prospects) does not negate this racially constructed predisposition. The CRT framework examines and challenges the continuing significance of race and racism whereby study participants (and Latinx students in general) are not provided the same quality and quantity of resources as their high-income, mostly White counterparts at affluent high school campuses. A CRT lens reveals how (a) current policies in K-12 public institutions negatively impact marginalized students' access to college-going resources (Solórzano, Villalpando & Oseguera, 2005; Zamudio, et all, 2011); and (b) that such policies favor white, affluent students, evidenced by the current lack of representation of Latinx students at selective colleges (Yosso, Parker, Solórzano & Lynn, 2004).

A CRT lens also revealed how these inequities remain – stratified by race and ethnicity, demonstrated by lack of counseling support, lack of quality on-campus intervention programs, and that participants were required to leave their educational institutions to independently identify external college-going resources. Moreover, it was evidenced by the fact all external resources utilized by participants were operated and funded independently – not through their respective high school campus. And, the external college-going resources ranked as highly effective by participants, were those programs whose eligibility requirements specifically included race/ethnicity and socioeconomic status.

After examining institutional brokers, the study focused on brokers outside of participant's respective institution – looking externally to local & community based programs, regional or national programs, discipline-based programs, and/or "Fly-In: programs. These programs included formal intervention programs, mentorship programs,

workshops facilitated at local colleges, or community based services. Ninety-three percent (93%) of participants were engaged in *at least* one local, regional, discipline-based, or national program. Participants named 35 programs they were engaged in at some point throughout their high school tenure, and on average, participants engaged 2.25 such programs. These programs were most closely aligned with mitigating undermatching for the participant's demographic because (1) they were tailored to high-performing students from historically underrepresented backgrounds, (2) were a *local* resource accessible to students, and (3) With the exception of one program, were free of charge.

There were five national college brokers reported by participants, with Questbridge being the most utilized resource. One in three participants utilized at least one national broker, and many participants utilized more than one. While these interventions were short-term, and/or not located within participant's local community, they were ranked as highly effective at mitigating undermatching. Similar to the above local programs, the efficacy of these national programs may be attributed to their program design and outreach – tailored to high-performing, first-generation, low-income, and for the most part, targeted for historically underrepresented students.

Discipline-based programs were also noted as being instrumental in ways that brokered selective college knowledge. While the programs were not geared toward college admission per se, the fact that like-minded peers attended and networked, as well as shared capital from host organization, resulted in a sharing of knowledge that aided in college application strategies.

Fly-In programs were especially helpful for participants in two important ways. First, they provided a service (round-trip air and lodging) for students who could not otherwise afford a college visit. Participants reported being on-campus and interacting with peers was instrumental in their college choice and enrollment decisions. Second, campus visits provided a first-hand tour (and often a workshop) of the financial aid office. Because participants rated financial aid as the number one factor in determining their enrollment decisions, these Fly-In programs provided the necessary means for students to gain access to valuable financial aid information.

To understand how these external programs were beneficial to study participants, Social Capital Theory provides explanation. Social Capital Theory is aligned with the ways participants' gained fortunate access to critical "high status" college-going resources – through relationships with institutional agents outside of their sociocultural communities (Stanton-Salazar, 2011) – allowing them to gain knowledge, learn strategies, and identify role models that were helpful in their selective college going pursuits. Without such access, and when social networks are limited and contained to the immediate sociocultural circle, this can be harmful to Latinx students by limiting postsecondary opportunities (Perez & McDonough, 2008). This emphasizes the significance of participants reaching outside of their immediate social networks to gain access to institutional agents who provided valuable commodities (Pérez & McDonough, 2008; Stanton-Salazar, 1997).

These findings concerning external intervention programs also highlight the ways in which CRT informs this study. It revealed how marginalized students are required to draw on 'critical navigational skills' in order to successfully compete within the select

college admissions arena (Solórzano & Villalpando, 1998). The fact participants *independently* sought out these resources, represented core traits among all participants – their Navigational Capital and Aspirational Capital. Navigational Capital refers to, ". . . *skills of maneuvering through social institutions. Historically, this infers the ability to maneuver through institutions not created with Communities of Color in mind.*" (Yosso, 2005, p. 80). That participants successfully navigated outside of their respective institutions, and found ways to enter supportive community based intervention programs, is representative of their navigational capital.

Aside from Navigational Capital, Aspirational Capital appeared to fuel participant's desire to pursue the very difficult process associated with admission to a selective college. Aspirational Capital refers to:

> ". . . *the ability to maintain hopes and dreams for the future, even in the face of real and perceived barriers. This resiliency is evidenced in those who allow themselves and their children to dream of possibilities beyond their present circumstances, often without the objective means to attain those goals.*" (Yosso, 2005, p. 77-78).

Based on statements by participants, aspirational capital was modeled mostly from, and, as a result of behaviors and communication by their parents.

Overall, there were several important findings based on the above intervention programs. First, that most participants did not participate in any college-going interventions hosted by their local institution. That is, nearly all interventions rated as highly influential and effective by participants were funded and hosted off-campus (local, regional, or national). Second, with exception of two outliers, the remaining (93%) participants were engaged on average with 2.25 intervention programs. This finding

indicates that *multiple* interventions may likely be required to offset the potential to undermatch for this demographic. Lastly, in addition to socioeconomic class and college-going status, program efficacy may be directly linked to the fact these interventions were specifically targeted and designed for a specific racial/ethnic group (those historically underrepresented in higher education). This finding may help educators, non-profits, and funding organizations justify targeting and recruitment of particular subgroups, despite post Proposition 209 calls for racial neutrality.

College-Going Surrogates

Surrogates were individuals that participants relied upon for college-going advice, strategies, and information to help them navigate their selective college pathway. They are defined as surrogates in that they functioned as non-traditional providers of college-going support, on behalf of and in lieu of typical support typically afforded to highly resourced/ affluent communities. Three surrogate types emerged in the findings including informal mentors, peers, and siblings.

In terms of mentorship, participants reported a significant lack of formal mentorship (via their institution or external agency) or guidance regarding selective college admissions. A few participants noted formal mentoring that occurred via an external (local or regional) program such as College Match. Aside from College Match, when mentorship did occur, it was largely a "one-off" situation where an adult happened to initiate an interest in the student. Participants expressed appreciation for the mentorship they did receive, noting that while the guidance was not technical per se (not

geared toward selective college admissions), the mentor provided encouragement and served as a role modelling experience.

These findings regarding lack of mentorship for LIFGHPMAS can be explained by Social Capital theory – where youth residing in privileged communities are beneficiaries of institutional and community socialization that ensures necessary resources to prepare them for college opportunities. In contrast, students residing in disadvantaged communities attending under-resourced high schools, lack mentorship opportunities to prepare them for four-year and selective college enrollment (Stanton-Salazar & Urso Spina, 2003; Stanton-Salazar, 2001).

In addition to mentors, peers were also noted as an important source of validation for participants. Peers were defined as either similar aged friends, classmates, cousins, or neighbors. While peers did not typically possess social capital to help participants mitigate undermatching, participants expressed that they relied, valued, and trusted information and recommendations from peers. This is consistent with research suggesting that peers provide instrumental guidance and information to help Latinx/low-income students navigate the educational system (Gándara, 2005; Pérez & McDonough, 2008; Stanton-Salazar, 2001). Moreover, peers played a significant role in validating participant's journey to higher education, as well as recommending or introducing participants to special programs or resources. Lastly, peers also provided emotional support and encouragement throughout the college application process, helping participants navigate the selective college system. This finding was consistent with research concerning college outcomes of low-income, ethnic minority, immigrant youth and emotional support from peers (Rivera, 2014).

In addition to peers, participants noted how siblings influenced and/or played a significant role in their college going behaviors and decisions. Forty percent (40%) of participants had older sibling(s) who were either attending college or had graduated from college. Of these students, nearly all stated a sibling had influenced their decision (early on) to pursue admission to a selective university – whether the influence was positive or negative. This finding was consistent with the literature concerning influence of siblings on Latinx college aspiration (Ceja, 2006; Pérez & McDonough, 2008).

Internal Support from Parents

Certainly, the literature has demonstrated the prominent, valuable and long-term effect of parents throughout student's K-12 experience. However, what was striking in this study was that the participants recognized, valued, and articulated the significant role their parents played in their college process. Although parent's involvement was described as non-traditional, insofar as it was informal, internal (within the home), and mostly unobservable (invisible to school staff and administration) – it was ranked by participants as being the *most* influential factor in their selective college aspirations. These numerous parental efforts included verbal encouragement, monitoring of grades and assignments, making financial sacrifices, supporting student's extracurricular activities, providing cautionary tales and "consejos" as examples to keep students on the right path, and clearing domestic barriers and obstacles (so students could focus on homework).

The finding that support from parents was a significant factor in college-going behaviors of low-income, first-generation, Latinx youth is not new (Ceballo, 2004).

However, there is little research concerning the role of parents and high-performing Latinx students who aspire to attend *selective* universities. Future research may consider how internal support by parents, as a protective factor, may promote academic invulnerability, and therefore, help mitigate undermatching for LIFGHPMAS.

One of the most strategic efforts by parents was their decision to enroll their student in an alternative high school campus, not zoned for their residence. Fifty percent (half) of participant's parents pursued this option. Participant's enrollment in a charter, magnet, college preparatory, or private high school was the result of parents lobbying for alternate school choices, participating in a lottery, pursuing an intra or inter-district transfer, or applying for a full scholarship at a private school. Participants felt their attendance at these college-focused campuses was instrumental in their college-going strategies and success. Currently, there is a lack of literature regarding undermatching of Latinx students and high school campus attended. Whether it may be attributed to smaller class sizes, faculty and staff, the overall campus climate, alma matter of faculty and staff, recruitment practices, or some other factor(s), the issue of secondary campus choice and college outcomes is worth exploring.

Institutional context is a critical factor that clearly aligned with successful college going outcomes of participants. Nearly all participants indicated they lived in underserved communities, with "high poverty," and were therefore scheduled to attend underperforming high schools zoned for their zip code. That parents were required to take these intentional and aggressive steps to position their children for success is yet another example of "internal" (hidden and unreported) ways parents support Latinx youth. Furthermore, it exemplifies how CRT is a logical and natural explanation for this

phenomenon, as Latinx parents must diligently and aggressively maneuver racist and oppressive educational systems that continue to yield devastating 4-year college-going rates for their children.

Early Validation & Psychological Support

A body of research indicates that low-income, Latinx students are particularly receptive to *early* validation from respected adults (Alfaro, et al, 2006; Auerbach, 2007), and that this validation is positively correlated with academic outcomes (Stanton-Salazar, 2011). The theme of early validation and psychological support from teachers and parents emerged prominently within the study findings. Participants recalled several validating experiences that occurred mostly prior to middle school. It was during this time most participants noted a particularly significant event or experience that brought awareness and/or influenced their decision to pursue a selective college. These experiences ranged from acknowledgement of intellectual giftedness or a teacher telling the student s/he was very smart, to inspiration through positive words of encouragement, to intrusive advising by a teacher or institutional agent.

This finding, although not novel or unique, reinforces the argument that validation from teachers serves as a strong predictor of academic performance of Latinx students (Alva & Padilla, 1995; Cohen & Garcia, 2014; Gándara & Contreras, 2009; Stanton-Salazar, 2011), especially within an undermatching context. Furthermore, the effects of being identified early as intellectually gifted is also aligned with the literature. For example, in a study examining protective factors of academically invulnerable Mexican-American college students, most participants (22 out of 30) attributed their positive sense

of identity to early validation received by nomination/participation in the GATE program (Arellano & Padilla, 1996). Likewise, 18 out of 30 students in this study were identified, nominated, and/or participated in a GATE program.

While teachers were highly effective in validating college-going identities of participants, parents also provided much-needed validation. Validation from parents was linked to one of the most important findings in this study—namely that parents were identified as the number one factor that influenced participant's college-going behaviors. More than half (56%) of participants stated parents were the person(s) who influenced their decision to pursue a college degree; and 70% stated their parents were the *greatest* influence impacting their successful pursuit of a 4-year college degree. This finding is consistent with research regarding parental impact of college-going Latinx students (Auerbach, 2007; Ceballo, 2004; Ceja, 2006; Gándara, 1995; Valencia & Black, 2002). Both forms of validation – from teachers and parents, should inform K-12 institutions regarding the value of early interventions.

Forced Completion

An unusual finding was the concept of "forced completion," a concept noted 45 times by participants. I define "forced completion" as the deliberate and methodical process of requiring students to complete college going components during a workshop or program, or during mandated instructional time (e.g. AP English or AVID). For example, requiring students to design a list of colleges during a regional or national intervention program, requiring students to write a personal statement during AP English, or requiring students to apply to at least three scholarships during an AVID class.

Participant feedback revealed that in hindsight, forced completion was a highly effective strategy positively linked to their college outcomes.

However, it is important to note the distinction between forced completion efforts within secondary institutions versus external agencies. In secondary settings, forced completion exercises were purely "one-off" practices, not part of an institutions' intentionally designed and executed college-going efforts for their student body. These practices were limited to AP English classrooms as well as AVID classrooms (only 2 out of 30 participated in AVID). That an English teacher may have independently required students to complete a college-related task in class should not be attributed with overall institutional resources.

The effectiveness of forced completion relied on the fact that (a) the task was aligned with an important college-going component; (b) time was allocated during a workshop, program, or class to accomplish the task; (c) the task was linked to either a grade or as a workshop component; (d) students typically had access to WIFI or a laptop via the institution to complete the task; and (e) they were surrounded by supportive peers and/or a teacher, in the event assistance was required to successfully complete the task.

This unusual finding may have potential, as a mitigating effort, to support college-going aspirants across a wide range of college selectivity (local and state colleges through Ivy League institutions). Furthermore, the general concept of a hands-on, class-time or workshop-specific activity has been identified in the literature as a successful strategy positively aligned with college-going success among low-income, Latinx students (Bettinger, Long, Oreopoulos, & Sanbonmatsu (2012). This finding has promise for educators, administrators, and on-campus college-going programs.

College Application Behaviors

In terms of number of colleges applied, types of colleges applied, and locations of campuses applied, the behaviors of study participants were an exceptionally unusual finding. In terms of the number of colleges applied, the average was 16 colleges – spanning a low of seven applications to a high of 27 applications submitted. This is compared to the national average where one in three students applies to seven or fewer campuses. Of note, fee waivers provided to participants were positively linked to the total number of applications submitted for all participants.

The unusually high number of applications submitted is inconsistent with a study concerning the average number of colleges applied by Latinx students – where only 5% of Latinx students applied to five or more colleges (Hurtado, Inkelas, Briggs & Rhee, 1997). As well, the findings were highly inconsistent with behaviors observed in my coaching practice – where most Latinx, first-generation, low-income students apply on average to six campuses. This finding poses an important question for future research – namely, to address which factors (if any) influence the number of college applications submitted by LIFGHPMAS.

In terms of types of colleges applied, 100% of participants submitted most applications to private and selective colleges on the East Coast. With exception of colleges identified by participants as "safety" campuses, as well as in-state campuses that provided fee waivers, most match and reach campuses were submitted exclusively to highly selective colleges. These behaviors are highly inconsistent with college choice literature concerning low-income, first-generation, Latinx students (Hoxby & Avery,

2011; Black, Cortes, & Lincove, 2015). In terms of geography (proximity to familial residence), this behavior is also inconsistent with typical college choice practices of low-income and Latinx students who tend to enroll in local, non-selective colleges (Avery & Turner 2008; Ceja, 2004; Walton-Radford 2009).

Of note, only eight participants applied Early Action (EA) to a campus. While 11 students participated in Questbridge, most did not participate in the "early" match program, lowering the total number of EA submissions. While this finding seems inconsistent, given the number of applications submitted as well as the types of colleges applied, it should be investigated further. In the selective college admissions world, we are aware of the significant increase in odds of admission via EA, and therefore, future efforts to increase exposure about this option could yield positive benefits for Latinx high school students.

Two other findings were related to immigrant status and gender of participants. Undocumented students tended to submit the most applications as they believed their financial "burden" on colleges made them a less attractive candidate. Gender differences were nominal in terms of application submission behaviors including number of applications submitted, types of colleges, and geographic proximity to familial residence.

A diverse and inclusive campus climate was also a factor impacting application and enrollment behavior of participants. Participants discussed ranking systems, including diversity as a top three contender, as a very important factor in their application and enrollment behaviors. Participant's concept of diversity and inclusion comprised race, ethnicity, first generation college-going, immigrant (undocumented), as well as LGBTQ status. To determine a campus' position on diversity and inclusiveness,

participants relied on first-hand experiences (typically via Fly-In campus visits), data gathered from websites (such as Niche), and especially reliance upon testimony by peers on social media.

Although beyond the scope of this study, the topic of college application behaviors among high-performing Latinx students should be addressed in future research as the total number of applications, proximity of campus to familial residence, diversity and inclusion, and type of college (private versus local and/or non-competitive campuses) were factors positively associated with mitigating undermatching.

Digital Technology

All forms of digital technology tools were examined to determine whether they influenced, impacted, or provided participants with selective college-going strategies or guidance. While various forms of digital technology were utilized by participants at some point during their college admissions journey, it did not appear to be strongly correlated with mitigating undermatching. For example, when participants were asked whether they utilized any digital tool to help them identify or qualify potential selective college campuses, or to narrow "contenders," very few digital tools were mentioned. Furthermore, no participants utilized an application "app" related to selective college application or enrollment decisions. Nevertheless, there were several interesting findings that emerged, based on habits and behaviors of participants.

A broad array of 31 different digital resources were named by participants, with the Google search engine being the most utilized resource. Google was utilized by nearly every participant in various college searches. In some cases, Google was the only digital

resource utilized. Additionally, the College Board's site "Big Future" was also noted by nine participants as a helpful tool to compare and contrast campuses. In terms of websites visited (at least once), participants mentioned visiting 28 different websites. The visits occurred at two distinct points in their college process – at the investigative phase (determining which campuses to apply) and during the "weeding out" phase (when they were narrowing and eliminating campuses from consideration). A surprising (and counterintuitive) finding was that only 12 participants indicated they visited a respective college's website to learn more information.

Aside from search engines and website usage, several participants relied on social media tools to obtain "testimonials" from peers in the form of student blogs, admitted student Facebook pages, and other peer-driven sites. For example, participants reported utilizing the "admitted student" Facebook pages, to read about testimony from peers and get a sense of what potential future classmates were like. More than half of participants used Facebook at some point during their college selection and enrollment decision phase.

Another tool utilized by many participants was the College Confidential site. One in three participants stated they visited this site to learn more about selective college admissions. This public, message-board forum provides personal opinions from students, parents, and college admission consultants, regarding the selective college admissions process. However, the consensus of participants was that the site left them feeling intimidated and demoralized as "bragging" by other students (posting of exam scores and academic awards) made them feel their academic profiles were inferior.

Although digital tools in general did not yield promising results insofar as mitigating undermatching, it did yield a significant finding. This finding was the extent peers continue to be a leading factor influencing LIFGHPMAS in their college-choice and enrollment behaviors. Participants closely followed blogs, admitted students' Facebook pages, and message boards to gage perceptions of peers. An extreme result of this phenomenon was the way participants made application decisions (where to apply), and in some cases, acceptance or rejection of offers of admission based on peer testimony. Participants wanted to know what like-minded students felt or experienced, rather than getting information from the university's website. The point being – participants did not use social media to create their shortlist of types of colleges to apply. Instead, social media was used to "weed out" and vet campuses to determine whether the campus might be a good "fit." Stated another way, at the point participants utilized social media, they were already determined to attend selective colleges. Therefore, social media was not necessarily helpful in mitigating undermatching.

The findings also highlight the period most participants utilized Facebook – between the date admissions offers were extended and prior to the SIR (Statement of Intent to Register) due date. During that time (March 30 through May 1), participants narrowed options and heavily considered the statements and opinions of peers – especially regarding diversity and campus climate. The overall findings suggest digital tool usage is an area that should be explored further by researchers interested in selective college going behaviors of Latinx high school students. This is especially important as organizations such as "*The Coalition*" (Coalition for Access, Affordability, and Success) move to create "digital portfolios" as part of the college admissions process.

In general, there is currently a critical lack of research concerning digital tools and college-going practices of Latinx youth. However, given our current social-media driven economy, this may likely change soon. Nevertheless, the findings from this study point to the need to consider many factors including peer-driven testimony on various sites (blogs, Facebook, message board forums).

In conclusion, each dimension analyzed within the study revealed close alignment with the three theoretical frameworks. The three intersecting theories below illustrate how the underlying theory of CRT situates participant's predisposition and high vulnerability to undermatch. Whereas, Social & Cultural Capital Theory (SCCT) highlight the ways in which participants utilized necessary and available capital, that was often non-traditional, to position themselves for greater college-going success. In addition to SCCT, the theory of AIT exposed the ways participants were shielded from the many negative and harmful conditions that often preclude them from advancing toward four-year college attainment. The following illustration synthesizes the intersectionality of these three theories:

Figure 6. Intersecting Theories

Limitations of The Study

The major limitation of this study is also the strength of the study. That is, the participants were exceedingly rare. However, this rarity created an exceptional lens in which to closely examine this demographic. They were rare with respect to their exceptional academic profiles and ability to strategically maneuver throughout the complex selective college arena, despite their socioeconomic and racial/ethnic disadvantages. They were also rare in that several protective factors shielded them from undermatching, unlike most LIFGHPMAS. However, the rare qualities of this targeted demographic limit generalizability to Latinx youth in general. The study was also limited in terms of geographic representation. Participants represented the southwestern states of Arizona, California, Nevada, and Texas. Therefore, the experiences and feedback are respective to these southwestern states and not generalizable to other US regions.

Implications for Theory

The conceptual framework of Critical Race Theory (CRT) provided an unobstructed and sober understanding that more clearly explains the multi-layered and historical dynamics in which most LIFGHPMAS succumb to undermatching. That the 30 participants escaped undermatching does not mean they were not subject to extensive and long-standing forms of oppression due to institutional racist policies. In fact, as evidenced in the findings, participants were required to strategically and skillfully maneuver through many obstacles (throughout most of their K-12 experience), to actualize their academic potential.

CRT exposes the overt contradictions participants experienced with regard to objectivity, meritocracy, color blindness, race neutrality, and equal educational opportunity along their pathway to a selective university. Based on the findings, participants did not have *an equal opportunity*, equal to white and affluent students in their trajectory to a selective institution. At each step of their journey – from the institution in which they were situated, to the lack of adequate resources, and lack of quality preparation, exposed the distinct inequities they faced compared to White, middle and upper income counterparts. That these participants escaped undermatching does not negate the extent they experienced racial oppression, but rather, that they were beneficiaries of several protective factors that made them invulnerable to many psychological and logistical threats.

In addition to the CRT framework, the conceptual framework of Social and Cultural Capital theory was useful in linking connections between participant's social network and resources and navigating the elite college arena. These theories were especially relevant within the context of selective college admissions, as these forms of capital are critical for the social mobility of Latinxs. The types of capital lacking in the study findings included formal mentorship, access to quality advisement, institutional access to programs geared for high-performing students, and sharing of information that would enable participants to actualize their potential at a selective university. Social and cultural capital theory shed light on the ways study participants – from low-income and first generation status communities – were not recipients of social assets (institutionalized relationships) that promote social mobility (Bourdieu, 1986; Bourdieu & Passeron, 1977).

In addition to CRT and Social/Cultural Capital theories, the theory of Academic invulnerability was instrumental in understanding how protective factors essentially shielded participants from threats to undermatch. The protective factors exhibited by participants included high motivation, optimism, strong sense of self, and positive attitude. External protective factors included validation by teachers (Alfaro, J., Umaña-Taylor, A., & Mayra Y. Bámaca, M. (2006), and a strong support network of peers, mentors, teachers, counselors, community based organizations, and college intervention programs. These simultaneous support systems provided consistent care, monitoring, and encouragement that often began in elementary school and lasted throughout their senior year of high school. Most notable was the protective factor of parents that shielded participants from academic vulnerability, providing an important layer of insulation from threats to their academic potential (Alva, 1995; Arellano & Padilla, 1996; Ceballo, 2004; Ceja, 2004). Although this theory has not been applied specifically within an undermatching context, research has shown a positive relationship between protective factors and academic invulnerability among Mexican-American youth (Alva, 1991; Alva & Padilla, 1995; Arellano & Padilla, 1996; Gonzalez, R., & Padilla, A. M. (1997).

Implications for Policy

As addressed earlier, one of the most successful mitigating efforts that helped participants avoid undermatching was through participation in intervention programs purposefully designed and facilitated with three criteria for student eligibility: (1) historically underrepresented (race/ethnicity); (2) Socioeconomic status (low-income); and (3) High-performing (profiles aligned with admission to selective universities).

Ninety-three percent of study participants utilized *at least* one such college going

intervention program. The combination of these three criteria and the local availability

resulted in helping students mitigate undermatching. Research suggests that intervention

programs are more effective when the cultural background of students is considered and

when the program administrators are culturally competent (Gándara, 2005). Therefore,

as a policy issue, re-focusing intervention efforts with a lens toward race/ethnicity would

benefit Latinx students:

> *It is not reverse discrimination to advocate for the creation of a program*
> *designed specifically for Latino college students. Rather, such a program*
> *constitutes a requisite acknowledgment of the institution's historical*
> *legacy of exclusion and a culturally relevant response that attempts to*
> *understand the importance of Latinos' identity in their success. LatCrit*
> *requires higher education to acknowledge that the dominant ideologies of*
> *alleged color blindness in practice only serve to benefit majority white*
> *students while further disadvantaging Latinos and other students of*
> *color."* (Villalpando, 2004)

The findings also suggest that institutionally-based support services should reflect

culturally-responsive curricula, designed exclusively for low-income, first generation,

Latinx students. Ideally, services should be sensitive to the many ways this demographic

experiences racism, discrimination, alienation, and other forms of oppression.

Furthermore, service providers should recognize and appreciate how the dynamics of

race/ethnicity, poverty, first generation status, English language acquisition, immigrant

status, and other obstacles severely impact many Latinx students' access to higher

education.

In addition to culturally-relevant programs, there is also need to develop policies

to establish or expand formal mentorship programs. Mentorship was a critical form of

social capital missing for many of the participants. Likewise, formal college intervention programs designed for *high-performing* students, were unavailable at secondary campuses. When formal programming is not feasible, there should be efforts to facilitate college workshops tailored for selective college options.

Intervention programs reported by participants as being highly effective in mitigating undermatching were programs offered locally *and* for a sustained period. While the various "one-off" workshops or weekend programs were reported as being helpful, it was the long-term interventions reported as having the greatest impact on mitigating undermatching. These programs were offered free of cost to participants (grant funded), included counseling services and other resources, and were facilitated over a long period (typically 1 to 2 years). Therefore, from a policy perspective, focus on local (institutional or community-based) intervention programs, designed exclusively for low-income/first-generation/underrepresented students, that are sustained over several years, and provide mentorship and quality advising, would be especially beneficial for LIFGHPMAS. These recommendations underscore the reliance on secondary institutions to partner with state or federally funded programs, community based organizations (CBO's), philanthropic organizations, or local colleges and universities, to ensure Latinx students receive timely and effective college intervention programs.

Implications for Practice

The findings are aligned with other research that calls for educators and administrators to re-conceptualize the role of Latinx parents as critical support agents. It should be acknowledged the multiple and unique ways (informal and "hidden")

participant's parents provided critical support for their high achieving students. While the internal ways of Latinx parental support are not always acknowledged, their support should be recognized, valued, and encouraged. Parent remain an untapped resource, with significant potential to increase college-going habits and successes of Latinx students.

In addition, the practice of "forced completion" was linked to completing critical components associated with selective college admissions. For example, requiring students to complete a Personal Statement during instructional time or requiring students to complete the CSS profile during a workshop is associated with selective college admissions. This concept can be easily replicated and implemented at high school districts across the US.

Finally, through an analysis of best practices gleaned from this study, the cumulative effect of the various and multiple protective agents yielded significant results for students aspiring to attend selective universities. The following model represents a set of policy and practice recommendations that may be applied in the context of primary and secondary educational institutions, institutions of higher education, Community-Based Organizations (CBO's), and for parents of Mexican-American students. These practices represent the necessary and multiple protective agents that shield and insulate students from potentially undermatching or foregoing applying to college altogether.

Primary Educational Institutions. *Early* and consistent validation from elementary teachers and/or administrators (principals). Recognition and verbal acknowledgment of student's academic and personal strengths via direct (one-on-one) communication with student and student's parents. Culturally competent training required by teaching staff to properly identify and nominate potential GATE students.

Initiative to recognize talented students and nominate for accelerated coursework, special

programs, or discipline-based opportunities. Develop informal mentorship programs to

pair-up former students with current students.

Secondary Educational Institutions. Recognize that low-income, first-

generation, high-performing, Mexican-American students may not seek out assistance

and/or guidance during their college choice and enrollment process. Develop or enhance

on-site college intervention programs tailored for *high-performing* students. Facilitate

programs after the school day so that students are not required to choose between core

curriculum (especially Advanced Placement courses) and an intervention program.

Provide specialized training for secondary counselors so they may provide appropriate

guidance to high-performing Mexican-American students. Make efforts to promote local,

regional, and national college-going programs to sophomores and juniors. Design and

implement campus-wide "*Forced Completion*" exercises embedded into core curriculum

(math, science, English, history, foreign language) for all students, especially during

junior and senior years. Exercises should coincide with college admission components

and deadlines. Develop on-campus formal mentorship programs by partnering with local

community (former graduates who are alumni of selective colleges). Host evening or

weekend workshops for parents regarding identified best practices (see "Parents" below).

Coordinate efforts with on-campus organizations including ELAC and DLAC, etc.

Colleges and Universities. Continue or expand Fly-In programs. Make efforts

to identify and recruit students *directly*, versus via external organizations or through

secondary counselors. Ensure students receive adequate exposure to campus, peers,

financial aid, and campus climate (diversity and inclusion). Establish a welcoming space

by providing peers (from similar demographic) as guides, point-of-contact, or to dorm with during visit. Ensure campus is free from racially hostile acts during visits. Provide virtual tours of college campus beyond one-dimensional architectural vantage points. Virtual tours should include all aspects of the college experience including campus life, dormitories, lectures, the financial aid office, and on-campus clubs and extracurricular organizations. Provide testimonial videos from like peers, as to particular aspects of the college transition process. Provide similar virtual tours for parents in both Spanish and English.

Intervention Programs. Especially in light of recent proposed cuts to college intervention programs by the Trump administration, current intervention programs should remain independently funded and operated, and free of charge for participants. Continue recruitment efforts based on targeted eligibility including race/ethnicity, socioeconomic status, and academics. Focus on long-term interventions, versus "one-off" workshops. Expand recruitment outreach through multiple partnerships, and host informational sessions on-site at local high school campuses. Discipline-based programs should make efforts to provide college related components or modules embedded within the curriculum.

Parents. Establish college-going expectations very early (elementary school aged children). Communicate regularly to student (verbally) importance of education, and establish a culture of possibility. In addition to communicating college goals, provide logistical and psychological support. Establish priorities. Monitor homework and grades. Support extracurricular activities. Obtain timely information (prior to 8th grade) regarding intra-district, inter-district, or lottery based applications to charter, magnet,

specialized academies, or scholarship criteria to attend private high school campuses. Be

conscious of racialized policies and practices that negatively impact their students.

To illustrate the intersection of policy and practices ideally suited to serve Latinx

students in their trajectory to a selective college, the following Figure conceptualizes the

best practices:

SELECTIVE COLLEGE TRANSITION MODEL
High Performing, Low-Income, First-Generation, Latinx Students

Latinx Students

Multiple Protective Agents
Early Interventions
Parental Influence
Navigational Capital
Aspirational Capital
Mentors
Intervention Programs
Non-Traditional Public School

Stakeholders & Support

Primary Setting
Early & Consistent Validation
Culturally Competent GATE Identifiers
Informal Mentorship

Higher Education
University Recruitment & Outreach
Visit Low SES High School Campuses
Fly-In Programs
Diversity & Inclusion Focus
First Gen Liaisons
Virtual Campus Tours
Summer Programs for HS Students

Secondary Institution
Interventions for High Performers
After-School College Programs
Counselors Trained for High Performers
Promote Local, Regional, Nat'l Resources
Implement "Forced Completion"
Formal Mentorship Program
Honor & Recognize Parents

External Organizations
Targeted Resources for High Performers
Free Programs (No Cost)
Culturally Relevant
Privately Funded
Recruit Race/Ethnicity/SES/First Gen

Figure 7. Selective College Transition Model

Areas for Future Research

Based on the extensive findings from this study, and the limited research

concerning this narrow demographic (particularly high-performing Mexican-American

students) future research efforts could take many directions. One avenue may be a

qualitative study examining factors or dynamics that may have played a role in the way

participant's parents pursued alternative high school campuses. Since half of

participant's parents took affirmative steps and elected not to enroll in the high school

zoned for their residence, a study examining which factors or sources of information compelled parents to take such action would be appropriate. What were the influencing factors, and how did parents access this information?

A second avenue may be a critical ethnography examining how this demographic obtains information (learns) about effective college intervention programs. Participants in this study stated they learned of such programs in a "hit or miss" way, from a peer, an older sibling, or some other random way. Formal studies that draw upon effective ways to disseminate this information to a targeted pool of students would be beneficial.

A third avenue could be a quantitative or mixed-method approach to examine why participants who enrolled in multiple college intervention programs felt they were still lacking information (during the application and enrollment phase). This calls into question which components may have been missing. Limited research regarding college intervention programs for low-income, underrepresented youth suggests there are several factors that impact program effectiveness including soft funding, lack of program evaluation, programs geared toward short-term solutions (often available late in high school), and lack of student tracking to name a few (Tierney & Hagedorn, 2002).

A fourth avenue may investigate which programmatic resources, curriculum, or policy-driven elements were consistent within charter, academies, magnet, and college-prep campuses, that served to promote a college-going culture at these campuses?

Finally, the pursuit of action research by teams or communities of Mexican-American high school seniors, as a reflective process to understand and/or improve the way this demographic utilizes digital technology during the college search, application, and enrollment phase. Given that participants stated a strong desire for a virtual tool,

perhaps research designed around such an application may yield insightful (but practical) results.

Implications for Social Justice

The counter-stories of 30 high-performing, low-income, first generation, Mexican-American students in this study exposed the extent they maneuvered institutionalized racism, harmful policies and practices, and critical lack of available resources and programs to secure their deserved space at a selective university.

From a social justice perspective, it is important these findings do not focus exclusively on the individual achievements of the 30 participants, but rather, refocus analysis into the institutional policies, processes, and lack of structural opportunities that prevent many other Mexican-American students from achieving similar educational outcomes. By viewing participant's achievements as "exceptions" to their race and culture, minimizes the effects of the structural barriers and views their achievements as atypical to "normative" behaviors (Holguín Cuádraz, 2006).

The findings should be a call to strengthen institutional practices to move toward educational equity for marginalized youth. Undermatching of LIFGHPMAS continues to be a social justice issue because (a) undermatching disproportionately impacts historically underrepresented and first generation college-going students and (b) Latinxs, as a subgroup, undermatch at the highest levels, compared to all racial/ethnic groups. The cost of undermatching for LIFGHPMAS is steep: Admission to a selective university is closely aligned with higher graduation rates; graduating in an ideal time frame; likelihood to attend graduate and professional schools; professional opportunities including positions

of influence and leadership; greater earnings, and quality of life. Furthermore, avoiding undermatching means deserving students are allowed the opportunity to actualize their intellectual potential. Building critical mass of Latinx students at selective universities requires an imperative to design effective intervention programs, identify models of success, scale programs to serve more students, and significantly invest funds and resources to produce dramatic outcomes.

This study indeed exposed and confirmed the many deficits that continue to plague LIHPFGMAS throughout their selective college admission process. However, the findings also revealed many promising realities that inspire hope for today's college-going Mexican-American students. In speaking with these 30 students, I am reassured of the extent Mexican-American parents are nurturing and protecting their students, thereby enabling them to actualize their incredible gifts and talents. These caring parents are practicing successful habits within their homes, fostering high-performing students. I also find comfort in knowing that digital technology has much future potential to help LIHPFGMAS acquire selective college admission capital that has largely been absent in marginalized communities. Indeed, the virtual door has been cracked open. Most importantly, this new generation of scholars exemplify intellectual giftedness, exceptional characteristic strengths, and leadership skills that are often hidden or ignored. It is hopeful through the publication of this study that a new appreciation for these exemplary students may be realized.

Appendix A: Qualtrics Survey

Thank you for your interest in this study. To protect your identity, you will be assigned an I.D. # and only the Principal Investigator will have the key that links names to I.D #'s. Please feel free to contact me directly at roxanneocampo@sbcglobal.net with any questions you may have. Thank you, Roxanne Ocampo

1. Type in the I.D. # assigned to you.
2. I identify as Male or Female or Other [Drop down menu]
3. Which of the following racial/ethnic groups do you personally identify? [Drop down menu]
4. For the majority of your K-5, middle, and high school years, were you eligible for Free & Reduced Lunch? [information icon with definition and eligibility criteria]
5. Are you at least 18 years old, as of January 1, 2016?
6. Do either of your parents/legal guardian's hold a 4-year college degree from the U.S. or from any other country? [Yes or no]
7. As of Fall 2015, are you currently in an undergraduate program of study, as a Freshman, at one of the following universities? [Drop down menu]
8. My intended major is [Fill in box]
9. What was your first language? What language was mostly spoken at home during your childhood? What language do you feel most comfortable speaking with friends and family?
10. If English was your second language, did you participate in ELD courses? If so, how many years?
11. Which of the following best describes your immigrant *generational* status?
    Option #1: I am the first generation in the U.S. (My parents are foreign born and immigrated to the U.S.; I was born in the U.S.)
    Option #2: I am 1.5 generation in the U.S. (My parents are foreign born and I immigrated to the U.S. before or during my early teenage years)
    Option #3: I am the second generation in the U.S. (my parents and I were born in the U.S.)
    Option #4: I am the third generation in the U.S. (my parents, grandparents, and I were born in the U.S.)
    Option #5: I am the fourth generation in the U.S. (my parents, grandparents, great grandparents, and I were born in the U.S.).
12. Name of high school attended
13. Was the high school you attended geographically zoned for your residence? If not, did your parent or guardian [drop down menu] request an intra or inter district transfer? Participate in a lottery program? Other?
14. How many AP courses did you complete?
15. How many counselors were at your high school?
16. Were you ever in a Gifted and Talented Education program (GATE)?
17. Did you have a computer-related device in your home? [drop down menu] Laptop? Tablet? Was the device shared with family members? Did you have wifi?
18. Did you own a smartphone at any time during high school? If so, what years?
19. During your elementary, middle, and high school years, what were your parent's occupations?
20. How did you get to and from high school (transportation)?
21. Did you have a library near your home? If so, how often did you visit?
Were there leisure reading books in your home? Who supplied them?

Appendix B: Recruitment Email To College Going Organizations (To Accompany

Flyer)

Dear Educator, Counselor, or Community Based Organization:

I am a student in the Joint Doctoral Program in Educational Leadership at the University of California, San Diego (UCSD) and California State University San Marcos (CSUSM). I am conducting a study that seeks to explore the various resources utilized by high school seniors during their college application selection and enrollment process. You are being contacted because you were identified as someone who either works with or has knowledge of students that meet the demographic profile for this study.
Through this research, I hope to identify the types of resources utilized by the student demographic during their college selection process including community based, institutional (high school campus) based, peer and family based, and/or digital technology based resources.
I believe this study has the potential to identify certain practices, behaviors, and resources that may help educators, educational leaders, and intervention programs develop tools and practices that may increase the number of low-income, first generation, high-performing, Latino students in the U.S. applying to and enrolling in selective colleges.
Please see the attached recruitment flyer that defines eligibility requirements.
Thank you for helping identify students that meet the study criteria.
Respectfully,
Roxanne Ocampo, Doctoral Student
UC San Diego and CSU, San Marcos
209-914-4199
roxanneocampo@sbcglobal.net

Attach: Flyer

Appendix C: Recruitment Flyer

RESEARCH STUDY

University of California at San Diego
& California State University at San Marcos

You are invited to participate in a study examining the experiences of first-generation,
low-income, high performing, Latino (Mexican-American) students
attending highly selective colleges in the United States.

The principal researcher is Roxanne Ocampo, a candidate for a Doctor of Education.
The Dissertation Chair, and overseer of the research study is
Dr. Frances Contreras, Associate Professor, Department of Education Studies
University of California at San Diego

The study involves a one-hour (audio recorded) interview conducted via Skype,
completing a biographical and demographic survey (approximately 25 short questions),
and preferably (but not required) obtaining a copy of the college application submitted to
the university currently attending.

Who is Eligible?
At least 18 years of age on or before January 1, 2016;
Income Eligible (see Free & Reduced Lunch guidelines)
First Generation College Student
Self identify as Latino (Mexican-American);
High school graduate in Spring 2015;
Graduate from a public high school in Arizona, California, or Texas;
Began undergraduate studies as a Freshman (not transfer) in fall 2015;
Received admission and currently enrolled in a highly selective college

Examples of highly selective colleges (not an exhaustive list)

Bowdoin	Georgetown	Stanford University
Brown	Harvard	Swarthmore
Columbia	Johns Hopkins	University of Pennsylvania
Dartmouth	MIT	Vanderbilt University
Duke University	Princeton	Yale University
Cornell	Rice	

For more information contact: Investigator/Graduate Student (Roxanne Ocampo)
at 209-914-4199 or email roxanneocampo@sbcglobal.net
Interviews will be conducted via Skype between March and June 2016
Participants will receive a $25 gift card for participation in this study.

Appendix D: Email Invitation To Participate In A Case Study (College Student)

Dear [College Student],

I am a graduate student in the Joint Doctoral Program in Educational Leadership at the University of California, San Diego (UCSD) and California State University San Marcos (CSUSM). I am conducting a study that seeks to explore the various resources utilized by students as they recently transitioned from high school to a highly selective college. You are being contacted because you were identified by an educator, counselor, or community based organization within your community.

Through this research, I hope to identify whether or not students like yourself utilized any number of resources including community based, institutional (high school campus) based, peer and family based, and/or digital technology based resources, during the college choice process.

I believe this study has the potential to identify certain practices, behaviors, and resources that may help educators, educational leaders, and intervention program administrators develop tools and practices that may increase the number of low-income, first generation, high-performing, Latino students in the U.S. applying to and enrolling in selective colleges.

If you choose to participate in this study, you will complete a confidential survey that takes approximately five minutes to 20 minutes to complete. You will be assigned an I.D. to protect your identity. You will be interviewed individually (by me) via Skype, at a time convenient for you. Interviews will be conducted between March, 2016 and June, 2016. The interview will have a conversational style and will last approximately one hour, and will not exceed two hours. During the interview you will be asked a series of questions, related to your early home life, and elementary, middle school, and high school experiences, within the broad context of college preparation.

With your permission, the Skype interview will be audio taped and transcribed. You will be provided with a transcript of the interview for checking and clarifying the information.

Your confidentiality will be respected throughout this process. Pseudonyms will be used to minimize the risk of identification. You will be given the opportunity to review the transcribed interview and to eliminate any comments or references you feel may be identifiable or have negative connotations. Your responses will not be linked to your name or address.

I hope you will agree to participate in this research project. You will receive a $25 gift card for your participation. If you would like to participate, please reply to me by [placeholder for date]. Please let me know if you have any questions or concerns.

Respectfully,
Roxanne Ocampo, Doctoral Student
UC San Diego and CSU, San Marcos
209-914-4199
roxanneocampo@sbcglobal.net

Appendix E: Direct Recruitment Campaign

1vyG (Inter-Ivy, First Generation Student Group)
Advancement Via Individual Determination (AVID)
Chicano/Latino Youth Leadership Program
CLYLPers on the East Coast
Community Scholars Program at Georgetown (First Gen Group)
Dartmouth First Generation Network
Dream Academy (Salinas)
First-Generation at Stanford
First-Generation College Students in the Ivy League
FLIP (Columbia University First-Generation Low-Income Partnership
Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)
Generation 1st Degree Pico Rivera
Harvard College First Generation Student Union
Harvard FirstGen
Harvard Fuerza
Harvard Latinas Unidas
Harvard Raza
Ivy League Project (Arizona)
Ivy League Project (California)
Latinas Pursuing Doctoral Degrees (National)
Latinos-in-the-Ivy-League
LEDA Leadership Enterprise for a Diverse America
Puente (Andrew Hill HS)
Puente at Pittsburgh High School
Puente Program at UC Berkeley
El Centro Chicano, Stanford University
Stanford Medical Youth Science Program
Subiendo: Academy for Rising Leaders (UT Austin)
Undergrads College Consulting (Texas)
UPenn First Gen Group
UPenn First (First Generation Low Income Students)
UPenn Mechistas
Upward Bound (Clairemont HS, Mission Bay HS, Hoover HS)
Upward Bound (San Diego – Kearney Schools)
Upward Bound San Diego (Chula Vista HS, Mar Vista HS, Southwest HS, Sweetwater HS)
Upward Bound San Diego (Mount Miguel HS, Monte Vista HS)
Upward Bound San Diego (San Diego HS, Lincoln HS)

Appendix F: Interview Questions

EARLY COLLEGE FORMATION (Psychological Assets)

Question 1 – At the time you self-identified as a college bound student, did you also begin to think about the *types* of colleges you might apply?

Question 2 – Was there any particular person(s) who influenced your decision to pursue a college degree?

Question 3 – Considering all influences in your life (to date), what or whom was the most influential factor in your decision to pursue higher education?

Question 4 – What was your *mother's* attitude toward the value of (your) education?

Question 5 – What was your *father's* attitude toward the value of (your) education?

Question 6 – Which of the two parents had the greatest influence over your educational goals?

Question 7 – Beginning with the moment in time you recalled being cognitively aware of making "the choice" to pursue college, what things did you to do help you understand or prepare for this process?

TECHNICAL PREPARATION (Institutional Assets)

Question 8 – What was your ACT or SAT composite score?

Question 9 – Prior to your decision regarding which colleges to apply, how did you decide whether or not you were a strong candidate for a particular college?

Question 10 – At any time during high school did you meet with your counselor to discuss college options? If so, how many times and for how long per session?

Question 11 – Did your high school offer a financial aid workshop? If so, did you learn about financial aid for the types of schools you were planning to attend? Or, as a result of attending the workshop, did you consider applying to more selective colleges?

Question 12 – Using a scale of 1 to 5, where would you rank yourself in regards to knowledge concerning how to select a college fit?

Question 13 – What was the number one criteria that determined where you would apply and where you would enroll?

Question 14 – Did you receive recruitment materials from colleges? If so, did any of the materials prompt you to investigate a campus further? What did you learn from the materials?

Question 15 – If you were to host a workshop tomorrow with high school freshman, what would be your top 3 tips to help students like yourself figure out how to apply to a college that fits their profile?

COLLEGE CHOICES

Question 16 – Were physical or geographic locations of potential colleges ever discussed in your home growing up? If so, do you feel your parent's preferences influenced where you applied or where you decided to enroll?

Question 17 – At what point in time did you investigate your potential college choices? Freshman, Sophomore, Junior (and what month)?

Question 18 –Did you engage in any type of selection criteria to determine which colleges to apply? What was the criteria?

Question 19 – how many colleges did you apply? Why did you apply to this number?

Question 20 – On a scale of 1 through 5 (1 being not knowledge and 5 being extremely knowledgeable), how would you rank your knowledge of the financial aid process as a high school senior?

Question 21 – If you can recall, do you remember the top 3 factors that most guided your decision on *which types* of colleges you would apply?

Question 22 – How did you develop knowledge that informed your college choices?

Question 23 – Considering your knowledge today, what is your understanding of the admission requirements and qualifications of a selective college versus a state college or non-competitive college?

Question 24 – did you receive recruitment materials, phone calls, or emails from any colleges that you had not considered, but later applied (based on your new knowledge)?

DIGITAL TECHNOLOGY (Technology Based Assets)

Question 25: Did you have a computer at home during (a) K-5; (b) middle school; (c) high school? Was it family used, or personal? If not, did you use a computer at school or library?

Question 26 – Did you have a smartphone or computer at your home? How do you access digital technology?

Question 27 – Did you have wifi at your home via a cable company or service provider like Verizon, Cox, TimeWarner, or AT&T?

Question 28 – With regard to any type of digital technology (websites, smartphone App, YouTube videos, eBooks), did you use any of these tools to help you in your college choice search?

Question 29 – Was there one particular digital tool that you used that helped you identify and confirm the types of schools that you eventually applied?

Question 30 – During high school, did you learn about a particular tool to help you stay on track with calendaring of deadlines related to college? If so, what was this resource? If not, how did you stay on track?

Question 31 – Did you have a Facebook, Twitter, Instagram or Snapchat account during high school? If so, did you use any of these tools to help you learn about colleges?

Question 32 – Did you join any online forums regarding college preparation? Or, for a particular college?

Question 33 – After learning that you received admission to some top schools, did you use any type of digital technology to learn more about them? If so, did what you learned influence your decision to enroll?

Question 34 – As a recent high school graduate, and considering all of the knowledge you've accumulated in the last four years, I'd like to chat with you about an "ideal" world of technology. In this ideal technological world, there are tools that exist to help students, like yourself, navigate the college admissions process. Keep in mind, this is an imaginary world, so technology can solve many problems.
Imagining this world, please share with me how you imagine technology would help you learn about college.

COMMUNITY OR SCHOOL BASED RESOURCES

Question 35 – Throughout your middle and high school years, did you participate in any college-going programs like Puente, Upward Bound, AVID, GEAR UP, etc.? What was the extent of your participation (number of years)?

Question 36 – At any time in middle or high school, did you receive mentorship that influenced the type of college you would apply?

Question 37 – Did you participate in any courses, programs, or projects outside of high school that either sparked or solidified your interest in a particular college major? If so, how did you learn about them?
[Follow-up questions]
At these programs, did they discuss college options?

Question 38 – if you applied or participated in any summer programs that required an application, nomination, or other prerequisites, how did you learn about these programs?

Question 39 – Did you participate in a standalone workshop, or any other program that provided you with information about college preparation? If so, what was the program and what specifically did you learn?

Question 40 –Did you attend any type of leadership program that helped you learn about college admission options? If so, what was the program and what did you learn?

Question 41 – If so, do you remember whether you were taught a particular method or were given a particular resource that helped you learn more about your college choices?

CLOSING:

Question – Do you have any questions for me?

Appendix G: Profiles of Participant's Academic Institutions

Appendix X: Demographic of High Schools Attended by Participants
Data obtained from public documents and participant statements

High School (Pseudonym)	Socioeconomic Status	College Index
CHARTER SCHOOLS		
ABC Charter School	Title 1 Campus. 95% Economically Disadvantaged. 100% Minority Enrollment	612 students / 2 counselors 306:1 student counselor ratio 29.6% Meet College Index;
Amoeba High School		529 students / 2 counselors 265:1 student/counselor ratio 57% Latino
Air College Charter		450 students / 1 counselor 450:1 student counselor ratio
Big College Prep Charter	96% Latino	248 students / 1 counselor
Tree Top Prep Academy	69% Latino	145 students / 1 counselor
Valley High School	62% Economically Disadvantaged	28% met A-G and graduated
Nor Cal College Prep (residential facility)	67% Latino	99% First Generation college going 100% admitted to 4-year colleges
Able Magnet School	80% Latino 90% economically Disadvantaged	1841 students / 3 counselors 613:1 ratio
All Magnet School	55% Latino 74% economically disadvantaged	1762 / 3 counselors 882:1 ratio
Ask Magnet School	45% Latino 50% economically disadvantaged	1998 students / 3 counselors 666:1 ratio
Beta College Prep	18% Latino	1327 students / 7 counselors 1901:1 ratio
Valley High School	72% Latino 62% economically disadvantaged	777 students / 2 counselors
123 High School	98% Latino 87% Economically Disadvantaged	2832 students / 8 354:1 ratio 46% A-G Compliant
Ace High School	99% Latino 89% economically disadvantaged	1322 students / 4 counselors
Betty High School	45% Latino 30% economically disadvantaged 54% met A-G	1105 students / 3.6 counselors 307:1
Cat High School	89% Latino 77% economically disadvantaged 35% met A-G	1608 students / 4 counselors 402:1 ratio
Dog High School		1765 students / 4 counselors
Car High School	90% Latino 80% economically disadvantaged 50% met A-G	1460 students / 4 counselors 429:1 ratio
Bar High School	Unavailable	Unavailable
Apple High School	17% Latino 12% economically disadvantaged	3240 students / 8 counselors 405:1 ratio

Big High School	62% Latino 79% economically disadvantaged 29% met A-G	2811 students / 7 counselors 402:1 ratio
Central High School	98% Latino 80% economically disadvantaged 42% met A-G	799 students / 2 counselors 400:1 ratio
Bud Charter School	Unavailable	Unavailable
Air College High School		450 students / 1 counselors 450:1
Beat Magnet School	Unavailable	3 counselors
Big College Prep		2811 students / 7 counselors 402:1 ratio
Boat High School		1940 students / 4 counselors 485:1 ratio
Bond High School	92% Latino 74% economically disadvantaged	2460 students / 6.2 counselors 397:1 ratio

Appendix H: College Majors of Participants

Males	College Major	Females	College Major
Jesus	Computing & the Arts	Nayeli	Psychology
Ramon	Sociology/Government	Sofia	International & Global Studies
Luis	Molecular Biology	Citlali	Biomedical Engineering
Joaquin	Environmental Policy/Political Science	Lizeth	Political Science
Carlos	Economics	Maricela	Public Policy
Miguel	Theater, Dance and Media	Juana	Education
Marcos	Human Biology	Yulisa	Computer Science
Juan	Computer Science	Yadira	Computer Science
Javier	International Relations	Monica	Neuroscience and Economics
Julio	Chemistry	Gabriela	Government
Arturo	Psychology	Marina	Education/Economics
Emilio	Computer Science	Xochitl	Government
Pedro	Cognitive Science (Neuroscience	Socorro	Mathematics
Omar	Computer Science & Sociology	Maribeth	Civil Engineering
Diego	Biomedical Engineering	Mayahuel	Economics

The following represents parent occupations stated verbatim by participants (alphabetical order). Note this list exceeds 50 because some of the parents worked more than one job.

Appendix I: Occupations of Participant's Parents

Arborist & Retail	Factory Worker	Janitor
Babysitter	Farmworker	Letter Carrier
Bus Driver	Farmworker	Machine Operator
Butcher	Fast Food Worker	Maintenance
Cafeteria Lady	Field Worker	Maintenance at Golf
Caretaker of Mentally Ill	Field Worker/Truck	Course
Chef at Multiple Restaurants	Driver	Mechanic
Cleans Houses	Gardener	Nursing Assistant
Clothes Factory/Babysitter	Gardener	Preschool Teacher
Clothes Presser at a Dry	Gardener	Realtor
Cleaners	Gardener/Landscaping	Sales
Construction	Homemaker	Seamstress
Construction, Scrap Metal	Homemaker	Seamstress
Cook	Homemaker	Secretary
Cook	Homemaker	Stay at Home Mom
Disabled/Unemployed	Homemaker	Supervisor at Costco
Electrician	Housecleaner	Teamster
Electronics	Housekeeper	Truck Driver
Factory Assembly/Clean	Janitor	Welder
Houses	Janitor	

Appendix J: Personal Profiles of Each Participant

Female Participants

Nayeli was born in the U.S., and identifies as a first generation Mexican-American. She grew up in Los Angeles, California and attended a local public high school in South Central Los Angeles that was zoned for her residence. She was identified early as intellectually gifted through the Gifted & Talented Education Program (GATE). Her parents immigrated to the U.S. from Mexico (Zacatecas and Nayarit), and English was not her first language. She has an older sister who attended an elite, liberal arts college on the east coast. She grew up in a home with supportive parents described as "very hard working," – her father is a factory worker, and her mother is a seamstress. Nayeli is currently majoring in Psychology at a prestigious, liberal arts college on the east coast.

Sofia – a scholar and athlete, was born in the U.S. and identifies as a first generation Mexican-American. She grew up in Los Angeles, California, and attended the local public high school near the *Los Angeles* River, zoned for her residence. She describes her neighborhood as "poor" and her school district as "corrupt." She was identified as a GATE student during her primary education. Her parents immigrated to the U.S., and Spanish was her first language. She grew up in a strict household, with both parents present. Sofia currently attends an elite, liberal arts college on the east coast and is majoring in International & Global Studies.

Citlali was born in the U.S. and grew up in Las Vegas, Nevada. She identifies as first generation Mexican-American. The public high school she attended was *not* zoned for her residence (in the metropolitan area of Las Vegas) and has only 16% Hispanic

enrollment (only 14% economically disadvantaged). The high school zoned for her neighborhood was not high performing. Her older sister attended a highly competitive University of California campus. Both of her parents were highly supportive of her college goals. Her father attended one year at a community college and works at a national bulk grocery chain. Her parents sacrificed significantly to ensure their daughter receive a quality college education – including foregoing air conditioning in the sweltering heat of Las Vegas. Both parents worked multiple jobs including janitor, bulk grocery chain supervisor, a realtor, and a babysitter. Citlali currently attends an Ivy League University and she is majoring in Biomedical Engineering.

Lizeth was born in the U.S. and grew up in South Central Los Angeles.   Her mother is Mexican and her father is Salvadorean – although she identifies ethnically and culturally as a first generation Mexican-American. She attended a local public high school (near downtown LA), that was *not* zoned for her residence. She was identified early as intellectually gifted through the Gifted & Talented Education Program (GATE). Her parents immigrated to the U.S. from Mexico and El Salvador. English was not her first language. She grew up in a home with supportive parents. Lizeth's father works in maintenance. She is currently majoring in Political Science at a prestigious, liberal arts college on the east coast.

Maricela was born in the U.S. and grew up in Southern California. She was able to attend an International Baccalaureate (IB) high school by virtue of being qualified as a GATE student in middle school. She was raised by very supportive parents and is very religious. Her mother was gravely ill and went into a coma when she was in 8th grade (and died). A friend's mother became her figurative guardian and was instrumental in

getting her into high performing schools. Her father was a landscaper/gardener.

Maricela was Valedictorian of her high school graduating class, received a Gates

Millennium Scholarship, and currently attends a highly selective private college in

Northern California where she is studying Public Policy.

Juana is a very friendly and outgoing young woman who was born in the U.S. and

grew up in Highland Park, East Los Angeles. Her parents immigrated from Mexico to

the U.S. She is the youngest of three girls, and both of her siblings attended public

colleges in California. She attended the local public high school (South Central Los

Angeles), zoned for her residence and was identified as a GATE student. Her high

school had one counselor for 2,000 students. Her parents were highly supportive of her

college goals and modeled social justice values. Her mother would frequently stay up

until 3:00am or 4:00am while Juana completed homework, while her father took on the

role of the Academic Decathlon "Team Dad" by purchasing matching team T-shirts,

cheering them on, and hosting a celebration team party. Juana currently attends an Ivy

League institution where she is majoring in Education and is active in social justice

organizations.

Yulisa was born in the U.S., but lived in Mexico for three years (5th grade through

8th grade). She did not attend the high school zoned for her residence. Instead, she

received a full scholarship to attend a residential, private college preparatory high school

in the Bay Area – the only female in the study who attended a private high school. She

described her ethnic and cultural identity as Mexican-American, but discussed the fluid

nature of identity as an American in Mexico and as a Mexican in the United States.

While she describes her parents as being very supportive, they divorced when she was in

middle school, and her mother didn't return to the U.S. until she had already applied to colleges. Yulisa currently attends an elite liberal arts college on the east coast where she is studying Computer Science.

Yadira was born in the U.S. and raised in a notable farming community in the Central Valley of California. Her parents immigrated from Mexico to the U.S. In the U.S. they have held occupations as fast-food worker, electrician, farm worker, and stay-at-home mom. Yadira's first language was Spanish. Her older sister attended a University of California campus. Yadira attended the public high school zoned for her residence. She was identified as a GATE student. Her interest in Computer Science was sparked by participating in the Google Summer Science Institute, the summer after her senior year. Yadira is currently pursuing a Computer Science degree at a highly selective private college in Northern California.

Xochitl was born in the U.S. and her first language was Spanish. Her parents are farmworkers and immigrated from Mexico to the U.S. She was raised in the coastal area of Northern California where she attended a small, charter "college preparatory" high school (not zoned for her residence). Xochitl is currently attending a selective liberal arts college on the east coast and is studying Government.

Monica was born in the U.S., and her parents immigrated from Mexico. Her first language was Spanish. Her father is a teamster and her mother is a seamstress. She attended a charter school in the Westlake/MacArthur Park area of Los Angeles. Her charter school had one counselor for the entire student body. Monica was identified and recommended early (2nd grade) to participate in GATE. Her older sister attends a competitive University of California campus. Her interest in Neuroscience was sparked

through a summer program at a children's hospital. Today, Monica is attending an Ivy League institution where she is studying Neuroscience and Economics.

Gabriela was born in the U.S. and grew up in Houston, Texas. Her parents immigrated from Mexico to the U.S. Gabriela was the *only* participant in this study who spoke English as her first language. She was raised by a single parent (her mother), and indicated that her father was absent from her life from about five years old until present. She did not attend the public high school zoned for her residence. Instead, she attended a charter public high school ("early college") located at a community college in the Houston area. This charter operated on a hybrid ranking system and lottery system for admission. She had preference for admission because her sibling attended. She was named a National Hispanic Scholar. During high school she was heavily involved in Debate and Student Council. Her involvement in these activities led to her desire to become a Lawyer and eventually enter politics. Gabriela currently attends the most selective Ivy League institution and is studying Government.

Marina was born in the U.S., but her parents were born in Mexico and immigrated to the U.S.. Her mother was a nursing assistant and her father was a chef at multiple restaurants. Her first language was Spanish. She was raised in a border town city, near the border of Arizona and Mexico. Marina was identified early as a GATE student, and attended a magnet high school in Tucson, Arizona that was zoned for her residence. Marina currently attends an elite, all women's college on the east coast, and is studying Mathematics.

Socorro was born in the U.S., and her first language was Spanish. Her parents are farmworkers and immigrated from Mexico to the U.S. She was raised in the coastal area

of Northern California where she attended a small, charter "college preparatory" high school (not zoned for her residence). Socorro is currently attending a selective liberal arts college on the east coast and studying Mathematics.

Maribeth was born in the U.S., while her parents were born in Mexico and immigrated to the U.S. Her first language was Spanish. She grew up in the Tempe, Arizona area. Her father is a cook. Her mother became pregnant with Maribeth when she was only 19 years old. Maribeth described her life in middle school and high school as "living paycheck to paycheck." Her father left her home when she was very young, and therefore grew up with her mother only. Maribeth attended the public high school zoned for her residence. She is currently attending an Ivy League institution and is studying civil engineering.

Mayahuel was born in the U.S., while her parents were born in Mexico and immigrated to the U.S. Her first language was Spanish. She grew up in a border town near the Tijuana border. She indicated she had constant fear about not having enough food. Her mother only finished elementary school in Mexico and was a homemaker, while her father worked as a maintenance worker at a golf course. Mayahuel is currently pursuing an Economics degree at a highly selective private college in Northern California.

Male Participants

Jesus was born in Mexico and is undocumented. Spanish was his first language and he grew up Los Angeles. He was identified early as a gifted student and participated in the GATE program. His parents held multiple jobs through the years including field worker, truck driver, factory assembly, and house cleaner. His mom was a stay at home

mom during his high school years. Jesus attended a STEM focused charter high school in the Los Angeles region, where his family participated in a lottery for admission. He had very supportive parents who monitored his school work and provided encouragement. Jesus completed a summer internship at an aerospace company that sparked his interest in STEM. He is currently attending an Ivy League university pursuing Computing and the Arts.

Ramon was born in the U.S., while his parents were born in Mexico and immigrated to the U.S. Spanish was his first language. He grew up in Redwood City and participated in Migrant Education. He attended a public, college preparatory high school in Northern California. Ramon is currently pursuing Sociology at a selective liberal arts college on the east coast.

Luis was born in the U.S., while his parents were born in Mexico and immigrated to the U.S. He grew up in the Central Valley and attended the public high school zoned for his residence. During 1st grade, he was identified as a very "fast learner" and subsequently participated in the GATE program. He participated in a STEM program at UC Davis and a national STEM program hosted at Stanford. His older brother graduated from a very selective University of California campus and is currently applying to Medical School. Luis' father worked doing construction and scrap metal. Today, Luis is studying Molecular Biology at an Ivy League institution.

Joaquin was born in the U.S., while his parents were born in Mexico and immigrated to the U.S. His first language was Spanish and he grew up in the Los Angeles area where he attended the public school zoned for his residence. He credits his older brothers with providing college guidance as they attended undergraduate and

graduate school (law school) at selective universities including an Ivy League and a selective University of California campus. Although his parents only attended elementary school until the 1st and 2nd grade, they were significantly involved in his school. His father was a truck driver, working 18 hours per day, and his mother was a stay at home mom. Joaquin attends a selective liberal arts college on the east coast where he is studying Environmental Policy and Political Science.

Carlos was born in the U.S., while his parents were born in Mexico and immigrated to the U.S. His first language was Spanish and he grew up in the east Palo Alto area. He attended a gifted honors program at his middle school, and received a full scholarship to attend a residential, private college preparatory high school in the Bay Area. Carlos is pursuing an Economics major at a selective liberal arts college on the east coast.

Miguel was born in Mexico and came to the U.S. when he was 10 months old. He is undocumented and his first language was Spanish. He grew up in Los Angeles, and attended a medical magnet high school in the Los Angeles region. His father was a butcher and his mother was a stay at home mom. Miguel was advanced in Mathematics, and to pursue higher level math, he had to enroll in community college classes. Being undocumented, he had to get a loan (and work summers to pay it) to cover the non-residential course fee of $1,600. Miguel also paid $500 out of pocket to receive coaching from the National Association of College Advising. Miguel currently attends the most selective Ivy League campus and is pursuing Theater, Dance, & Media.

Marcos was born in the U.S., while his parents were born in Mexico and immigrated to the U.S. His first language was Spanish and he grew up in the Los

Angeles region. He attended a science-focused, college preparatory charter high school.

His high school had partnerships with several selective universities that visited their

campus to recruit students. His older sister attended college, but all males in his family,

including his parents, are gardeners. Marcos participated in several STEM related

summer programs that led to his interest in medicine. Today he is studying Human

Biology at a highly selective university in Northern California.

Juan was born in Mexico and is undocumented. His first language was Spanish

and he grew up in Phoenix, Arizona – where he said racism was prevalent. He attended a

private, Catholic high school on a full scholarship. The transition to a private high school

was challenging due to the demographics of his neighborhood (low-income Latinx

families who do not attend college) and his private school (affluent White families).

Although Juan received A's in even the most difficult classes, he felt rejected and

discriminated against by many peers at the private school. Juan is currently studying

Computer Science at a selective liberal arts college on the east coast.

Javier was born in Mexico, immigrated to the U.S. when he was in the 6th grade.

His first language was Spanish and he grew up in El Paso, Texas. During middle school,

he walked 50 minutes each way to school and home. While his father was in his life, he

only saw him once per year. Javier is majoring in International Relations at an Ivy

League institution.

Julio was born in the U.S., while his parents were born in Mexico and immigrated

to the U.S. His first language was Spanish. He grew up in the Los Angeles region and

attended a charter high school. He was in the GATE program in middle school, and was

given an application for the charter high school. His mom worked in a clothes factory

and as a babysitter, while his father was a welder. His brother was in prison, and his sister dropped out of high school. Julio is studying chemistry at the most competitive Ivy League campus.

Arturo was born in the U.S., while his parents were born in Mexico and immigrated to the U.S. His first language was Spanish. He identifies as transgender and queer. He grew up in the Bay Area, participated in the GATE program, and attended the public school zoned for his residence. His parents held jobs such as janitor, caretaker for the mentally ill, and housecleaner. His father died when he was in the 3rd grade. He is currently studying Psychology at an Ivy League institution.

Emilio was born in the U.S., while his parents were born in Mexico and immigrated to the U.S. His parents work as clothes pressers at a dry cleaners. His first language was Spanish. In middle school, he was identified as intellectually gifted and participated in the John Hopkins Center for Talented Youth. Also in middle school, he enrolled in math and English courses at the local community college, "just to keep busy." In his freshman year he attended an open access magnet high school where he felt he wasn't challenged enough. The following year he applied and was accepted to a more challenging magnet program. He is studying Computer Science at an Ivy League campus.

Pedro was born to very young parents in Mexico and is undocumented. His father was absent for the first three years of his life, but returned and brought the family to the U.S. His first language was Spanish and he grew up in Riverside county, California. Pedro attended the public high school zoned for his residence. He was identified early as intellectually gifted and participated in the GATE program. He earned the highest SAT

and ACT scores any student at his high school had ever received. His mother is a homemaker and his father works in construction. Pedro is currently studying Cognitive Science with a Neuroscience concentration at an Ivy League campus.

Omar was born in the U.S., while his parents were born in Mexico and immigrated to the U.S. His first language was Spanish and he grew up in Tucson, Arizona. He was identified early as intellectually gifted and attended the public high school zoned for his residence. He received perfect scores on his SAT Subject exams. His younger sister attends a private university in the southwest. Omar didn't start thinking about college until his sophomore year because he didn't see people in his community attending college. During high school, he spent two summers teaching mathematics (trigonometry) to students in his grandmother's hometown of Sinaloa, Mexico. Omar's father is a mechanic. His mother worked as a janitor at the local preschool where his younger sibling attended. She took a few courses at the local community college to earn credits to become a Preschool Teacher at this same preschool. Omar is studying Computer Science and Sociology at an Ivy League campus.

Diego was born in the U.S., while his parents were born in Mexico and immigrated to the U.S. His first language was Spanish and he grew up in Los Angeles county. He was identified early as a gifted student and participated in the GATE program. He attended a magnet public high school not zoned for his residence. In high school, he self-taught himself Physics to take the AP Physics exam, and earned a near perfect score. And, he took college chemistry at a community college during his Freshman year in high school. Diego's two older sisters attended state public colleges in California. His father is a letter carrier for the US Postal Service and his mother works in

a school cafeteria. Growing up, Diego saw his father suffer from Lipo Sarcoma (cancer) and endure eight surgeries. On his way back from a Fly-In program he learned his father had Prostate Cancer. These medical issues influenced Diego's decision to pursue Biomedical Engineering. Today he is studying Biomedical Engineering at an Ivy League campus.

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