Exploring Low-Income Student Perceptions of High School in the Transition to College

By

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ABSTRACT

Students raised in low-income households continue to trail the general student population in attainment of baccalaureate degrees. Despite considerable resources aimed at closing this gap, students among underrepresented minorities, first-in-their-family students, and low-income students are less likely to find success in college. As our educational system demands greater accountability in improving retention and graduation rates, there is a need for further quantitative and qualitative investigation of the path of low-income students.

This study focuses on the perceptions these students have of their high school life and how well high school prepared them for postsecondary school/college. Participants were interviewed to share their individual experiences about high school and their college transition challenges. The initial hypothesis - students would identify a particular area of need - was not confirmed. Instead, I found a more general conclusion: that the many variables a student brings to his or her educational journey must each be addressed individually. The study produced several implications for high school and college, particularly that personal connection and powerful student stories must be addressed in the college environment to assist students in connecting with college and remaining in the program to degree objective.

DEDICATION

To my parents: my father, now deceased, who had only a third-grade education but tirelessly did everything he could to ensure I had access to college and beyond, and my mother, who continues to support my educational journey with encouragement and applause. She, too, was there every step of the way.

To my children, Dean and Eliza, who allowed me to pursue this dream and put up with my occasional absence. You are two remarkable young adults who bring me joy every day.

And to my wife, Cynthia, who has been with me from the beginning, to the middle, and into the continuing future. Your unwavering support and love has kept me on the path, and allowed me to keep everything in balance. Thank you for our partnership.

David

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CHAPTER 1

Introduction, Purpose, and Overview

It is no longer enough to be concerned only about *whether* low-income and first-generation students go to college. We also must be concerned about *where* and *how* they go to college. (Engle & Tinto, 2008, p. 5)

Introduction and Purpose Statement

Horace Mann described school as "beyond all other devices of human origin the great equalizer of the conditions of men, the balance-wheel of the social machinery." The American high school carries this task like Hercules, striving to provide equity to a diverse student population. Students arrive at high school with widely different abilities, language competencies, ethnic backgrounds, and socioeconomic statuses. The high school in general is looked to as a fulcrum to fix or polish each student so that he or she is ready, in some ideal sense, for college and beyond.

The positive impact of college on future earnings, health, self-esteem, and civic engagement is well documented **(**Brand & Halaby, 2006; Pascarella & Terenzini, 2005; Ma, Pender, & Welch, 2016). Despite the earnest effort of high schools to reach this positive outcome, many students do not manage to complete postsecondary degrees (Kena et al., 2015).

Among those who do enter college, a great number of students require remediation once they get there (California Community Colleges, 2016). According to the California Community Colleges (2016), 33% of students in math and 45% of students in English who first had to enroll in remedial classes then completed a college-level course in the same discipline (6-year cohort 2009–2015). This likely means that many more students who entered community college may never have passed a college credit class in math or English and likely left the system (California Community Colleges, 2016).

This local study focuses on the path of Petaluma High School (PHS) students from low-income families into postsecondary education. Through both quantitative and qualitative research, I document the struggle of low-income students and offer possible solutions that this high school and other high schools might take to improve outcomes for these students. This study examines the performance level of low-income students at PHS in the postsecondary environment during the last 6 years (quantitative) with particular emphasis on the graduating class of 2016, coupled with semi-structured interviews with some recent low-income graduates of PHS (class of 2016) to gather their perceptions of their transition to college (qualitative). The goal is to discover if the high school environment at PHS can better serve marginalized students.

In my time as assistant principal and principal at PHS, now spanning almost 10 years, I have had many conversations with PHS students about their high school experience. These conversations have occurred over time, occasionally with students who struggled academically and socially at PHS but who have found academic or professional success beyond. I have no formal data collection from these previous conversations but simply an anecdotal sense that many students were relatively underserved simply because the staff of the school has not developed a real understanding of each unique student.

This study aimed at a small slice of the under-served student population, focusing on the performance and perceptions of PHS students identified as low income by virtue of their participation in the National School Lunch Program (NSLP). My theory of action, based partly on those previous conversations with students as a high school teacher and administrator, is that each student needs a sustained and personalized experience in order to maximize his or her capacity as a high school student. As an example, our counselors often go into classes to present

information about college. I have had many conversations with students who say they were in class for those presentations but didn't think the information pertained to them. That college information, to quote one student, was "for the other kids." (More study of these kinds of group presentations is necessary to ensure that high school students understand that the college message is for all.)

Students who are deemed college ready when entering the postsecondary environment (based on Early Assessment Program [EAP] scores, SAT/ACT scores, and/or Advanced Placement [AP] scores) are far more likely to persist and reach degree objectives (Mattern, 2009, 2013). At the California community college level, 70% of students who begin identified as "college ready" complete a degree, certificate program, or transfer-related outcome, compared to 39.6% of students who begin as "not college ready" (California Community Colleges, 2016). Despite improvements in high school graduation rates, which are now at over 80%, college readiness rates have remained the same; graduation by itself has not conferred college readiness on students (Achieve, 2017). Though college readiness rates are difficult to compare locally, regionally, and nationally, the National Assessment Governing Board has used results from the National Assessment on Educational Progress to offer one national measure of college readiness. The most recent report (2015) of 12th grade performance found 37% of students proficient in reading and 25% in math (Kena et al., 2015). The National Center for Public Policy and Higher Education estimates the remediation rate for all students at 60% on average, and higher at nonselective colleges, according to Long and Kurlaender (2009). Ultimately, too many of our students are just not ready for college when they exit high school.

According to Engle and Tinto (2008), students identified in need of remediation tend to struggle in achieving degree objectives; many do not persist and leave the postsecondary

environment altogether. To address this issue, my study seeks first to determine the extent to which students at PHS are college ready and successful at postsecondary institutions, and second to gather perceptions of former PHS students regarding their college readiness based on their experience at college. My study will specifically target low-income students formerly enrolled at PHS. It is my sense that unearthing these experiences and beliefs will shine light on the critical question raised at the outset: Why are so many low-income students in need of remediation?

There are many related factors that burden low-income students as they attempt to transition to college: access to financial aid and financial aid information; lack of bridge programs or other academic support in the transition from high school to college; "summer melt," where students intending to enroll in college delay or never enroll; diversion from a 4-year institution to a community college; barriers to college campus engagement; family demands; and cultural criteria, to name a few (Engle & Tinto, 2008). My study centers on the obstacles low-income students face and the supports that they benefited from, based on the students' own words and experiences.

The research questions I investigate are as follows:

- How do low-income PHS graduates perform in the postsecondary environment (specifically at the primary receiving public 2-year institution, Santa Rosa Junior College [SRJC])?

- How do low-income former PHS students describe their academic preparation for college? How do they perceive and define their college readiness vis-à-vis their prior experience at PHS? What specific high school programs or activities do low-income students identify as critical to their success or lack of success in postsecondary schooling?

My research uncovered factors that students describe as significant to their postsecondary choices (location and selectivity of college) as well as the exploration of other possible factors—after-school programs, access to SAT/ACT test prep, and access to college counseling services—that improve student access to, preparation for, and persistence in college. Though we might imagine that a low-income student has less opportunity in school advancement because of his or her income status, this study attempts to discern what programs or supplements are most effective in closing the opportunity gap. Students generally reported in the interviews that PHS provided reasonable support for college, but that other distractions and dispositions regarding college attendance were factors in future postsecondary schooling and success. Some students did not consider college as an option and therefore ignored the general information about college (e.g., signing up for the PSAT, visiting the college counselor). These students might be less likely to attend postsecondary school.

This study is significant because there is limited qualitative research that gathers low-income students' perceptions of their high school experience and how their experience connects to their own sense of college readiness.

Much has been written about educational inequality for low-income students in the college-going experience. Gary Berg's (2016) exploration *Low-Income Students and the Perpetuation of Inequality* is particularly on target in its examination. Berg cites the tendency in 21st-century America to rely on Jefferson's "natural aristocracy," the idea that the "best" eventually succeed with a combination of hard work and talent. He laments the societal belief that the "poor [are] primarily responsible [that] limits the perceived responsibility of society" (p. xiv). He concludes:

The American philosophy toward education then is two-part: first, that there are natural or innate differences in ability and that society should allow the best to rise to the top, and second, that those who are less able are largely responsible for their own fate. (Berg, 2016, p. 7)

Berg (2016) also cites the inherent difficulty in just talking about poverty: "Even the simple act of identifying individuals or groups as 'disadvantaged' or 'poor' carries with it loaded connotations (and) unintended value judgments" (p. xiv).

Significance of This Study

At the heart of this study is the issue of equity. It would appear that schools are not doing enough to create equitable opportunities for students. Students in the public school setting should ideally have access to the same set of opportunities or *schools should do what they can to provide equitable opportunities for all.* One example of this lack of equity at PHS is preparation for the SAT and the college application process. For example, a family with resources may enroll their son or daughter in an SAT prep program external to PHS or hire private college counseling services, whereas a low-income student may not have the same opportunity.

High school success or failure has lasting impact for the individual student and for the greater society. The fundamental question facing the K–12 system is why students are unprepared for postsecondary education. One in five high school freshmen do not graduate from high school, yet of the four of five who do, at least three are not ready for college (Kena et al., 2015). Low-income students are more likely to be "not ready" and either never get to or never complete college (Engle & Tinto, 2008). According to Gary Becker (2013), the average earnings premium of a college graduate is approximately 80%. Unless we find a solution, our society and education system will continue to perpetuate the imbalance of the haves and have-

nots; unless we find a solution, the idea of that every student can achieve at the highest level moves from a possibility to a fantasy.

The question of how students interact with the opportunities afforded in high school is an important one. Providing a program is not the same as providing direct access and encouragement to the program. Further study will be necessary to determine a specific plan for reaching each student and connecting him or her to opportunity.

Organization of the Study

This dissertation is organized as follows: (1) this introductory chapter on the significance and purpose of this study; (2) a chapter with a theoretical framework section followed by a literature review; (3) a short contextual chapter focused on Petaluma and PHS; (4) two chapters describing the quantitative, then the qualitative approach to the research questions and findings; and (5) a summary chapter on conclusions, limitations, and relevance.

CHAPTER 2

Theoretical Framework and Review of Literature

Theoretical Framework

Several key theorists who have considered the complex path to college attainment frame my work. First is Vincent Tinto's work on "leaving behavior" in college, which considered the challenges students report in their college experience. Second is James Coleman's (1988) work on social capital as a lever for student persistence. Coleman's focus on obligations and expectations, information channels, and social norms framed my inquiry around the supports (or lack thereof) at the high school level. Finally, George Kuh (2007) and his colleagues (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006) defined six precollege experiences as critical markers for success: academic preparation, college readiness, enrollment decisions, peer and family support, motivation, and demographic characteristics. These markers were useful guides in developing interview protocols and framing my qualitative research in general. In addition, I added my own experience as a K–12 educator and the observations and data I have gathered as a comprehensive high school administrator for 8 years.

In 1975, faced with growing concern about dropouts from higher education, Vincent Tinto sought to develop a theoretical model that described the multiple characteristics of college dropouts. He pointed out that research up to that point had failed to distinguish between variables, to "separate permanent dropout from temporary and/or transfer behaviors," leading educational planners to "overestimate substantially the extent of dropouts from higher education" (Tinto, 1975, p. 90). In creating a detailed longitudinal model, Tinto (1987) connected the social and academic systems of college with the individuals who attended, and with the patterns of student interaction with other peers and the institution itself. Tinto

described the exceedingly complex interaction students have with one another and how these interactions may affect student persistence. A student may enter college and leave without a degree (a nonpersister); or enter college, remain enrolled for 2 years, stop, and then return 6 years later; or enter college, remain for 1 year, and transfer to another university to complete the degree; or enter more than one community college simultaneously. Student persistence is thus a very individualized experience. It may well be connected to the high school experience of the student.

Subsequent work, including Braxton (2000), questioned some of Tinto's (1975) constructs, including academic integration. Braxton encouraged the use of constructs from other theoretical perspectives—economic, psychological, and sociological—in more fully describing student departure from college.

Astin (1971), another prominent scholar in this area, neatly summed up the complexity of capturing college persistence:

The term "dropout" is imperfectly defined: the so-called dropouts may ultimately become non-dropouts and vice versa…But there seems to be no practical way out of the dilemma: A "perfect" classification of dropouts versus non-dropouts could be achieved only when all of the students had either died without ever finishing college or had finished college. (p. 15)

James Coleman (1988) focused on the concept of social and economic capital and how the lack thereof contributes to dropping out of high school. Social capital can be understood as the various assets an individual accumulates that allow for relationships that produce tangible and symbolic returns (Bourdieu, 1986). Coleman divided social capital into two broad streams, the first governed by societal norms, obligations, and rules, the second by economic desire, the principle action of maximizing utility. These two streams, Coleman said, combine as a principle for rational action and behavior. They can account "not only for the actions of individuals in particular contexts, but also for the development of social organization" (p. 18). Students who

develop strong relationships with peers and staff are potentially advantaged by the peer group as well as access to information. Students in a high-functioning AP class might find themselves accumulating social capital that is an advantage when applying to college. My own experience is that low-income students often have relatively less social capital, either because of structural barriers to those networks (AP classes or others) or because of fewer connections with the dominant group.

Social capital, Coleman emphasized, exists in "the *relations* among persons." This social capital is a resource that students need to advance; in its relative absence, students may struggle. Social capital, Coleman said, depends on the "trustworthiness of the social environment…and the actual extent of obligations held." In the student environment, this capital might be a collaborative study group or a commitment to do portions of research on a joint research paper. The trust implicit in a community of learners might lead to persistence within each individual to attain degree goals. This element from Coleman's work was critical to my research, particularly in the context of students from low-income backgrounds. Specifically, within interviews, I explored the lack of social capital among low-income students, and whether its relative absence is a prime factor they identify in terms of their success on the college campus. I investigated their knowledge of how to navigate college and who to talk to during a challenging academic moment.

Coleman (1988) explored the relationships between social capital, financial capital, and human capital. Financial resources "provide the physical resources that can aid achievement: a fixed place in the home for studying, materials to aid learning, the financial resources that smooth family problems" (p. 30). The absence of financial capital therefore can lower overall social capital. Coleman also described how human capital is necessary for students'

development. This human capital is measured typically by years of schooling and relative wealth, the resource of experience (Coleman, 1988). As such, lower social capital may result in lower human capital, and vice versa. For example, since parents are an important part of children's lives, they pass on their prior experiences to their children; so when those experiences do not include college or are hampered by financial constraints, this can disadvantage students in access to resources (financial capital), knowledge of how college works (human capital), and networks of supports (social capital). Thus, Coleman hypothesized, low-income students would enter postsecondary institutions at a deficit, leading to a drop in persistence and success.

Coleman (1988) drew some of his conclusions from the *High School and Beyond* study conducted with Hoffer (Coleman & Hoffer, 1987). He found specific social capital factors that affect dropout rates in high school, including single-parent families (6% difference), four siblings or more (6.4%), mother's expectation of college (versus no expectation; 8.6% difference), and a combination of these factors (22.5%). I explored these factors in descriptive data of PHS graduates enrolled in nearby postsecondary institutions, as well as through the design of qualitative questions to my target group.

George Kuh (2007) described the pathway to college as a series of twists and turns, citing a myriad of influences that bear on college admission and persistence to degree. His examination of the research on college success found six pre-college experiences to be critical markers for success: academic preparation, college readiness, enrollment decisions, peer and family support, motivation, and demographic characteristics (Kuh et al., 2006). For the purposes of my local study, the interview protocols explored these areas to determine if local data match Kuh et al.'s markers. Kuh (2007) cited a need for further exploration of student voice and the

capturing of their pre-college experience: "We need to know more about the pre-college experiences and dispositions of students who are less likely to engage and induce those students to participate in demonstrably effective programs and practices" (p. 4). This is precisely what my dissertation has focused on.

Finally, John Braxton's (2000) work on student persistence and his model describing a student's path to college has been influential. In *Reworking the Student Departure Puzzle,* Braxton explored the impact of academic and social integration on college success. He posited that greater academic and social integration lead to better persistence rates (Braxton, 2000). Braxton (p. 175) provided a basic framework to gauge a student's path to college, combining general background and school experiences that lead to the intention to engage in college seeking, eventual college entry, and (ideally) persistence to degree (Figure 1).

Figure 1. Key Elements of a Student-Centered Model
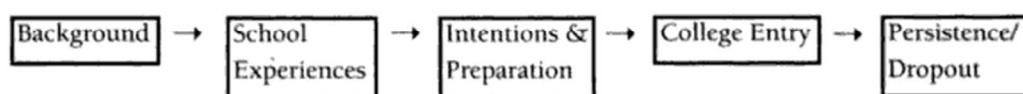
Figure 1. Key elements of a student-centered model (Braxton, 2000).

Braxton (2000, p. 177) further developed the model to include the specific factors that may affect the student (Figure 2). He included background characteristics, such as parental income, parent education level, and cultural capital; the school experience and the manner in which information about a student is shared and discussed with peers, teachers, and counselors;

and how these lead to specific student-centered decisions to volunteer, take college prep classes, and set college goals.

Figure 2
A Student-Centered Theory of Persistence

Background		School Experiences		Intentions/ Engagement		College Entry		Persistence/ Dropout
Family SES Parents' Ed. Cultural Capital Encouragement	→	Feedback: Teachers Peers Counselors	→	Advice Seeking Volunteering College-prep. Classes	→	Goal Setting Intellectual & Social Involvement Motivation	→	
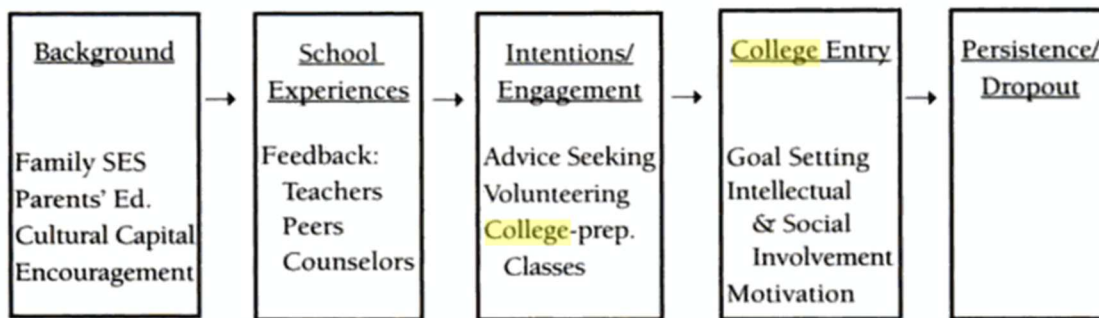
Figure 2. A student-centered theory of persistence (Braxton, 2000). SES = socioeconomic status; Ed. = education.

Balfanz (2009) challenged the American high school to "serve as a means of advancement for all of its students and the nation" (p. 32). He pointed out that though high schools have made many efforts at reform in the last 25 years, there are still many questions about the preparation of students for success at college and careers. A specific review of the literature reveals these troubling gaps in the preparation of students for college and career; in particular, low-income students are significantly more at risk of lacking preparation for college.

Together, these theoretical concepts helped frame my study and guide the data collection. I now turn to a review of the literature in the area of college readiness and success for low-income students.

Literature Review

California high school graduation rates continue to rise, yet numerous studies bemoan the gap between California students who appear to be college ready via high school graduation yet perform poorly on community college or California State University (CSU) placement tests. These students are assigned to remedial classes in English and math (Brown & Niemi, 2007; Kurlaender, Jackson, & Howell, 2012; Callan et al., 2010). On a national scale, 24% of first-year students enrolled in 2-year public institutions and 21% of those at 4-year public institutions reported being enrolled in remedial courses, according to Aud et al. (2013). In California, the remediation rate in the CSU system is far higher. Trounson's 2002 article in the *Los Angeles Times* described the CSU system "kick[ing] out more than 2,200 students—or 7% of the freshmen class—for failing to master basic math and English skills" (p. 2). Of the 50,000 entering freshmen in the CSU system in 2008, 68% required remediation in math, English, or both (National Center for Public Policy and Higher Education & Southern Regional Education Board, 2010).

Various studies have attempted to uncover trends that might lower remediation rates. Some have pointed to college-focused activity like college fairs, establishing college-going culture on the high school campus, and providing information about college readiness (Howell, Kurlaender, & Grodsky, 2010; Roderick, Nagaoka, & Coca, 2011); others (Howell, 2011) have linked remediation rates directly to inequality in preparation by socioeconomic status. Much of the research defines the problem as one of alignment between high school graduation standards and college readiness standards (as determined by postsecondary systems). These studies underline systemic concerns that include the tension between improving graduation rates and simultaneously raising standards and rigor. In the quest for higher graduation rates, it is possible

that standards are simultaneously being lowered. At PHS, the desire to ensure all students graduate can mean a lowering of standards. When school districts add rigor in graduation standards (like another year of math or science), graduation rates may decline.

A primary culprit noted is the disconnection between K–12 and postsecondary expectations. As one study said, K–12 and postsecondary education "typically set college readiness expectations independently of one another" (National Center for Public Policy and Higher Education & Southern Regional Education Board, 2010, p. 4). When comparing traditional college entry assessments with specific college readiness skills, student performance at college trails. Hyslop and Tucker (2012), Callan et al. (2010), and Venezia, Kirst, and Antonio (2008) all noted this gap, stressing that coursework between high school and college is not well aligned. Venezia et al. emphasized that "students graduate from high school under one set of standards and, three months later, are required to meet a whole new set of standards in college" (p. 2).

This review of the literature will focus on three areas that drive my research: first, I examine the literature regarding college readiness and content articulation gaps; second, I examine literature related to student perception of their postsecondary experience; and finally, I examine the literature on student poverty and low-income student retention and persistence at the postsecondary level.

College Readiness

Alignment between K–12 and postsecondary schooling. California students have, until recently, selectively taken the EAP test at the end of 11th grade. Since the introduction of California Assessment of Student Performance and Progress (CAASPP) testing, all 11th graders now sit for the EAP. The EAP is a collaborative effort among the State Board of Education

(SBE), the California Department of Education (CDE), and the CSU system. Begun in 2004, the EAP was established to provide opportunities for students to measure readiness for college-level English and mathematics in their junior year of high school, so that students could be provided opportunities to improve their skills during their senior year. Prior to CAASPP, 80% of eligible California students participated in the EAP, but the majority (77% in English and 85% in math) did not test college ready (Venezia et al., 2008).

Betraying the College Dream (Venezia et al., 2008) was one of the first studies to formally identify and study the high school–college preparation gap and the disconnect between K–12 and postsecondary education systems. Focusing on six states (California, Georgia, Illinois, Maryland, Oregon, and Texas), Venezia et al. (2008) interviewed state, university, and community college faculty as well as K–12 educators and staff (principal, vice principal, a counselor in charge of seniors or of college counseling, and four teachers per school). They also surveyed high school students and their parents, conducting field research in a total of 24 high schools. They interviewed and surveyed two ninth-grade and two 11th-grade classes (one honors and one nonhonors per grade level) and the parents of those students in each school (more than 2,000 students in total).

Venezia et al. (2008) described multiple disconnects between high school and college, including the plethora of student assessments (school, district, state-mandated, national—AP, PSAT, SAT, ACT); disconnected curricula; lack of longitudinal K–16 data; poor accountability across K–16; lack of K–16 governance mechanisms; and student, parent, and K–12 educator misunderstandings about college. They found that states had created unnecessary barriers between high school and college that were undermining student aspirations. The current fractured systems, the study said, "send students, their parents, and K–12 educators conflicting

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and vague messages about what students need to know and be able to do to enter and succeed in college" (Venezia et al., 2008, p. 10).

The study found gaps in students' knowledge of what college would be like, as well as K–12 teachers' knowledge of what college expectations were. They also found high school offered generally inadequate college resources, inadequate connections with postsecondary institutions, and weak college admissions information. Most damning was their finding that high schools provided inequitable college preparatory opportunities for students, including a general lack of quality college counseling. The authors found that many students seek college advice from teachers rather than counselors. But teachers, say Venezia et al. (2008), often are ill equipped to advise: "Most teachers throughout the states were completely uninformed about specific placement policies" (p. 38).

Venezia et al. (2008) concluded that much of this disconnect and disarticulation stems from the initial creation of the K–12 and higher education systems. According to Venezia et al., in the early years of the 20th century, the educational systems were loosely linked. The College Board set standards for each academic subject, and issued a syllabus to assist high school students in preparing for college entrance subject-matter exams. However, over time, the K–16 academic standards connection "frayed and then broke open" (Venezia et al., 2008, p. 14) American schooling lacks a truly connected system of communication for students seeking postsecondary options, Venezia et al. said (p. 14). Once a student graduates from high school, he or she is untethered from the K–12 system and essentially on his or her own in tackling post-secondary education.

Venezia et al. (2008) made the following recommendations about improving K–12 and postsecondary connection: (1) to provide student and parents with high-quality information

about high school courses that will best prepare student for college; (2) to focus on the postsecondary institutions that serve the majority of students (community colleges rather than Top 20 universities); and (3) to create awareness and new focus "from access to college to include access to *success* [emphasis added] in college" (pp. 2–3)

Howell (2011) explored three teacher quality measures (years of service, degree/educational attainment, and credential status) to determine whether these measures had any effect on remediation rates. Her work focused on the possibility that "high college remediation rates signify a disconnect between K–12 curricula and the expectations and requirements of post-secondary study" (Howell, 2011, p. 296). After controlling for student body characteristics, she found that these three quality measures had "statistically significant associations with remediation rates of college-bound students (Howell, 2011, p. 314). She also found that more teacher experience was associated with lower rates of remedial course taking in math. Additionally, there was compelling evidence that the greater the proportion of teachers in a high school with a master's degree, the lower the English remediation need by that school's students in college, particularly for those students who attend high schools with larger minority student populations (Howell, 2011, p. 314).

Some researchers focus on the specific articulation gap. The *Ready by Design* report developed by Hyslop and Tucker (2012) described a case study at West Hills High School, in a suburb of San Diego, California. There, teachers explored the disconnection between the academic work of high school and the academic work expected in college. With a student population of approximately 2,300 (72% Caucasian, 14% Latino/Hispanic, and smaller percentages of Asian, African American, Native American, and Filipino students), school leaders at West Hills discovered that 95% of its graduates who were headed to community

college needed remediation in English. West Hills teachers joined with faculty at Grossmont-Cuyamaca Community College District to see what had gone wrong. They investigated years of student transcripts, exchanged lesson plans, and shared curricula. Among other things, they found that West Hills's English coursework was primarily targeting literature and literary analysis instead of collegiate skills of argumentation, analytical thinking, and writing to inform. The work at high school and the work at the community college were simply not aligned. The *Ready by Design* report found that only 25% of high school students taking common college entrance exams are deemed college and career ready—and two out of every five students require remediation in college in basic "skills they should have mastered in high school before they can enroll in credit-bearing courses" (Hyslop & Tucker, 2012, p. 4).

Defining and measuring college readiness. Hyslop and Tucker (2012) also pointed out that test scores describe only one element of college and career readiness. Test scores, they said, may be the best way to answer a "very specific kind of question, such as whether a school's students mastered grade-level math content" (Hyslop & Tucker, 2012, p. 8). But in terms of measuring progress toward the larger goal of postsecondary readiness, test scores need to be combined with other direct evidence of readiness. Hyslop and Tucker noted that an examination of CDE data reveals that some schools that have relatively low Academic Performance Index scores have relatively high levels of students who are University of California (UC)/CSU eligible (p. 8). They argued that a broader measure of college readiness is necessary to truly hold schools accountable for college and career success. "To thrive on campus, as well as in the workplace, students need skills to adapt and thrive in these new environments, including those that apply to persistence, time management, and interpersonal relationships" (Hyslop & Tucker, 2012, p. 6).

Like Hyslop and Tucker, Aldeman (2010) argued that schools that produce higher test scores may not necessarily produce college-ready students. Students may be able to perform on a discrete test but have not fully developed their critical thinking and collaboration skills. He argued for accountability measures tied specifically to success in the transition to college. For example, he said, districts may relax standards in order to raise the graduation rate, yet not necessarily produce college-ready students (Aldeman, 2010, p. viii).

Roderick et al. (2009) confirmed Aldeman's (2010) finding among students from urban high schools. They identified four elements crucial for college success that they believed high schools should stress: content knowledge and basic skills; core academic skills; noncognitive, or behavioral, skills; and "college knowledge," the ability to effectively search for and apply to college (Roderick et al., 2009, p. 185).

Academic preparation in high school. Beil and Knight's (2007) study of freshman students at George Washington University in 2006 concluded that the writing expected in college—criticizing a written argument, defining a problem, and proposing a solution, as well as analyzing the audience—had not been assigned with any frequency to this cohort of students while in high school. During the first week of class, Beil and Knight administered a beginning-of-course survey to new students who were taking their first writing course at the university. They asked students to describe the types of writing experiences and assignments they had been assigned in high school, including writing tasks, the frequency of feedback, how research sources were used, and the format and length of the written assignments. They found three types of writing assignments—literary analysis, in which students investigated themes, symbols, or other literary devices; analytical essays; and lab reports—to be most frequent in high school; however, less than half of the students had been assigned a research paper on a frequent basis.

Personal narratives, news reporting or feature writing, and book reviews had been assigned only occasionally or not at all.

The *Chronicle of Higher Education* conducted a nationwide survey of faculty members and high school teachers on student readiness for college, as well as on a variety of other issues, including the impact of high-stakes testing (Sanoff, 2006). The survey focused on a sample of public high school teachers in core academic subjects and college faculty members in a variety of academic disciplines at public and private colleges and universities that offer a 4-year degree and have a comprehensive academic program (Sanoff, 2006). Forty-four percent of K–12 members said students are not well prepared for college writing, a view shared by only 10% of college teachers. Just 6% of professors viewed students as "very well-prepared" writers, compared with 36% of teachers who saw them that way. In math, 37% of high school teachers said students were "very well prepared" in math, but only 4% of college professors agreed (Sanoff, 2006, p. 2).

Tellingly, Sanoff (2006) describes an overall perception gap:

Asked about students' overall preparation for college, 84 percent of [college] faculty members compared with 65 percent of teachers say that high-school graduates are either unprepared or are only somewhat well prepared to pursue a college degree. Almost one-fourth of faculty members say flatly that students are not prepared. Just 12 percent of teachers agree with that assessment. (p. 7)

In *College Knowledge: What It Really Takes for Students to Succeed and What We Can Do to Get Them Ready*, David Conley (2008) described a K–12 system that sends students to college who are unprepared for rigor. He distinguished between students who are "college-eligible" and "college-ready." Readiness, he said, implies that the student's preparation is aligned with the set of knowledge and skills necessary to succeed in college. The emphasis should be on being able to succeed, not just on being admitted (Conley, 2008).

Conley (2008) defined college readiness as "the level of preparation a student needs in order to enroll and succeed— without remediation—in a credit-bearing general education course at a postsecondary institution that offers a baccalaureate degree or transfer to a baccalaureate program" (p. 22). Conley described three elements of readiness: that a student needs to possess the content knowledge, strategies, skills, and techniques necessary to be successful in a postsecondary setting; that every student need not have exactly the same knowledge and skills to be college and career ready; and that a student's college and career interests help identify the precise knowledge and skills the student needs.

Critically, Conley (2008) pointed out the importance of appreciating student interests when considering college readiness. The aspiration of the student is far more important than "relying on common 'cut' scores for all students on a few measures, generally English and math tests" (Conley, 2008, pp. xi–xii). He found that much more is required to succeed in college. The college-eligible students, he said, have taken courses whose titles have been approved by college admission offices, whereas college-ready students are truly ready for the collaborative, critical-thinking culture of college (Conley, 2008).

In *College and Career Ready in the 21st Century*, Stone and Lewis (2012) argued that high school's purpose "has to be to do the best it can to provide all who leave it the foundation necessary to enter, or further prepare, for adult life" (p. viii). Their book, based on research by the National Research Center for Career and Technical Education, discussed the tension between academic skills (the elements tested in the ACT test, for instance) and broader "developmental assets" (the skills of critical thinking, collaboration, and oral competency). They argued that defining areas like "STEM" [science, technology, engineering, and mathematics] often leads to poor comparisons across systems (and nations). The attempt to

move all students to college, they said, by narrowing high school curriculum "exacerbate[s] the stubbornly persistent high dropout rate" in college (Stone & Lewis, 2012, p. 6).

This perspective is important in that our education system should offer multiple end points for students, including, as Stone and Lewis (2012) said, coupling the high school diploma with a credential that documents skills gained in high school. Though one goal (and the purpose of this study) is to determine what else high schools can do to promote college enrollment, persistence, and success, many students will succeed without a college degree, and high schools should be strengthening these pathways as well.

A new study from the Education Trust shone light on college and career readiness. In *Meandering Toward Graduation*, Bromberg and Theokas (2016) examined transcripts from the National High School Longitudinal Study to determine how many students were completing a full college- and career-prep curriculum and had grades that demonstrated mastery. They followed a nationally representative group of ninth graders from 2009 through 2013, asking whether these students were being exposed to the kind of content that would prepare them for postsecondary work, including whether the students were being afforded "experiences that groom them to problem solve, study effectively, and work productively in teams" (Bromberg & Theokas, 2016, p. 1). Crucially, they disaggregated the data, looking closely at differences by race and socioeconomic status as well as students' own aspirations.

Bromberg and Theokas (2016) grouped the graduates into four categories: college-prep curriculum**,** career-prep curriculum**,** college- and career-prep curriculum**,** and no cohesive curriculum**.** They acknowledged that course completion does not signal mastery, and examined grades earned in academic and career coursework to measure whether learning had occurred, reasoning that grade point average (GPA) has been predictive of college success. Their study

found that only 8% of students nationwide completed a college AND career readiness sequence. Significantly, 46% of high-socioeconomic-status students completed a college-ready curriculum compared to only 31% of low-socioeconomic-status students (Bromberg & Theokas, 2016) whereas 47% of all high school graduates did not complete any cohesive curriculum. This was particularly true for Latino graduates (52%) and graduates from disadvantaged families (53%). The authors concluded that more than half of low-income students leave high school without completing a college- and career-ready curriculum (Bromberg & Theokas, 2016).

Bromberg and Theokas (2016) found that more than half (57%) of the students were missing more than one college-ready course requirement, with the remaining 43% missing only one or none. Math and foreign language were particularly problematic courses: 31% of students who missed only one requirement simply did not take two years of a foreign language (Bromberg & Theokas, 2016). About a third of students were missing the math requirement, not because they did not take enough math credits, but because they did not specifically earn Algebra II credit.

Bromberg and Theokas (2016) warned that schools must prevent course failure by monitoring student performance in real time and by "providing the instructional and cultural supports that enhance course mastery" (p.7). They also recommended accelerating learning in middle school and early high school to help alter some of these patterns. Otherwise, they said, schools will continue to see high rates of failure, especially as schools demand more rigorous college- and career-ready standards.

Bromberg and Theokas cited a 1985 Coalition of Essential Schools study comparing high schools to "shopping malls." As it was in that period, the authors stated, "Our data show that today's students are still meandering through lots of disconnected courses that get them to

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graduation but nowhere else" (Bromberg & Theokas, 2016, p. 12). Even in the mid-'80s, they identified that graduation rates had reached an all-time high and postsecondary enrollment rates were steadily rising, but thousands of new college students still tested into remedial reading, writing, or math courses because they didn't have the foundation to perform at the levels demanded in college classes (Bromberg & Theokas, 2016).

Barnes and Slate (2013) considered the events that brought college readiness to the forefront of high school curriculum. They said college readiness should not be "one-size-fits-all," arguing that college readiness is dynamic. Students, they said, may be college ready for one level of postsecondary education but not necessarily for other levels. The result of considering readiness as a one-size-fits-all question has led to perpetuation of a bifurcated education system.

Nichols, Glass, and Berliner (2006) said that students from families whose household incomes fall into the middle and upper middle socioeconomic ranges, who typically score well on standardized tests, are "not bothered by the high-stakes testing and punitive accountability measures because the pass rates of students are extremely high" (p. 6). Instead, it is the students in the lower socioeconomic range who are forced into accountability systems that narrow the curriculum and force teaching to the test, elements that may not prepare them for college work (Barnes & Slate, 2013).

In summary, the literature on college readiness suggests significant gaps in preparation for low-income students, driving my local study forward to determine whether a similar picture emerges and whether students can determine factors that may or may not assist in developing college readiness.

Collegiate success. Kuh et al. (2006) described the pathway to college as a series of twists and turns, citing a myriad of influences that bear on college admission and persistence to degree. In examining the research literature on college success, Kuh et al. focused on the impact of precollege experiences on college success. They used a "weight of the evidence" approach, focused on national or multi-institutional studies over a single-institution or state report. In particular, they looked at students who are at risk of underperforming and/or dropping out, such as historically underserved students (racial and ethnic minorities, low-income students). They created a two-sided diagram (Figure 3), the left hand representing precollege experiences and the right hand the college experience (Kuh et al, 2006).

What Matters to Student Success
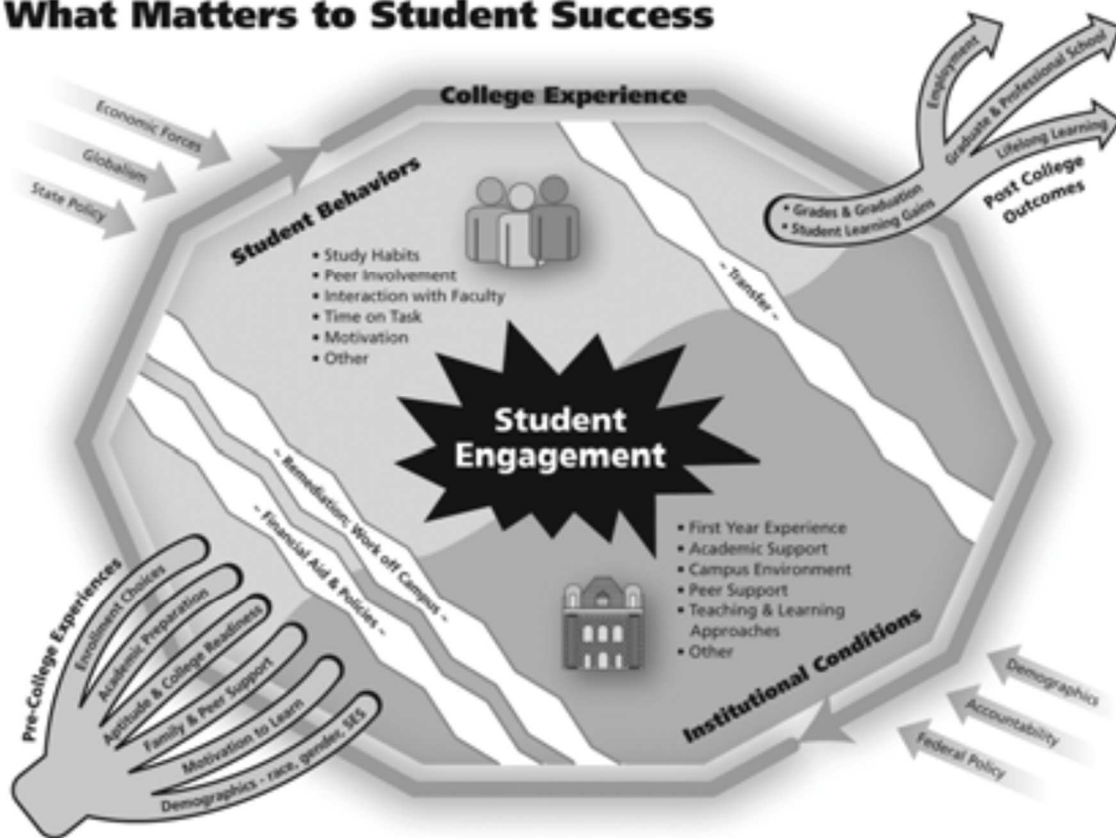
Figure 3. What matters to student success (Kuh, 2006, p. 8).

Kuh et al. (2006) found six pre-college experiences to be critical markers for success: academic preparation, college readiness, enrollment decisions, peer and family support, motivation, and demographic characteristics. For the purposes of my local study, I developed interview protocols motivated by these (and other) indicators. Kuh et al. went on to cite a need for further exploration of student voice and the capturing of students' pre-college experience:

To increase the odds that students will survive and thrive in college, we need to know more about the pre-college experiences and dispositions of students who are less likely to engage and induce those students to participate in demonstrably effective programs and practices. (p. 106)

In further study, Kuh (2007) explored the role that student communication with staff and peers has in long-term success. Using student engagement surveys conducted by the Indiana University Center for Postsecondary Research, in particular the National Survey of Student Engagement, he found that students who "talk about substantive matters" and engage in educationally purposeful activity with staff and peers typically are more satisfied with their college experience, earn better grades, and are more likely to persist (p. 4). Kuh cited Cruce et al. (2006), who also found that though these educationally purposeful activities help all students, it is particularly the underserved and low-income students that tend to benefit more. My study examines and poses questions about these types of activities.

Kuh (2007) also looked at the High School Survey of Student Engagement (HSSSE). He notes that students who do not attain grade-level proficiencies in math and reading by the eighth grade are much less likely to be college ready at the end of high school. He described HSSSE findings that suggested that the academic preparation of many high school seniors is lagging and that, according to the survey, they have not developed the habits of mind that will allow them to tackle more challenging intellectual tasks (Kuh, 2007).

Engagement and Student Activities. Kuh (2007) also cited a companion survey to the HSSSE, the Beginning College Survey of Student Engagement, which asked entering first-year college students about their academic and extracurricular involvements in high school as well as the importance that these students place on participating in "educationally purposeful activities" in the first year of college. The survey found that about 60% of students expected to spend more than 15 hours a week studying, but only 40% did so. Most students expected to earn grades of B or better, though they spent only about half the amount of time preparing for class that faculty say is needed to do well. Similarly, more than 90% of entering students expected to participate

in cocurricular activities, yet 32% spent no time in these activities during their first year. About half the students did not use career planning, tutoring, or financial advising services.

Kuh's (2007) work demonstrated the gap between student perceptions before starting college (their precollege attitude) and their actual behavior. In my local study, I asked current students to reflect on their attitude prior to college entry and their current viewpoint.

Poverty/Retention and Remediation. Low-income and underrepresented minority students are more likely to attend nonselective 4-year schools or open-enrollment community colleges than the general population (Hoxby & Turner, 2013). In a study for the Pew Hispanic Center, Fry (2004) found that nearly 66% of Latinos—compared with fewer than 45% of White students with similar academic backgrounds—initially enroll at nonselective institutions. A simulation analysis of the possible collegiate outcomes for the 689,000 Latinos enrolled in eighth grade in October 2002 found that had they attended the same kind of colleges as similarly prepared Whites, the likely number of bachelor's degrees to come from this class would have increased by 20%, from 125,000 to 150,000 (Fry, 2004, p. vii).

Similarly, Kahlenberg (2004) found that more than 60% of high school graduates from the wealthiest quartile enroll in a 4-year institution, whereas only one in five from the lowest socioeconomic quartile do so. At the nation's most selective colleges, 74% of students come from the top socioeconomic quartile, whereas only 3% are from the lowest quartile (Kahlenberg, 2004). It should be noted that the literature on student outcomes at selective colleges is mixed. Dale and Krueger (2002) pointed out that "students who attended more selective colleges earned about the same as students of seemingly comparable ability who attended less selective schools" (p. 2). However, significant to my study, they also found that students from low-income families earned more if they attended selective colleges (Dale and

Krueger, 2002). There is a consensus that students are more likely to complete degree programs at selective institutions. Oseguera (2005) found that "attending a selective institution enhances both four and six-year degree completion of all the groups" (pp. 32–33). The positive effect of selectivity is even stronger for Asian American and Mexican American students compared to Caucasian students, Oseguera found. Because selective schools have a positive effect on degree completion, Oseguera concluded, more attention needs to be paid to the relative underrepresentation of low-income students and students of color.

Recent research from Hoxby and Avery (2012) showed that low-income students, even those who are highly qualified to do so, do not apply to selective colleges. Many factors may be responsible, including inadequate K–12 preparation, poor admissions counseling, and misperceptions of affordability. De La Rosa (2006) specifically argued that current financial aid policy fails to account for low-income families' awareness of college affordability; these families are more likely to steer clear of perceived high price tags..

Hoxby and Avery (2012) found that income is strongly correlated with application to selective colleges. Using de-identified student data from the ACT and the College Board for the class of 2008, they separated the low-income, very-high-achieving students, then looked at patterns of college admission. Low-income high achievers ("income-typical" behavior) acted very differently from higher-income students ("achievement-typical" behavior). They found that income-typical students were generally isolated from other high achievers within their school.

Interestingly, Hoxby and Avery (2012) found that high-achieving, low-income students who did apply to selective institutions were just as likely to enroll and progress toward a degree as high-income students with equivalent test scores and grades. In fact, they found that selective institutions were likely to offer generous financial aid packages such that it might actually cost

more to attend nonselective schools. It appears that many low-income students may lack appropriate information on college financial aid options and/or lack access to advice on what is the best path to take. These questions are embedded in my qualitative study.

In *The State of College Access and Completion*, edited by Perna and Jones (2013), the authors explored why college completion rates have not changed even though college enrollment has grown dramatically, and what postsecondary systems can do to change this. The college enrollment process, they said, is influenced by an "internalized system of thoughts, beliefs, and perceptions that is acquired from the immediate environment" and shaped by the "social, economic, policy, organizational, and cultural contexts in which individuals are embedded" (Perna and Kurban, 2013, p. 14). Like Kuh, they noted that locked in the group data are many variables that affect individual students in different ways (Perna and Jones, 2013).

Berliner (2009) described the impact on low-income students of six "out-of-school factors" (OSFs) common among the poor that affect the health and learning opportunities of children. Drawing data from the U.S. Department of Education, the U.S. Department of Agriculture, and many specific studies of schools serving low-income students, Berliner stated that these OSFs—(a) low birth weight and nongenetic prenatal influences on children; (b) inadequate medical, dental, and vision care, often a result of inadequate or no medical insurance; (c) food insecurity; (d) environmental pollutants; (e) family relations and family stress; and (f) neighborhood characteristics—are often outside of a school's control. Poverty, he suggested, may be insurmountable. Berliner stated that we will never "reduce the achievement gap between poor and nonpoor children, between African American and White children, or between Hispanic and Anglo children, unless OSFs that positively or negatively affect achievement are more equitably distributed" (p. 9).

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Carnevale and Strohl (2013) convincingly underlined the problem raised by Hoxby. They used various data sources, including Georgetown University Center on Education and the Workforce calculations using Integrated Postsecondary Education Data System data (various years) and the National Center for Education Statistics (NCES)–Barron's Admissions Competitiveness Index Data Files, to study enrollment patterns at 468 selective colleges nationwide. They found an increasing population of White students attending the selective colleges, while Latino and African American students are more and more concentrated in the less well-funded, open-access, 2- and 4-year colleges. The postsecondary world, they said, is echoing and even amplifying the inequities of race and socioeconomics in admissions. Specifically, White students accounted for almost all the growth in enrollment at the selective colleges (72%) but had virtually no increase in population at open-access schools. On the other hand, Latino and African American students accounted for almost all the open-access enrollment growth (92%; Carnevale & Strohl, 2013).

Carnevale and Strohl (2013) went on to outline the funding differences and resources available to students at selective colleges, including the all-important completion rate data. Whereas 49% of students at open-access colleges complete programs, the completion rate is 82% for the 468 selective colleges. Simply put, more students complete their degree and enter the workforce from selective colleges, and low-income and racial/ethnic minority students are less likely to attend those selective colleges.

Like Berliner (2009), Carnevale and Strohl (2013) described a landscape where wealth provides access:

More college completion among White parents brings higher earnings that fuel the intergenerational reproduction of privilege by providing more highly educated parents the means to pass their educational advantages on to their children. Higher earnings buy more

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expensive housing in the suburbs with the best schools and peer support for educational attainment. (p. 7)

The cycle of wealth begetting more wealth is retained.

Critically, Carnevale and Strohl (2013) found that, regardless of race, White, African American, and Latino students who graduate with a bachelor's degree from selective colleges go on to graduate school at the same rate. They equivocated between race and economic deprivation: both, they said, affect educational and economic opportunity and are "most powerful in combination." They went on to sum up the connection between race and class: "This is why some class-based metrics that reflect class-based disadvantages in their most extreme form, like differences in wealth, family structure, parental education, and occupational status, can translate into proxies for race in college admissions" (Carnevale & Strohl, 2013, p. 14).

Carnevale and Strohl's (2013) distinction between race and class is critical to this study. A governing theory of my study is that students in these classifications have varying degrees of advocacy. In *Moving Beyond Access: College Success for Low-Income, First-Generation Students,* Jennifer Engle and Vincent Tinto (2008) examined the performance and constraints of low-income students in college. Using NCES statistics, the authors first described access to college for low-income students, defined as those whose family income is below $25,000 per year and where neither parent has earned a bachelor's degree. Based on these criteria, there were 4.5 million low-income, first-generation students in postsecondary institutions at the time of the study (2008), making up about one in four postsecondary students. This population has an interesting diversity: 64% are female, 54% are minorities, 16% are not U.S. citizens, and 30% are from single-parent homes (Berkner et al., 2004). They are also likely to be older when first enrolled, with an average age of 23 (Engle & Tinto, 2008). The diversity of this population is

important to note; whereas an African American or Latino student might have some direct advocacy, low-income students are often unidentified at K–12 and postsecondary levels. Staff at K–12 schools, including PHS, does not know who in the student population is low income and therefore may have less access to resources for school. Advocacy for these students may be "indirect," as a member of another specific group, such as MeCHa (Movimiento Estudiantil Chicanx de Aztlan), 10,000 Degrees or other clubs and organizations. All told, the data on retention are sobering. After six years, 43% of low-income, first-generation students had not attained degrees and had left postsecondary education altogether, a majority after the first year of postsecondary education (Engle & Tinto, 2008).

Summary

The literature clearly delineates a problem regarding college access and success of low-income students, including deficits in academic preparation; economic, social and human capital; and direct advocacy. My study is intended both to capture the specific local data relative to this student population and to explore what school factors—as expressed by students' experiences—may be altered to change the general outcomes for low-income students.

CHAPTER 3

Context

The purpose of academic research is not just to push the boundaries of knowledge, but to break free from limiting personal beliefs about the way things should be. Instinct is useful, but the universe is more interesting than we can imagine or extrapolate from personal experience. The most important results are those that—at first—appear wrong; the counter-intuitive, the confusing, the weird and the wonderful effects nature reveals. (Hayton, 2015, p. 28)

In this chapter, I describe the context where the study takes place. I first outline and describe the city of Petaluma, and then look at Sonoma County comprehensive high schools in general and how PHS compares in that context (Tables 1–8). I then focus more closely on the study setting and sample at PHS, including its history, demographics, and student performance data (Tables 9–15). I make the case that students at PHS are representative of high school students across the county of Sonoma and state of California and therefore represent an important population to investigate.

The City of Petaluma

The city of Petaluma was founded in 1852 and incorporated six years later in 1858. Petaluma is located just 32 miles north of San Francisco, at the gateway of Sonoma County's wine country. Its ideal location serves as a base for those exploring local wineries, the California redwoods, and the breathtaking Point Reyes National Seashore. The Petaluma River winding through town and leading to the San Francisco Bay made Petaluma one of the fastest growing and largest California cities in the 1860s. Eggs, in particular, and other produce were transported to San Francisco and beyond. By the early 1940s, Petaluma and the surrounding area produced more than a half billion eggs for export annually (Peterson, 2017). Petaluma was the largest and wealthiest town in Sonoma, Marin, and Mendocino counties, and one of the wealthiest in California (The History of Petaluma California, n.d.).

The invention of the chicken incubator by Lyman Byce as well as the city's ideal shipping location on the Petaluma River turned the city into a bustling trade center. Petaluma became known as the "World's Egg Basket" and its economy revolved around the chicken and the egg. As a result, a tremendous building boom created much of downtown Petaluma and the surrounds, most of which is still standing today. By the mid-19th century, Petaluma's predominant industry was becoming dairy farming. Today, the agricultural focus remains; however, tourism and high-tech industries also contribute to the economic vitality of the city.

In many ways, Petaluma is a "typical" North American city. Petaluma has long been known for its "Americana" visual appeal that has attracted Hollywood filmmakers for more than 50 years. Movies like *American Graffiti* (Coppola, Kurtz, & Lucas, 1973), *Peggy Sue Got Married* (Gurian, Osborne, & Coppola, 1986), *Inventing the Abbotts* (Cummins et al., 1997), *Pleasantville* (Alsobrook et al., 1998), and *Mumford* (Dunn, Knowlton, Hutman, Kasdan, & Okun, 1999) have used Petaluma's historic downtown streets, shops, residential homes, and unique collection of architecture and landscapes for film shoots.

According to 2015 U.S. Census Bureau estimates, Petaluma's median household income was $61,679, compared to California's of $64,500 and the nation's of $56,516. The ethnic population of Petaluma generally mirrors that of PHS (Table 1). Also according to 2015 U.S. Census Bureau estimates, 68% of Petaluma residents identify as Caucasian, 22% as Hispanic, and 9% as Asian, African American, or Other.

PHS was founded in 1873 and is one of the oldest high schools in California. It is one of two comprehensive high schools in Petaluma. Tables 1–5 describe PHS in relation to other Sonoma County schools.

Area High Schools

In order to contextualize the performance of low-income PHS graduates in the postsecondary environment, I first assembled a data set of PHS students relative to students at other comprehensive high schools in Sonoma County. I relied heavily on data from the CDE's DataQuest database, which provides information on individual schools. I compiled data on each of the 13 public comprehensive high schools in Sonoma County, then produced tables describing the student populations by ethnicity, subgroups (English learner [EL], Resource Program—Special Education [RSP], and socioeconomically disadvantaged [SED]), graduation rates by subgroup, AP exam participation rate, CAASPP test overall and by SED, and the UC/CSU a–g rate.

I then looked more specifically at PHS, using local Aeries[1] data, Ed-Data, and U.S. Census data. I built tables describing PHS student demographics relative to the nation, California, and Petaluma; a 5-year PHS demographic trend; CAASPP scores over a 3-year period (since test inception); CAASPP scores by subgroup (though I am focused on SED students, I determined that data on other subgroup performance added context to the SED student performance); and first-time freshman math and English proficiency for select Sonoma County comprehensive high schools at CSU.

It is important to note the various definitions that determine socioeconomic status and classification in this study. I use SED as defined by the SBE. The SBE defines a student as SED if he or she meets one of two criteria: neither of the student's parents earned a high school diploma OR the student participates in the NSLP. At PHS, the SED list includes all of the students participating in the NSLP. Within the study, I use SED status when referencing

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[1] Aeries Student Information System is the data management system used by Petaluma City Schools.

statistics from the State of California; I also use the NSLP list when referencing local PHS data. In all cases, these elements are footnoted as appropriate.

Taken together, these measures allowed me to understand the context of a PHS student within this study.

Table 1 describes the ethnic makeup of comprehensive high schools in Sonoma County. Among this group, El Molino and Healdsburg are relatively small (student population approximately 600), whereas the rest of these schools have student populations between 1,000 and 2,000. Aside from Analy, El Molino, and Maria Carillo, which have relatively small Hispanic populations (less than Petaluma's 26.4%), the schools have more than 38% Hispanic enrollment. At Elsie Allen High School, more than 3 out of 4 students are Hispanic.

Table 1

Sonoma County Comprehensive High Schools Enrollment by Ethnicity as Percentage of Total Enrollment

School	Hispanic	Caucasian	Asian	Other
Analy	18.3	72.6	3.7	5.4
Casa Grande	39.2	49.5	4.5	6.8
El Molino	24.8	68.0	.1	7.1
Elsie Allen	78.2	10.2	6.4	5.2
Healdsburg	56.9	38.5	.4	4.2
Maria Carillo	23.9	55.0	8.1	13.0
Montgomery	45.6	39.6	3.6	11.2
Petaluma	**26.4**	**66.8**	**1.6**	**5.2**
Piner	65.0	21.0	5.6	8.4
Rancho Cotate	44.8	42.2	3.2	9.8
Santa Rosa	38.3	46.6	4.7	10.4
Sonoma	55.7	38.8	2.1	3.4
Windsor	43.8	50.3	1.5	4.4

Note. Data from California Department of Education (2018b).

Table 2 dissects the student populations of these schools by subgroup. Maria Carillo High School (18.5%) and Analy High School (20.7%) have the smallest SED student

populations. The other 11 schools all have SED student populations greater than 30%, with

Elsie Allen High School the highest at more than 82%. PHS has a relatively low EL student

population but the highest RSP population. There is substantial variation in the representation of

the Caucasian population, from 72.6% at Analy High to 10.2% at Elsie Allen High. It is

important to note that these 13 schools have significantly different populations.

Table 2

Sonoma County Comprehensive High School Enrollment by Subgroup as Percentage of Total Enrollment

School	% EL	% SED	% RSP	Total enrollment
Analy	2.4	20.7	10.4	1,200
Casa Grande	10.2	40.3	13.0	1,670
El Molino	4.5	36.5	11.9	600
Elsie Allen	32.1	82.4	17.6	1,093
Healdsburg	11.5	52.3	9.0	589
Maria Carillo	5.0	18.5	8.6	1,578
Montgomery	13.2	38.5	13.8	1,620
Petaluma	**4.5**	**31.3**	**15.6**	**1,335**
Piner	21.8	63.5	15.1	1,294
Rancho Cotate	9.4	38.3	12.4	1,448
Santa Rosa	9.2	36.6	10.8	2,022
Sonoma	9.2	56.0	14.7	1,344
Windsor	7.5	32.6	13.0	1,711

Note. Data from California Department of Education (2018b). EL = English learner; SED = socioeconomically disadvantaged; RSP = Resource Program—Special Education.

Table 3 describes county graduation rates overall and by subgroup. PHS has the highest

overall graduation rate in the county at 98.7%. Petaluma also has a significantly higher

graduation rate for SED students than its peer high schools, particularly Montgomery High and

Elsie Allen High. Windsor High School has the highest graduation rate among the RSP

population at 93.1%.

Table 3

Sonoma County Comprehensive High School Graduation Rate Percentage by Subgroup

School	EL	SED	RSP	Total
Analy	86.4	92.8	83.8	97.8
Casa Grande	91.6	93.2	91.6	95.9
El Molino	100	92.6	66.7	94.9
Elsie Allen	73.6	73.5	42.1	72.9
Healdsburg	88.6	87.9	68.4	91.0
Maria Carillo	92.9	89.7	88.5	94.9
Montgomery	80.0	83.7	61.5	88.4
Petaluma	**96.3**	**97.5**	**91.7**	**98.7**
Piner	88.5	87.9	81.5	89.2
Rancho Cotate	85.9	88.5	86.7	91.7
Santa Rosa	82.8	90.9	77.8	93.5
Sonoma	91.1	92.0	84.5	94.2
Windsor	86.4	92.3	93.1	96.4

Note. Data from California Department of Education (2018b). EL = English learner; SED = socioeconomically disadvantaged; RSP = Resource Program—Special Education.

Table 4 describes AP exam data for 2015–2016. PHS has a relatively high pass rate and the highest percentage of students testing (34%), part of the school's effort to increase access for students to experience academic rigor. Some schools have far fewer students sitting for AP exams: Santa Rosa, Windsor, Rancho Cotate, and Elsie Allen High each have fewer than 1 in 5 students taking AP exams. Access to the exam is critical in exposing students to rigor and supporting postsecondary work, though passing rates may not keep up with increasing access.

Table 4

Sonoma County Comprehensive High School AP Participation and Scores 2015–2016

School	Grade 10–12 enrollment	*n*/% tested	Score 1–2	Score 3–5
Analy	963	247/25	113	365
Casa Grande	1,222	329/27	215	406
El Molino	431	101/23	40	133
Elsie Allen	765	83/11	128	66
Healdsburg	455	140/31	121	125
Maria Carillo	1,174	346/29	116	549
Montgomery[a]	1,207	57/5	10	68
Petaluma	**982**	**336/34**	**260**	**390**
Piner	794	172/22	148	119
Rancho Cotate	1,038	192/19	180	112
Santa Rosa	1,452	191/13	69	225
Sonoma	958	260/22	181	266
Windsor	1,280	201/16	104	309

Note. Data from California Department of Education (2018a, 2018b). Number of test scores is greater than students tested since one student may take multiple AP tests. AP = Advanced Placement.

[a]Montgomery is an International Baccalaureate school.

In 2014–2015, the CAASPP standardized tests were rolled out statewide, replacing the California Standards Test. In relation to the other comprehensive high schools in the county, Table 5 describes the percentage of students who met or exceeded standards on CAASPP at each high school in the county. PHS ranked second in the county in English language arts/literacy (ELA) and math performance. Analy High School was first in English and third in math, while Maria Carillo was first in math and third in English. Piner and Elsie Allen, where the SED population is greater than 60%, both performed relatively poorly in English and math.

Table 5

Sonoma County Comprehensive High School CAASPP ELA and Math Performance

School	% met/exceeded standard	
	English	Math
Analy	85.94	45.10
Petaluma		**48.48**
	78.63	
Maria Carillo	75.57	56.23
El Molino	74.8	45.03
Casa Grande	71.07	43.95
Windsor	67.76	22.00
Sonoma Valley	62.78	34.29
Rancho Cotate	58.08	22.75
Healdsburg	57.73	30.33
Montgomery	56.76	35.78
Santa Rosa	54.42	30.12
Piner	52.32	15.83
Elsie Allen	42.52	8.65

Note. Data from California Department of Education (2018b). CAASPP = California Assessment of Student Performance and Progress; ELA = English language arts/literacy.

Table 6 describes the relative percentage of students who met or exceeded standards on CAASPP based on the percentage of SED students in the school. Most results were in line with a perceived achievement gap (i.e., the higher the percentage of SED students, the lower the CAASPP performance). Looking at the percentage of SED students versus the total school population, Windsor and Santa Rosa High SED students performed relatively more poorly while Casa Grande High and Sonoma High Schools performed relatively better.

Table 6

Sonoma County Comprehensive High School SED Rank vs. 2017 CAASPP ELA/Math Rank

School	SED % rank	SED % of enrollment	ELA rank	Math rank
Maria Carillo	1	18.5	3	1
Analy	2	20.7	1	3
Petaluma	**3**	**31.3**	**2**	**2**
Windsor	4	32.6	6	11
El Molino	5	36.5	4	4
Santa Rosa	6	36.6	11	9
Rancho Cotate	7	38.3	8	10
Montgomery	8	38.5	10	6
Casa Grande	9	40.3	5	5
Healdsburg	10	52.3	9	8
Sonoma	11	56.0	7	7
Piner	12	63.5	12	12
Elsie Allen	13	82.4	13	13

Note. Data from California Department of Education (2018b). SED = socioeconomically disadvantaged; CAASPP = California Assessment of Student Performance and Progress; ELA = English language arts/literacy.

Finally, Table 7 describes the UC/CSU a–g readiness and completion percentage across these same schools. PHS at 48.2% ranked second on this measure, approximately 3 percentage points higher than the state average.

Table 7

Sonoma County Comprehensive High School UC/CSU a–g Completion Percentages 2015–2016

School	No. a–g ready/No. graduates	% a–g ready
Analy	161/317	50.8
Casa Grande	165/369	44.7
El Molino	33/128	25.8
Elsie Allen	44/162	44.4
Healdsburg	41/132	31.1
Maria Carillo	174/390	44.6
Montgomery	119/346	34.4
Petaluma	**144/299**	**48.2**
Piner	22/192	11.5
Rancho Cotate	142/320	44.4
Sonoma	112/260	43.1
Santa Rosa	133/433	30.7
Windsor	163/399	40.9
State of California	194,000/429,000	45.4

Note. Data from California Department of Education (2018b). UC = University of California; CSU = California State University.

Based on the data above, PHS is performing well relative to its peers in Sonoma County. The students at the school are graduating at the highest rate in the county; the SED student population is performing relatively well on standardized tests, particularly in English; and the school has an established system of open access for rigorous AP coursework. Students are generally at or above standard and have opportunities to move beyond high school into 4-year colleges, into the nearby community college system (SRJC), or directly to the workforce in highly sought-after career technical education positions.

However, there are markers, particularly in math, that the school (and the county) needs to pay greater attention particularly to SED students. There is a clear correlation between socioeconomic status and student performance, and it is not clear that PHS or its peer high schools in the county have done enough to close this gap.

PHS is an example of the "typical" suburban comprehensive high school. While PHS is a relatively high-performing school, it also enrolls a more advantaged student population, as measured by the percentages of low-income and EL-status students relative to its peer high schools. Like all schools, PHS must continue to pay attention to the performance gap between advantaged and disadvantaged students.

The study presented here captures a set of student performance and perception data that can be used as a starting point for a more robust development of individualized and personalized interventions with students early in their high school path. What follows documents the general performance of low-income students at PHS and at the community college that they transitioned to.

Study School

PHS (founded 1873) is one of two 4-year comprehensive high schools in the Petaluma City School District. Petaluma City Schools serves more than 7,200 K–12 students in the Petaluma Joint Unified School District. Within the district are two comprehensive high schools, Casa Grande High School (1,650 students) and PHS (1,344 students). The a–g completion rate at PHS was 48% in 2015–2016; many of these qualified students attend selective 4-year colleges and universities. Other students take advantage of a high-performing junior college (SRJC) and our nearby CSU campus (Sonoma State University) to continue their education.

Demographics

In the 2016–2017 school year, 26% of PHS students were Hispanic, 67% were White, and other ethnicities made up 7% of the total population (Table 8). As technology companies and tourism have gradually altered the demographics of Petaluma, the student population has gradually moved from a rural to a more urban representation. Relative to the state of California

as a whole, PHS (and the city of Petaluma) has a much smaller Hispanic population (about one quarter of the total, whereas the average California public school has a majority Hispanic population.)

Table 8

Demographics Comparison by Percentage: United States, California, Petaluma, PHS

	Hispanic	White	Asian	African American	Other
United States	18	61	6	13	4
California	39	38	15	6	2
Petaluma	22	68	5	2	3
PHS	**26**	**67**	**3**	**2**	**2**
California public schools	54	24	9	6	7

Note. Data from U.S. Census Bureau (2015), Accrediting Commission for Schools, Western Association of Schools and Colleges (2017), and California Department of Education (2019). PHS = Petaluma High School.

Table 9 below describes the student population at PHS over the last five years. The student population mirrors that of the community, coming from a wide range of socioeconomic, educational, and ethnic/racial backgrounds.

Table 9

Petaluma High School Enrollment by Ethnicity

School year	% Latino	% White	% Other	Total enrollment
2012–2013	22	73	5	1,295
2013–2014	26	68	6	1,305
2014–2015	26	68	6	1,348
2015–2016	28	65	7	1,354
2016–2017	26	67	7	1,344

Note. Data from Accrediting Commission for Schools, Western Association of Schools and Colleges Report (2017) and CBEDS

Academic Performance

As described earlier, the CAASPP standardized tests were rolled out statewide in 2014–2015, replacing the California Standards Test. Tables 10 and 11 describe PHS CAASPP data

since the test's inception. PHS students overall have demonstrated significant progress during

this span, particularly in math, where the standard met/exceeded percentage has increased from

38% to 49%.

Table 10
Petaluma High School CAASPP ELA Percentages

School year	Standard not met	Standard nearly met	Standard met	Standard exceeded
2014–2015	15	24	37	24
2015–2016	12	18	40	30
2016–2017	6	15	33	46

Note. Data from California Department of Education (2018a). CAASPP = California Assessment of Student Performance and Progress; ELA = English language arts/literacy.

Table 11
Petaluma High School CAASPP Math Percentages

School year	Standard not met	Standard nearly met	Standard met	Standard exceeded
2014–2015	33	29	23	15
2015–2016	31	33	27	10
2016–2017	24	27	30	19

Note. Data from California Department of Education (2018a). CAASPP = California Assessment of Student Performance and Progress.

Tables 12 and 13 describe these CAASPP scores by subgroup. Though the rise in

performance of PHS SED[2] students in ELA (from 42% to 63%) is impressive, the math results

amongst this population lag (17% to 13%). These data confirm a continuing need to focus on

the SED student population and provide additional supports at the school.

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[2] For the purposes of this study, the SED student population is based on participation in the NSLP.

Table 12

Petaluma High School CAASPP ELA Subgroups

	% met/exceeded		
Group	2014–2015	2015–2016	2016–2017
All	61%	70%	79%
White	71%	81%	84%
Hispanic	41%	50%	61%
ELA	0%	5%	6%
SED	42%	48%	63%
RSP	19%	10%	38%

Note. Data from California Department of Education (2018a). CAASPP = California Assessment of Student Performance and Progress; ELA = English language arts/literacy; SED = socioeconomically disadvantaged; RSP = Resource Program—Special Education.

Table 13

Petaluma High School CAASPP Math Subgroups

	% met/exceeded		
Group	2014–2015	2015–2016	2016–2017
All	38	37	49
White	51	46	55
Hispanic	12	20	28
EL	5	5	6
SED	17	12	13
RSP	12	2	26

Note. Data from California Department of Education (2018a). CAASPP = California Assessment of Student Performance and Progress; SED = socioeconomically disadvantaged; RSP = Resource Program—Special Education.

At PHS, the graduation rate is higher than the state or national average (2014–2015: 97%). According to Kena et al. (2015), the national graduation rate is 82.3% while the California graduation rate is 81%. However, among the PHS graduates are many who are not ready for either the community college or CSU. In looking at the CAASPP (EAP) data, I noted that significant numbers of PHS students who attend community college or CSU schools were "not ready" for the junior college or CSU. Many PHS students, for example, must take remedial courses at the local community college.

As Table 14 shows, in 2012, 30 of the 45 PHS students who began at a CSU campus were proficient in math (67%) and 39 of the 45 students were proficient in English (87%); in 2015, the percentages improved (to 87% in math and 94% in English), but further study of this population is necessary. Those students who are not ready will need to take remedial courses, and are far less likely to achieve degree objectives. Existing theories (reviewed above) suggest that this is particularly true within the low-income student population, many of whom enroll at SRJC.

Table 14

Sonoma County High Schools First-Time Freshmen Math/English Proficiency Percentages

School	2012	2013	2014	2015
Casa Grande	94/89	97/84	78/75	74/78
Petaluma	67/87	72/75	67/74	87/94
Analy	87/84	88/88	89/93	97/100
Montgomery	89/89	75/80	85/73	84/78
Maria Carillo	95/94	93/98	93/93	90/95
Santa Rosa	83/92	93/97	87/90	79/92
Sonoma	63/66	61/72	71/73	59/62

Note. Data from CSU Analytics (California High School Academic Proficiency Report 2015).

Though college readiness is a troubling question across the entire student population, the data are particularly concerning when looking at low-income students. Despite Local Control Funding Formula (LCFF) dollars granted to school districts to serve EL, foster youth, and low-income students, the achievement gap and the subsequent college readiness gap are persistent. In our locale (Petaluma City Schools district), only 16% of SED students were "ready" in English and only 9% were "ready" in math, according to results from the April 2015 CAASPP exam (EAP); these percentages for all students were 24% in English and 16% in math.

Based on the cumulative data presented, PHS is a high-performing comprehensive school. Many students at PHS are graduating high school "college and career ready," prepared

for 4-year school, 2-year community colleges, certificate programs, or direct entry to the workforce.

Yet low-income students from PHS are underperforming relative to their more advantaged peers. There is a discernible achievement gap that is apparent not just at PHS but at *all* comprehensive high schools in Sonoma County. Studying student progress in postsecondary school and interviewing low-income PHS students should provide information that can be considered for high schools in general.

In Chapters 4 and 5, I describe my methodology, both quantitative and qualitative, as well as my findings and analysis. This study utilized a mixed-methods approach to capture both (a) a quantitative analysis of the performance of low-income PHS graduates in the postsecondary environment and (b) a qualitative analysis of their perception of their college readiness. A well-conceived mixed-methods approach includes a strong connection between the quantitative performance data and the student perceptions that underlie that data (Creswell, Hanson, Clark Plano, & Morales, 2007; Tashakkori & Creswell, 2007).

CHAPTER 4

Quantitative Postsecondary Progress for Low-Income PHS Graduates

This chapter analyzes the academic performance of low-income PHS graduates[3] in the postsecondary environment as a basis for addressing Research Question 1: How do low-income PHS graduates perform academically while at PHS? How do they perform in the postsecondary environment, specifically at the largest receiving institution (SRJC)?

Data Set

First, I described the data set and measures of student demographics and performance at PHS, based on UC/CSU a–g rates at graduation and EAP scores. (As noted in Chapter 2, the "a–g" subject requirements are the designated requirements for the UC and CSU systems. They are intended to ensure that students have attained a body of general knowledge that will provide breadth and perspective to new, more advanced study. The EAP is a collaborative effort among the SBE, the CDE, and the CSU system. Through the CAASPP test, the program measures student readiness for college-level English and mathematics in the junior year of high school.)

Then, using National Student Clearinghouse data, I followed these students' progress and examined their postsecondary work and certificate or degree attainment.

Sample

My focus in this study is on the student population who are considered to be living in poverty. There is widespread debate in educational research about defining a student sample based on poverty since it is so difficult to establish a common guideline. A short history of poverty and the school lunch program follows.

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[3] SED student status is based on participation in the NSLP.

By the end of the 19th century, some American schools were already serving heavily

subsidized lunch to students, including the cities of Philadelphia and Boston. In the first decades

of the 20th century, school lunch programs spread rapidly, mostly sponsored by welfare

organizations like the Women's Educational and Industrial Union. Then, during the Great

Depression, the federal government stepped in by purchasing surplus farmer crops and

redistributing food to schools. This continued into the 1940s, but began to wane as food

supplies diminished during the war. President Harry Truman and Congress passed the Richard

Russell National School Lunch Act in 1946, placing into law the federal government's

responsibility to feed students in need (Rude, 2016).

The NSLP makes school lunches available to all K–12 students at an affordable price.

Many eligible students can have access to school lunches at a further reduced price or free,

dependent on the income level of the family. Eligibility for reduced or free status is based on

federal poverty guidelines, which are strictly income based (Harwell & LeBeau, 2010). For

example, students in a household of four are eligible for a free lunch if household income is less

than $25,100 \times 1.3 = \$32,630$; for a reduced-price lunch, the figure is $25,100 \times 1.85 = \$46,435$

(USDA Food and Nutrition Service guidelines). A student can also be eligible for program

benefits by direct certification, based on a household receiving food stamps or other federal

assistance or foster child status.

There are two factors that make the NSLP list problematic. First, there are other factors

associated with poverty that may not be directly measured by income. These include access to

other economic resources outside of direct income, social resources in a community, and social

capital (Rose and Pevalin, 2003). But other factors can increase income, including benefit

programs like the Special Supplemental Nutrition Program for Women, Infants, and Children,

food stamps, housing assistance, the earned income credit, and Head Start (Harwell & LeBeau, 2010).

Second, various studies have shown that students can be misclassified. A relatively older study (1990) conducted by the Food and Nutrition Service of the U.S. Department of Agriculture found that 17% of students certified as eligible should not have been; a 2003 audit by the General Accounting Office found that 21% of households were incorrectly certified either as eligible or ineligible (Harwell & LeBeau, 2010). In short, Harwell and LeBeau point out that using the NSLP list can lead to as many as 20% of students being misclassified.

However, the NSLP criteria do offer significant advantages in terms of determining which students are below, at, or just above the poverty guideline. Because schools like PHS certify students as eligible or not eligible for the NSLP, the eventual list is not affected by nonresponse status. As Harwell and LeBeau (2010) say, the NSLP variable "is consistently defined because of its link to the government's poverty guidelines, is available for every student, is nonintrusive, is simple (eligible/not eligible) and can be obtained cheaply…" (p. 126).

In short, the use of the NSLP list as a proxy for the school's SED population is by no means a perfect fit. However, it generally provides a platform to examine the school's students in poverty and is the best available data set.

Measures

In order to determine progress of low-income PHS graduates, I assembled a database from local (PHS Aeries data) and CDE data to create a profile of PHS graduates during a 6-year cycle (2011–2016). I also assembled data from the National School Clearinghouse on progress toward degree for PHS graduates, including a disaggregated look at student performance.

To answer Research Question 1, I first examined student performance and college readiness at PHS (Tables 15–17) during a 6-year period (2011–2016). I focused on UC/CSU a–g eligibility for SED students (those students who participated in the NSLP compared to the general population), and EAP[4] scores as measured by CAASPP for the class of 2016 and 2017—juniors in 2015 and 2016, respectively (Tables 15–17).

In order to then determine student progress, I gathered data from CDE's DataQuest site, as well as examining National Student Clearinghouse data for 2010 and 2011 graduating PHS students from the NSLP list, focusing on degree/certificate completion and individual performance at SRJC (Tables 20–25). I chose these years (2010 and 2011) so that there was a reasonable amount of time to achieve degree objectives.

Finally, I examined more current PHS NSLP student performance at SRJC, the primary postsecondary feeder for PHS students. Working with KC Greaney, director of the SRJC Office of Institutional Research, and Denise Cooper, manager of Admissions and Enrollment Records at SRJC, I gathered data on all class of 2016 PHS students as well as class of 2016 PHS NSLP students attending SRJC. I first put together a profile of all class of 2016 PHS students attending SRJC using the SRJC Office of Institutional Research website and high school visualization data. I then provided Denise Cooper with a blinded list of student identification numbers representing class of 2016 PHS NSLP students who had enrolled at SRJC, according to National School Clearinghouse data. I then cross-referenced these data to develop a progress snapshot for NSLP versus non-NSLP students at SRJC for the period of fall 2016 to spring 2018 (2-year period).

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[4] The EAP is an indicator of readiness for college-level coursework in English and mathematics used by the CSU system and participating California community colleges to determine acceptance and placement in coursework.

PHS Student Performance: a–g Rate and EAP

Table 15 examines the a–g rate of SED students versus the non-SED population. During the 6-year period, the percentage of SED students who were a–g ready increased from 16.4% to 27.6%. However, the gap between SED and non-SED students was apparent and actually grew over time, from 25 percentage points in 2010–2011 to 30.6 percentage points in 2015–2016. This indicates that as overall a–g readiness grows, the SED students are not keeping up.

Table 15
6-Year PHS a–g Rate All Students vs. SED Students

Year	% a–g ready			Percentage point gap
	All Students	SED	Non-SED	
2010–2011	35.7	16.4	41.6	25.2
2011–2012	35.7	23.3	40.4	17.1
2012–2013	36.0	19.6	40.9	21.3
2013–2014	36.6	18.9	43.0	24.1
2014–2015	48.0	30.0	52.5	22.5
2015–2016	48.1	27.6	58.2	30.6

Note. Data from California Department of Education (2018b).

Since 2015, all California high school students have participated in the EAP by virtue of sitting for the CAASPP Smarter Balanced Test in the spring. The EAP serves as an indicator of readiness for college-level coursework in English and mathematics and is used by the CSU system and participating California community colleges to determine acceptance and placement in coursework.

Thus, we now have data on all tested students and their college readiness as measured by EAP. Table 16 echoes the concern about SED student academic performance. There is a continuing English performance gap between SED students and the overall population. For the class of 2016 (the juniors of 2015), only 42% of SED students were ready or conditionally

ready in English versus 58% of all students; for the class of 2017, the gap widened, with only

41% of SED students ready or conditionally ready versus 70% for all students.

This gap is replicated in other subgroups, as the table describes. For the class of 2016,

41% of Hispanic students were ready or conditionally ready versus 58% of all students and 69%

of White students; in 2017, 49% of Hispanic students were ready or conditionally ready versus

70% of all students and 81% of White students. Amongst special education students and ELs,

the numbers are even more sobering. All subgroup data are included here to underline the

continuing gaps between student groups based on race, disability, poverty, and language

acquisition.

Table 16

PHS English EAP 2015 (Class of 2016) vs. EAP 2016 (Class of 2017)

Demographic and year	No./%		
	Ready	Conditionally ready	Not ready
All students			
2015 (*n* = 294)	71/23	108/35	115/38
2016 (*n* = 288)	86/30	114/40	32/18
White			
2015 (*n* = 184)	58/31	72/38	54/28
2016 (*n* = 173)	68/39	73/42	32/18
Hispanic			
2015 (*n* = 92)	9/10	29/31	54/57
2016 (*n* = 90)	13/14	32/35	45/49
SpEd			
2015 (*n* = 28)	0/0	6/20	24/80
2016 (*n* = 41)	0/0	4/10	37/90
SED			
2015 (*n* = 84)	11/13	24/29	49/58
2016 (*n* = 54)	8/15	14/26	32/59
EL			
2015 (*n* = 17)	0/0	0/0	17/100
2016 (*n* = 11)	0/0	0/0	11/100

Note. Data from California Department of Education (2018b). PHS = Petaluma High School; EAP = Early Assessment Program; SpEd = Special Education; SED = socioeconomically disadvantaged; EL = English language learner.

In math, the results show a similar pattern. Table 17 shows that for the class of 2016 (juniors of 2015), 17% of SED students were ready or conditionally ready versus 37% for all students; for the class of 2017, only 13% of SED students were ready or conditionally ready versus 36% for all students. Similarly, the gaps among Hispanic students, special education students, and ELs suggest a continuing need to create a more equitable environment.

Table 17

PHS Math EAP 2015 (Class of 2016) vs. EAP 2016 (Class of 2017)

Demographic and year	No./%		
	Ready	Conditionally ready	Not ready
All students			
2015 (*n* = 297)	45/15	68/22	184/60
2016 (*n* = 287)	28/10	76/26	183/64
White			
2015 (*n* = 185)	35/18	58/31	92/48
2016cify (*n* = 174)	26/15	54/31	94/54
Hispanic			
2015 (*n* = 93)	5/5	7/7	81/86
2016 (*n* = 91)	1/1	17/19	73/80
SpEd			
2015 (*n* = 30)	1/3	3/9	26/88
2016 (*n* = 41)	0/0	1/2	40/98
SED			
2015 (*n* = 85)	7/8	8/9	70/81
2016 (*n* = 54)	0/0	7/13	47/87
EL			
2015 (*n* = 20)	0/0	2/10	18/90
2016 (*n* = 13)	0/0	1/8	12/92

Note. Data from California Department of Education (2018b). PHS = Petaluma High School; EAP = Early Assessment Program; SpEd = Special Education; SED = socioeconomically disadvantaged; EL = English language learner.

These data suggest that low-income students who graduate from PHS enter postsecondary school behind their peers in the general population. The next section looks more closely at these students and their progress at college.

Postsecondary Performance

From 2010 to 2016, approximately three out of four PHS graduates enrolled at postsecondary school on average each year. There has been a gradual rise in the number of

graduates enrolling at a 4-year school versus a 2-year program. In 2010, 107 of 277 enrolled

graduates were at 4-year schools (38.6%); in 2016, 121 of 225 enrolled graduates were at 4-year

schools (53.8%; Table 18).

Table 18
PHS Graduates' Postsecondary Enrollment First 2 Years After Graduation

	Class year						
	2010	2011	2012	2013	2014	2015	2016
Total graduates	369	304	313	293	284	304	306
Total enrolled	277	245	242	247	211	253	225
Public	248	222	216	218	193	228	207
Private	29	23	26	29	18	25	18
4-year	107	84	107	90	84	117	121
2-year	170	161	135	157	127	136	104

Note. Data from National Student Clearinghouse (2018). PHS = Petaluma High School.

PHS graduates earn either an associate or bachelor's degree at an average rate of 43%

over a 6-year period, according to National Student Clearinghouse (2018). Degree completion

for the classes of 2010–2012 is displayed below (Table 19).

Table 19
PHS Students Postsecondary Degree After 6 Years

Class	No. completing degree/total graduates (%)
2010	164/369 (44)
2011	132/304 (43.4)
2012	134/313 (42.8)

Note. Data from National Student Clearinghouse (2018). PHS = Petaluma High School.
"Degree" refers to either an associate or bachelor's degree.

However, the tables above do not disaggregate student data, so we cannot determine

whether PHS SED students are also increasing their numbers at 4-year schools or earning

degrees at the same rate as their peers. Because many PHS students attend SRJC, I looked more

closely at the SED graduates and their relative progress at that institution. Working with the database of individual student progress reports from National Student Clearinghouse, I cross-referenced students by socioeconomic status.

Of the 74 SED PHS graduates who enrolled at SRJC from the class of 2010, 19 (25%) had earned an AA or certificate and/or a BA by June of 2016, while 26 students (35%) were still active as students with various numbers of credits earned; 29 students (40%) were no longer active at SRJC (Table 20).

Table 20
PHS SED Student Degree Status as of June 2016 (Class of 2010)

Group	AA	BA	No degree, active	SRJC inactive
White ($n = 38$)	8	3	18	8
Hispanic ($n = 35$)	4	4	7	21
African American ($n = 1$)	0	0	1	0
Total ($n = 74$)	12	7	26	29

Note. Data from National Student Clearinghouse (2018). PHS = Petaluma High School; SED = socioeconomically disadvantaged; AA = associate degree/certificate; BA = bachelor's degree. Data are for SED PHS graduates who enrolled at Santa Rosa Junior College.

Table 21 below shows similar completion rates for the class of 2011. From a group of 63 graduating SED students, 14 students (22%) had completed an AA/certificate and/or BA by June of 2016. 31 students (49%) were still active in postsecondary education while 18 students (29%) were inactive at SRJC.

Table 21

PHS SED Student Degree Status as of June 2016 (Class of 2011)

Group	AA	BA	No degree, active	SRJC inactive
White (*n* = 27)	6	4	15	3
Hispanic (*n* = 35)	2	1	16	15
Asian (*n* = 1)	0	1	0	0
Total (*n* = 63)	8	6	31	18

Note. Data from National Student Clearinghouse (2018). PHS = Petaluma High School; SED = socioeconomically disadvantaged; AA = associate degree/certificate; BA = bachelor's degree. Data are for SED PHS graduates who enrolled at Santa Rosa Junior College.

The PHS SED graduates trail in degree completion compared to all PHS graduates who attended SRJC. Forty-four percent of all 2010 PHS graduates had completed a degree or certificate at SRJC by June of 2016, compared to 25% of SED PHS grads; for the class of 2011, 38% of all PHS graduates had earned a degree or certificate, compared with 22% of NSLP graduates. For both years, more SED graduates remained active, still working toward a degree (Table 22). In summary, PHS SED students from the classes of 2010 and 2011 took longer to reach degree/certificate completion when compared with all PHS students from these classes.

Table 22

PHS Student Degree Status for SED vs. Non-SED and All Students as of June 2016 (Classes of 2010 and 2011) as Percentages

	Completed degree/certificate	No degree, active	SRJC inactive

61

2010			
All	44	15	41
SED	25	35	40
Non-SED	58	11	31
2011			
All	38	22	40
SED	22	49	29
Non-SED	52	13	35

Note. Data from National Student Clearinghouse (2018). PHS = Petaluma High School; SED = socioeconomically disadvantaged. Data are for SED PHS graduates who enrolled at Santa Rosa Junior College.

Class of 2016 Graduates

In order to get a more contemporary look at transition to postsecondary, I worked with the SRJC Office of Institutional Research to measure credit completion and average GPA of PHS graduates, disaggregated by income. I provided a blinded list of PHS SED graduates who had enrolled at SRJC sometime between fall of 2016 and spring of 2018. I then compared SED student performance with non-SED student performance.

In all, 125 total PHS Class of 2016 students have attempted coursework at SRJC since graduation. This group attempted an average of 27.9 units in a 2-year period (fall 2016–spring 2018) and completed an average of 25.2 units with an average GPA of 2.68 (Table 23).

Within this group are 35 PHS SED students. This subgroup of 35 attempted an average of 27.2 units and completed an average of 22.39 units as of June of 2018. The overall average GPA for these 35 students is 2.5. The 90 non-SED students attempted one more unit on average than the SED students. Perhaps more critically, the non-SED students had a higher average GPA (2.75 versus 2.5) than the SED students. In addition, non-SED students completed 1.1 more units on average during this 2-year period versus the SED students (Table 22).

Table 23

PHS Class of 2016 Performance Comparison at SRJC: Fall 2016–Spring 2018

Student group	*n*	Units attempted	Units completed	Average GPA
All	125	27.9	25.20	2.68
SED	35	27.2	22.39	2.5
Non-SED	90	28.2	26.30	2.75

Note. PHS = Petaluma High School; SRJC = Santa Rosa Junior College; GPA = grade point average; SED = socioeconomically disadvantaged. Source: SRJC Office of Institutional Research.

Table 24 describes each individual PHS NSLP student during this span. Of the 35 students, 15 had completed 20 or more units as of June 2018; 16 of the 35 had completed 10 units or less as of June 2018. Looked at another way, 10 of these students had completed an average of 49.9 units with an average GPA of 3.08. These 10 are distinct from the other 25 students, who had completed an average of 11.38 units with an average GPA of 2.32.

Table 24

SRJC Enrollment, Credit Completion, and GPA for Individual PHS NSLP Students

Student[a]	Units enrolled			Total completed units	Total cumulative GPA
	Fall 2016–summer 2017	Fall 2017–spring 2018	Fall 2018		
1	7.5	3	12	1	0.2
2	3	0	0	2	1.0
3	3	0	12	3	3.0
4	3	4	0	3	3.0
5	4	0	0	4	1.0
6	4	0	0	4	3.0
7	13.5	6	0	4.5	0.5
8	3	0	0	6	2.5
9	3	0	0	6	2.5
10	3	0	0	7	4.0
11	7	6	0	7.5	3.0
12	8	4	0	7.5	1.5
13	3	6	5	8	4
14	11	0	0	8	1.455
15	9	0	0	9	2.0
16	3	0	0	9.5	2.33
17	12	0	0	12	3.25
18	10	0	0	13	2.3
19	7.5	9.5	2	13.5	2.22
20	0	6	0	16	3.0
*21	13.5	13	10	20.5	2.106
22	23.5	0	0	28	2.9
23	28	0	0	28.5	2.7
24	15	14	0	29	2.138
*25	15	24	0	34	2.432
*26	17	13	12	37.5	3.4
*27	20	29.5	12	42	2.87
28	28	29.5	9	43.5	2.728
29	31.5	23	14.5	48.5	2.89
*30	25	25	14	51.5	3.0
31	27.5	30	14	52	3.67
32	20.5	32.5	9	53	2.9
33	24	25	1.5	53.5	3.5
*34	29	26	0	55	3.327
35	31	31	14	62.5	2.532

The data overall suggest a continuing gap for low-income students from high school into college, both in units completed and in average GPA, as well as a gap within the PHS SED student subgroup at SRJC. This gap is further discussed in the Findings section in Chapter 6.

We now turn to a qualitative examination of some PHS SED students and their perception of high school and their postsecondary experience.

CHAPTER 5

Perceptions of Low-Income PHS Graduates Regarding PHS and Postsecondary Progress

In order to get a better picture of the motivations of this group of students, I asked the following research question:

- How do low-income former PHS students from the class of 2016 describe their academic preparation for college? How do they perceive and define their college readiness vis-à-vis their prior experience at PHS? What specific high school programs or activities do low-income students identify as critical to their success or lack of success in postsecondary schooling?

Measures

First, I used baseline data from the first research question to determine eligible students to interview, drawn from the list of PHS students who entered the postsecondary environment in the fall of 2016. I focused on this recent cohort (2016), rationalizing that these students could provide the most current information on their transition to college. I used existing contact information from the PHS Aeries information system to reach out to these students. I sent a recruitment letter (Appendix 1) to each of the 79 NSLP students who had graduated in June 2016. Students replied via email, phone, or text indicating a desire to participate. Of the 13 who expressed a desire to participate, I randomized within race and gender groups, so that the sample was balanced and racially proportionate to PHS's SED population. I completed eight interviews in all. Interviews were conducted in person and were recorded and transcribed.

I interviewed five male and three female students: two Caucasian males, three Latina females, two Latino males, and one African American male. All of the sample students had been or were currently students at SRJC, with the exception of one student who attends a CSU campus.

Once the eight students had been identified, I used Aeries to document their past performance (high school) as well as self-reported performance at postsecondary. I collected interview data on their perception of their high school experience in the context of their postsecondary progress. Of the eight, four were active at SRJC, two were inactive but intended to return, one was active in one class but was unsure if he would continue further, and one was active at CSU.

I focused on four broad areas for the semi-structured interviews. First, I included an introductory section to capture general information about the student. Questions focused on current living situation, current employment, and any financial and/or socio-emotional events that had occurred that might have influenced current status. In some cases, I asked questions related to the findings/baseline data established in the first research question.

Second, I asked questions about PHS performance data as reported by the student and via the Aeries data management system (e.g., their thoughts and experiences about their high school preparation for college and the transition).

Third, I further questioned students about their postsecondary experiences up to this point, secondary school, course selection, access to counseling services, and co-curricular activities the student had participated in. Questions included a current self-assessment and comparison of perception of expectations beforehand (at high school) matched with the student's current status at postsecondary. I determined whether any remediation classes were required and how this may have affected each student's performance and persistence.

Finally, I gathered a reflection on the student's experience at PHS, including staff interaction, positive interactions whether academic or social (e.g., athletics/club participation), and any specific challenges that the student may have had in high school. In addition, I asked

about the personal experience each student encountered at PHS. I asked how each student interacted with teachers, counselors, and peers. I also asked what elements of high school in and out of the classroom each student perceived as important to the student's later success and what elements of high school each student felt was lacking and whose absence may have contributed to greater postsecondary challenges. I also asked students' perspectives about their participation in the NSLP, and whether they believed that information should be shared with teachers in order to better serve students in their postsecondary pursuits.

Interviews were conducted in person or by phone. Interview length varied between 60-90 minutes, dependent on the length of responses. I requested consent for these students to participate, then invited each student in complete an interview. All participation was voluntary (as described in the IRB and available in Appendix 1). The interview questions are shown in full in Appendix 2.

Data Collection

Each interview was transcribed verbatim. I listened (repeatedly) and hand coded data from these interviews. I carried out open coding to develop labels and categories, and extracted main themes and trends that emerged from the data. I assigned categories around course completion, EAP score and perception of EAP, perception of college readiness based on high school coursework, perception of counselor and staff interaction in providing relevant information about postsecondary opportunities, and other categories as the data collection process continued.

I looked to the data to demonstrate level of progress at the postsecondary level for low-income students in terms of GPA, credit completion, transfer options, and degrees, and how educators who teach them in K–12 and college have contributed to this progress. Below are

interview summaries that describe each student's progress to this point. Though the sample is too small to develop trends, I do draw some conclusions in Chapter 6 based on the interview responses. I make the case that it is possible that schools are searching for common solutions when the best treatment may be to evaluate each student on an individual basis and tailor program to better serve individual needs.

In Table 25, I collected and collated performance data from Aeries for each of the student interviewees. I first developed a profile for each of the eight students, looking at the following characteristics: (1) the student's EAP readiness as measured by CAASPP: ready, conditionally ready, or not ready; (2) whether the student had ever taken a remedial class at PHS in English (RSP English, Intervention English class) or math (RSP Math—Algebra Academy and/or Math Support); (3) the total GPA at graduation for each student; (4) the number of high school credits completed by graduation (minimum 220 credits to graduate); and (5) his or her class rank amongst the 310 PHS graduates of the class of 2016.

Significantly, most of these students were ranked in the bottom half of the class of 2016, based on overall GPA. Only one of the eight was ready for college as measured by the EAP. Four of the eight students had taken a remedial class in English or math at PHS, defined as a class where the student receives extra support or where the class level is "non-college prep."

Table 25

Individual PHS Performance Data—Low-Income Graduating Seniors 2016 in Interview

Student[a]	Incoming EAP: English/math	Remedial math	Remedial English	GPA	Number of credits	Class of 2016 rank (of 310)
John	NR/NR	No	No	2.47	245	245
Miles	R/R	No	No	2.44	240	252
Jen	CR/NR	No	No	2.43	225	255
Matt	NR/NR	Yes	No	2.17	220	286
Josh	NR/NR	Yes	Yes	3.25	240	146
Larry	NR/NR	Yes	Yes	2.27	240	273
Genie	NR/NR	No	No	3.22	295	153
Briana	CR/NR	Yes	No	2.63	240	228

Note. PHS = Petaluma High School; EAP = Early Assessment Program; NR = not ready; R = ready; CR = conditionally ready.
[a]All names are pseudonyms.

Below, I summarize each interview. In all cases, a pseudonym has been used.

Participants

Participant #1: John

John is a White male currently attending SRJC as a part-time student. He has earned 22 credits at SRJC and is enrolled in 10 credits in spring of 2018. He said it was his intention to go to SRJC after high school. He lives at home with his parents, who are supporting his living expenses as he attends college. He has a minimum-wage job (20 hours per week) at the Petaluma Outlet Mall and brings home net pay of approximately $300 every two weeks. He described himself as "making it but I don't have much money." He said he was doing "pretty well," getting "mostly A's."

John was assessed at the end of fourth grade and was placed in the RSP program at Petaluma City Schools for the rest of his K–12 experience. John attended PHS for all four years, completing 245 credit hours (25 more than the minimum for graduation). He finished with a

total GPA of 2.47. His course schedule throughout high school was typical of an average student. He took no honors or AP classes during his time at PHS. For electives, John took auto, drafting, 3D Animation, and accounting. He struggled in Algebra I during freshman year (D, C−), but repeated the course in sophomore year, earning A's both semesters. He eventually completed Algebra II his senior year with average grades. "I like taking electives more than honors classes [because] I really have fun doing the work and not stressing out."

John did not take an ACT or SAT prep course, nor did he ever sit for either test. He said his parents generally supported his college-going decision but did not actively encourage him. "We didn't talk much about college when I was in high school," he said. "They told me to go to college and that was it. They help out here and there [with expenses, living at home] but I usually pay for everything—school supplies, gas and insurance for my car." He was not aware if he ever took the EAP or what that test is.

John reported that high school was "normal," "OK," "typical." He described a few teachers whom he really liked (a history teacher and math teacher, in particular). He said he always turned assignments in on time and was an "average" student. He described himself as able to do college work and said that when he left PHS, he felt he was college ready. However, he said that once he started at SRJC, he came to realize that he was not. He said he felt he was a 3 in terms of college readiness on a scale of 1–10. He said, "I had no clue about college." He went to his counselor "about seven or eight times" but "[doesn't] remember her name." Significantly, he did not hear about nor apply for the Doyle Scholarship, a local assistance program through Exchange Bank that would have provided him with $1,000 for education expenses at SRJC. It is possible either his counselor or John did not think about the specifics of going to college until senior year.

John intended to focus on graphic design at SRJC, partly due to his experience in the 3D Animation class at PHS. "The 3D Animation course made me want to do 3D but college made me not want to do it. [It's] hard to navigate around the computer stuff without a high-powered laptop." Now, he said, he is leaning more toward graphic design, which still means many hours at SRJC working in the computer lab. He hopes to transfer eventually to a 4-year school (possibly Sonoma State University).

John said he had no problem with his participation in the NSLP. He said he didn't care if people were aware. He said the food was generally "terrible" and that they were "tiny portions." He didn't think it would matter if teachers knew information about students on this list.

John appears relatively unfocused, as if unsure what he will actually do. He answers the questions and if he must come up with an answer. He expresses a desire to transfer but does not seem to know what he will need to do to matriculate beyond SRJC. His current credit load suggests he will not have earned the 60 credits necessary for another 2–3 years at best. He says he is motivated to continue with classes at SRJC and beyond. He ranked himself a 7 on current college motivation on a 1–10 scale.

Participant #2: Miles

Miles is an African–American male. In the fall of 2016, he took an online course, and then began attending Lake Tahoe Community College (LTCC). He reported that he arrived "a little late" and never "felt comfortable there." He registered for two culinary classes and eventually completed one (Introduction to Pastries). In describing his experience at LTCC, he said he was challenged by "the worst snow year in 20 years." He felt he did not have a strong support system ("I knew maybe 6 people in the state") and that he could not develop a routine there.

Miles returned to Petaluma and is living at home with his father. He is working with his grandfather, assisting him with redwood deck installations and other odd jobs. He enrolled at SRJC for the spring 2018 semester and is taking 9 credits. Based on PHS data, Miles is certainly capable of academic success. He took and passed Calculus B/C with a B+ in his senior year. His total GPA for ninth through 12th grade was 2.44, marked by a weak performance in junior year (5 Ds, 5 Cs). Miles was generally a stronger math/science student.

He reflected that his decision to enroll at LTCC was more to do with access to snowboarding than to a particular desire to go to college. He said he is now happier at SRJC. He said that, in retrospect, he could have been more attentive to the details of applying to college. He did take the SAT and scored very well (620 Math, 680 English), but did not seem to have other supports in place to apply to college. He would have taken an AP exam but "did not get my form in on time." On standardized test scores from seventh grade and beyond, Miles often scored "advanced."

Miles said his family was very supportive of college. They wanted it, "both financially and physically." His mother created a 529 college savings account for him. His parents are separated and have relatively little interaction, but Miles does not think this had anything to do with whether he was prepared for a 4-year college. Generally, he feels he is where he is in his progression because of his own choices. Miles ranked himself a 6 on a 1–10 college readiness scale. "I was living and experiencing rather than studying," he said of his time at LTCC.

Miles rated himself a 5 on current motivation, again on a 1–10 scale. He is finding success at SRJC and seems to now have a direction.

At PHS, Miles said the independence he was offered to think for himself helped him. However, he also said that "when you have to fend for yourself, you need to be self-disciplined

and self-motivated." He attributed his lack of self-discipline to himself rather than the school. He felt that extracurricular classes and programs are more important than regular classes "because students are more likely to find their passion and work path that way." Otherwise, he said, "it is easier to commit to something that (a student) doesn't really want." He thinks other students take lots of college courses but don't have a direction.

Miles said he essentially used counseling services to "help me graduate by getting my credits." He didn't utilize counseling services for college or does not recall having those conversations with his counselor. With regard to being on the NSLP program, Miles did not think it was a problem. He got "food for cheap and free." He said that it could have been embarrassing but was not a problem for him.

At the end of the interview, Miles reiterated that he believes his main reason for struggle was his own self-discipline. He didn't think PHS could have changed that.

Participant #3: Jen

Jen is a Hispanic female who began attending SRJC in the fall of 2016. She said she had completed 35 units as of December 2017. However, she has recently had a change in her living situation and is not in classes at SRJC as of May 2018.

The interview with this student was completed by phone. Jen said that she had been "kicked out of her house" in October 2017 and was living in a different town 15 miles away. Because she does not have access to a car, she is not currently taking classes at SRJC, but has entered the workforce as a cashier. She said she hoped to resume her studies once she gains access to transportation.

She described her financial situation as stable. She has about $800 saved toward the purchase of a car, and can otherwise afford to pay rent with her shared living space (with friends) and food. She intends to resume her studies at SRJC when she has transportation.

Jen described herself as an average student at PHS. She took and passed Algebra 2 with a C. She took college prep classes but did not attempt an honors or AP class. She said her counselor did not push her to take AP classes. "They were, like, well you know, you can just take standard classes."

She completed 225 credits (toward 220 required for graduation) with a 9–12 total GPA of 2.43, ranked 255 of 310 students. Her grades were generally low, particularly in 10th grade (1.77 GPA) but improved over time (3.2 GPA in senior year). She was not aware of the EAP and whether she had taken that assessment ("What is it?"). She had thoughts about applying to a UC but said, "My grades were not great for UC or CSU, so I thought about going to the JC [junior college] for now so that I could transfer." She said she hoped to transfer to Humboldt State or Sacramento State eventually.

Though she had had a negative interaction with her family recently, she noted that they were generally supportive of her attending college. "They were supportive about me going to college and everything, but my mom didn't think I was ready. She didn't want me to go to a college that was far away. She wanted me to stay local."

On a scale of 1–10, Jen said she was a 7 in terms of how college ready she was at the beginning of her postsecondary experience. "I was excited about the JC and had a plan." When asked what specific things helped, she said that her counselor had helped (though she couldn't remember her name). "She talked about my grades [in sophomore year] and how I wasn't doing

great. She told me if I didn't get it together, I would be going to continuation school." Jen said she started working harder and her grades improved a little.

Jen also said that her counselor helped her enroll in a SRJC counseling class (concurrent). "That experience really, like motivated me to want to go to the JC and everything." When asked what might have been missing from the PHS experience, she said that it might help to talk more to students:

I feel like we do talk about [college], it's just we don't make sure we actually have a plan for ourselves…I feel like not a lot of people signed up for [the counseling class] because they don't really tell us. I only heard about it because my friend said, we should sign up for this, but the teachers didn't really tell us.

She did meet with the college and career counselor in junior year (though she did not remember her name). "She told me about going to Sonoma State but I didn't really want to go there instead of going to the JC. I knew my grades were not quite good enough."

She ranked herself a 10 in motivation for college on a 1–10 scale. "I was pretty proud of my grades or at least I felt like I had improved a lot. I was ready to take on the new challenge." She is anxious to resume her studies. She said that working has made her more determined to get better educated.

Regarding NSLP, Jen said there was no negative. "The program helped me to eat, like my mom is a single mom so she wouldn't be able to give me money to buy food so I kind of counted on free lunch." She didn't think it would matter if teachers knew about being on NSLP. "I mean maybe to some teachers, but I feel like maybe some teachers would be like you need to find time to do work." She said she worked after school but compared it to being an athlete who had to go to practice. "You have to balance those [things]."

Participant #4: Matt

Matt is a White male who graduated from PHS in June of 2016. He enrolled at SRJC in the fall of 2016, and is currently completing his fourth semester (May 2018). His intention was to become a chef, and he enrolled in a culinary class as well as prerequisites. He says he failed that culinary class in his first semester and that that was "a wake-up call." He had also enrolled in an anthropology class "just to fill out units." He said his anthropology teacher was motivating and interesting. He is applying to UC Santa Cruz, hoping to transfer as an anthropology major with the intention of earning a bachelor of arts. He wants to focus on archeology and work in South America. He is working at a retail clothing store and living with his girlfriend's parents. He said he is financially stable because "I have financial aid" and "I don't have to pay rent."

Matt generally struggled in high school, according to his transcript. He earned a D or F in 20 courses at PHS. His total 9–12 overall GPA was 2.17. He completed the minimum credits (220) required for graduation and was ranked 286 of 310 students in the senior class. He was not eligible to apply to CSU or UC, and did not take the SAT or ACT. He said his performance in freshman and sophomore year was not good, particularly in English. His freshman English teacher "would just show movies." He said that though she wasn't a bad teacher, she was "always working on her other classes." "We'd read books and write essays but not really do much in class." His standardized test scores in the California Standards Test show many years of scores in the advanced range, indicating he could be academically successful

Matt said his teachers and counselor never talked to him about college. He said his counselor was good, but that "her biggest concern was to get me to graduate." She would meet with him and encourage him to get assignments in and try to pass, but he "either wouldn't come

to school or wouldn't do the work." He said that the school tried but "obviously, then with the whole college thing, that wasn't their [the counselor's] fault, that was my fault."

When asked about his college readiness at the time of graduation, Matt said he was probably a 3 on a 1–10 scale. When he was shown his high school transcript, he said, "It's funny to look back at now…it's just completely different. I have a 4.0 now." Interestingly, he said the math teachers at PHS prepared him for college even though he did not earn good grades in math. "I tried Algebra 2 and flunked out my first semester." He said he is not very good at math but that "the math department was very strong." When he graduated from PHS, he was "super excited…just to be done with school." He said he was thinking, "I'm not going to do anything." He said he did not have any support at home for college from his family. "College wasn't important in the environment I was in…my stepdad was never home and my mom didn't care." Matt said that during the summer after graduation, he met a girl. She and her parents encouraged him to try SRJC. He registered two days before the deadline, but was still only somewhat motivated. Failing the culinary class was "devastating." He said after that, he "kicked it back into gear and shot up to a 10." The difference between high school and college, he said, was that "in (high) school, you're forced. You don't want to be there. When you choose to go to college, you're paying for it so that someday, you don't want it to go down the drain."

He thinks participating in the NSLP program had "definite benefits." "Some days when I didn't have breakfast at home, I would go to school and have my lunch, and I would eat half of my lunch, package it up, and take it home and have it for dinner." He says if he hadn't had that food, he wouldn't have been able to concentrate in third period or play sports. He was not sure whether teachers should know about a student's economic status. He said he couldn't afford a

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graphing calculator and that would have helped in math, but he worried that "you could be made fun of for being poor."

Matt said that meeting his girlfriend and her parents turned his life around. The school was fine, but he doesn't think he was listening when people at school talked about college. "[College] just never really came up…it would be like at the end of whatever. So for people like me, to promote [college] a little more would definitely help."

Participant #5: Josh

Josh is a Hispanic male whose plan was to attend SRJC in the fall of 2016. He enrolled there and continues to takes classes. He works at a local auto parts store, where he has been employed for 18 months. He lives with his brother and mother. He said his older brother supports him financially and with encouragement. His brother "wants me to go to school and excel."

Financially, Josh said he doesn't make a lot of money but "I make sufficient money to pay for phone bills and other necessities. I pay a little toward my brother's car that he drives me around in."

Josh moved twice during high school and viewed these moves as a challenge to his college going. He "came back and forth" between North Carolina and Petaluma. He completed his eighth grade and the first semester of ninth in North Carolina, then came to PHS to finish ninth grade and the first semester of 10th. Then he returned to North Carolina and finished 10th grade, finally returning to PHS for 11th and 12th grade. Math classes were a particular area of struggle. "I did part of algebra at PHS, then passed geometry in North Carolina with a B." But back at PHS, he struggled in Algebra 2.

Josh generally did well in high school, despite the movement back and forth between schools. He completed 240 credits with a total 9–12 overall GPA of 3.25. He was ranked 146 in his class of 310. He struggled somewhat in science, earning a C in biology one semester and a D− in chemistry (which he then dropped). He did well in English, moving from the English Language Learner development course (ELD) as a freshman to college prep English, where he earned As and Bs throughout high school. Josh was eligible to apply to the CSU and UC system, but did not do so or take the SAT. Instead he decided to attend SRJC.

In terms of counseling, Josh said he did not have much of a relationship with his counselor. He thought his back-and-forth out of state could have affected that relationship.

When I was in high school, I didn't really know about college…I remember people came from different universities to give people stuff. I could hear through the intercom of the school. Inside of me wanted to go but somehow I refrained myself from doing so.

He said he thought he would be in too much debt so didn't think about going to college. He did not take the SAT or any prep courses. He did take AP Spanish and scored a 5 on the AP exam. Significantly, he earned a C in the class ("I didn't do all the work").

Josh said his counselor started talking to him about college in "the second semester of 12th grade." He was failing chemistry so his counselor talked about SRJC. He says he wasn't too motivated at the time. Yet during the summer after graduation, he enrolled at SRJC. He said his mother was very supportive about attending SRJC:

I realized I was a minority in this country and many people like me are poor and illiterate. Many of our people work under the sun. My mom wants the best for me. I want you to succeed, she says to me. If you succeed you'll be the change.

His brother is also very supportive. "I'm not going to college for myself, I'm going to college for my family. I will carry it for them." At PHS, he says the college and career counselor "definitely helped me a lot." But he said he was not really involved in high school life. "I wasn't really into clubs or anything. I thought it was a waste of time." He liked English class

and his teacher, books like *Catcher in the Rye*, and *Great Gatsby*, and also *Into the Wild*. When

asked what was missing, he said that the ELD class was not good:

I took ELD in 9th and half of 10th grade. When I was in ELD I didn't learn shit. Kids were
rowdy. No structure and motivation. Students didn't learn grammar—commas, semicolons—I
might have learned them better in regular English.

At SRJC, he has taken Math 150A, a course similar to Algebra I, followed by Math

150B, similar to Algebra 2. He then completed Math 155 and then must take Math Stats. So far,

math has not stopped him from continuing his education. When he started SRJC in the fall of

2016, he enrolled in Puente, a bridge support program that he credits with significantly

improving his writing and English:

I took English 100 first (even though) when I took the placement test. I placed in to English 1A.
But I took English 100 because the Puente program said so. The Puente program and English
100 helped me write better. I used to write shitty papers so because of that I knew how to write
and when I took English 1A, I got a perfect score on the last paper and got an A.

As of June 2018, Josh had earned 38 credits. He planned on transferring to a 4-year

university in the fall of 2019 to pursue a BA in Latin American studies, perhaps at UCLA or UC

Berkeley. He is interested in linguistics and anthropology.

Regarding his college readiness, Josh said he was a 5 out 10 when he left PHS:

I wasn't really motivated to take math. Then I realized I wasn't going to school because of me
but for other people. I still hate math. But I'm not going to let a math class get in the way of me
succeeding.

He currently is extremely motivated, rating himself a 10 at the moment. He said he is getting As

and realizes how lucky he is:

I have become a better writer. My mind has expanded. I learned not to be selfish. In Honduras,
there is no free education. I have nephews over there who wish they could be at a university. I
have those resources. I can't really be selfish because they can't go to school and I can. I've
gotta demonstrate that I can do it for them. My main goal is to graduate college, try to get in the
government, work in [the] FBI. I am thinking about two options, apply in FBI or join the
military, then FBI. Then I want to go back to Honduras and change my country. People over
there are in need of change.

Josh was part of the NSLP. He said the benefit was food "though it is pure shit." He does think teachers should be aware of kids in the program. "I feel so because they would be aware of your life. I guess judging the student for acting out but if the teacher was aware and (could) be more of an understanding person."

Participant #6: Larry

Larry is a Hispanic male who enrolled at SRJC for the fall 2016 semester. He lives at home in Petaluma with his parents and siblings. He has a steady job at a health club where he has been working since graduation. He said he was financially stable "though there are moments when I am unstable." He was enrolled in 8 units or two classes, English 307 and Yoga Fusion, in the fall, and 10 units in the spring of 2018.

Larry was a special education student at PHS. As a freshman, he took Algebra Academy, a pre-algebra math course designed for students who demonstrate a need for further skill building before tackling algebra (or Math 1). He struggled in math throughout high school, earning Ds in algebra and geometry. He was off the a–g track early in his high school career and never seriously considered a 4-year college experience.

However, when asked if he had taken the ACT or SAT at any point, he said he had taken the SAT. "I got a pretty low score. Most of the questions I was unfamiliar with." In fact, he took the ACT in June of 2016. Larry had a composite score of 12 (the 13th percentile, nationally ranked). He was not sure what the EAP was, nor had he taken an honors or AP course at PHS.

He chose to go SRJC because "I didn't have any other options aside from the JC." He is considering transferring to a 4-year school. He has received flyers and emails from John Paul the Great Catholic University. He said admissions at the university had seen his artwork online and said "I would be a great asset to them." He said he didn't yet know all the details of the

possible transfer. "I did research about [transferring] but at my current state, I don't have financially the right amount. They are willing to help with financial aid." He says he and his counselor at the JC have worked out an education plan. That plan includes transferring and getting a degree in game designing and layout.

Larry said his family has been supportive of his work at SRJC. They paid for his school fees at SRJC for the first two semesters "until I had my own job and only then did I choose to pay my student fees."

When asked about his college readiness when he began at SRJC, Larry said he was a 3 on a scale of 1–10.

I was not ready to jump in. Just how different of a system it is. The different types of expectation they need from you. Showing up to class and everything. Turning in your homework. There were certain teachers who would see you struggling. Some teachers would help you more but others would not.

When asked to say more about the ranking of 3 and whether he felt college ready, he said,

To be 100% honest, no. You guys offered a lot of the help. The other half needs to be the person. I felt like there was a lot of support. When I left, I didn't feel college ready, but when I went to the SRJC, I felt better.

Now he says he is motivated and a 10 going forward. When asked about his current performance, he said he was doing "really well." His GPA at SRJC, he says, is a 2.0.

Larry credits his special education teachers at PHS as his "motivation to complete high school." He remembered taking Business Math, a course that teaches real-world math skills like checkbook balancing, as a course that helped prepare him for life. (He said he was doing "fairly well" in math at SRJC.) He could not remember the name of his counselor at PHS but said she had talked to him about college and the JC. He says she was very helpful.

Larry also said he used his enrollment in the NSLP program often. "Sometimes I would come here [to PHS] with an empty stomach. No one made me feel bad about it. I met a couple

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of people who were in the program so we had a connection." He doesn't think it would matter if staff knew who was or who wasn't enrolled.

Larry presents as a very agreeable young man. His answers were polite and deferential to the school and staff. Occasionally, it felt as if he were painting a brighter picture of his past and present, as an optimist can do. An objective person might worry that Larry seems to have relatively few tools to navigate the complex world he is entering.

Participant #7: Genie

Genie is a Hispanic female who began attending Cal Poly Pomona in the fall of 2016. She said she was on track to graduate in three years. In the most recent quarter, she took and completed 20 units. Her future plan is to move on to her master's and then attend law school and pursue a JD.

The interview with this student was completed by phone. Genie lives at home with her parents and siblings when she is home from college. She has a job at Target that she returns to when she is at home. She does not work when she is at college, saying she needs that time for studying and class.

She considers herself financially stable, due to a "good" financial aid package as well as support from home. "My family and sisters have always been behind me helping."

Genie described herself as a good student at PHS. She had a total weighted GPA of 3.22 at graduation. She completed 295 credits, including 25 honors/weighted credits. She says she got involved in school life and that helped her be a better student. She was a member of Associated Student Body (ASB; student government) as well as Bilingual Student Ambassadors (BSA). She felt that both these groups gave her a sense of identity and belonging.

Genie took math throughout her time at PHS, taking AP Statistics in her senior year (she earned a 3 on the AP test). However, she did not pass the EAP math portion, and had to take multiple math courses at Pomona. Now, she said, "I am done with math!" She also took an English class at SRJC (English 1A) that is equivalent to AP English, as well as AP World History (did not sit for the exam). She took AP Spanish Language (junior year) and AP Spanish Literature (senior year) and earned a 4 on the AP exam. She says she received college credit for the AP Spanish scores.

Genie applied to some UCs and CSU schools. She was accepted at UC San Diego and five CSU schools, but chose Pomona because of the financial package, the political science department, and the campus. "It felt right when I visited." She says began thinking about college "probably my freshman year. I think my family would always push me to it. "

Genie took the SAT and says she earned a 1500 on the test. She did not take a prep course prior or get any extra tutoring to prepare. She credits the teachers at PHS for preparing her. She said they were supportive:

The fact [is] that a lot of my classes and teachers helped me a lot. Mr. C. believed in us before we believed in ourselves. He said you have to figure out yourself and what you want. It's OK to struggle. When I was struggling my first year of college, I thought about that. That really made me believe in myself before I believed in myself, if that makes any sense.

She said that she felt college ready at graduation and that she felt confident entering college. However, she said she quickly realized she was not quite ready. "Once I got there [to Pomona] I was not ready. No. Not even academically. I thought I was. But when I went to college I realized OMG I'm not ready." She says she struggled the first year, often coming home and wondering if she would be able to make it in college. "The pace was very fast. After the first year, I was questioning the whole thing. I had to make myself believe I could do it."

She says the visits home helped. "Because others believed in me, it reassured me that I could do it. It made me want to do it so more people could do it themselves. I felt a bit like a role model."

She believes her biggest success is continuing into her second year at college and overcoming her fears. "I got confident in high school. I was OK in high school, [but] college and high school are not the same." When asked if the high school experience could be altered to make the college transition easier, she said,

Honestly, when I was there, it was fine. I wouldn't add anything. I liked BSA and ASB. There was something being developed for each one of us. Staff can't force students to be involved. I feel like a lot of students talk about their personal experience and think that it is the same for all students. One thing I would do is get students from different ethnicities to get more involved.

Genie credits the counseling department at PHS with assisting her. They were "beyond a 10. Ms. S., Ms. P., just the counseling in general." She says she was often in the counseling office just to say hello and developed a comfort with counseling services.

She said her current motivation to complete college and move beyond was very high. "I would say a 9." She credited her college confidence to maturity and independence. "You learn that life isn't a joke. You have to put the work in and make it happen." She said that sometimes teachers at PHS might offer too much support:

I don't think every student needed that guidance but some students would need it. A lot of us who didn't need the guidance would just accept the help. Teachers would say you have to do it on your own, but then offer the help.

Regarding NSLP, Genie said that she was glad to have the support. The program "benefited me financially—free food and financial help. My AP exams were $5 instead of $79." When asked whether teachers should be aware of a student's financial status, she at first said yes. "Yes. There's no way of them helping if the teachers weren't aware. I feel like personally at PHS I don't think it would have mattered. Teachers were always very kind and smiling." She thought further and then said,

I think it would be students. I can speak for others in my ethnicity. They think they're not eligible. They don't believe in themselves. The reason for all these supports—tutorial, lunch, everything—(is to help) but then the students don't put the effort in. Teachers knowing wouldn't change anything.

"It's not just going to be given to them. When the student gets a good grade, they think they did it but when they don't they blame the teacher," she said.

Participant #8 Briana:

Briana is a Hispanic female who enrolled at SRJC for the fall 2016 semester. Since graduation, she has lived at home in Petaluma with her parents and siblings. Her older sister also attends SRJC. She has a steady job at a dog day care center where she has been working since graduation. She said she was financially stable: "Even though I have a job, I still get help from my parents." She said that her work schedule sometimes makes it difficult to find time to study and do homework. She was enrolled in 12 units, or three classes, in spring 2018 and is taking a math class in summer school.

Briana spent her freshman year at Casa Grande High School, where she says she struggled socially. She had a 2.3 GPA after her freshman year and transferred to PHS. She said she was not a very good student in retrospect. "My freshman and sophomore year I wasn't focused on school. I thought I probably wouldn't be able to get in a university." She says she started thinking about college about halfway through junior year, though by that time, she felt she was not 4-year eligible.

She struggled in math, according to her transcript, though she did complete Algebra 2 with a C. At SRJC, she has taken four math courses. "I am still taking math. 150B Intermediate Algebra." She says she passed math in high school due to lots of help from "Ms. F. and Ms. W. The hands-on help made the difference for me."

Briana did not take any SAT or ACT prep courses and did not take the SAT. She did

take AP Spanish Language but did not sit for the AP exam. She wasn't sure what the EAP

assessment was or if she had ever taken it. ("I don't remember the ones I took.") She said her

English class with Ms. M. was helpful, especially preparing to write college essays. Briana feels

her written language in English has improved. She also said that counselors helped her a great

deal:

> I would see my counselor in junior year. Ms. M. Before I wouldn't really talk to teachers and I feel like that helped me ask for help. I think I just didn't really try at the beginning of high school. As I got older, I realized that school was really important.

Though she struggled in her first two years of high school, Briana described herself as

college ready at graduation. When asked to put that sense on a 1–10 number scale, she said

about a 5 or 6.

> I think it was a little easier (going to college) because I had a little more guidance. As I took more advanced classes, it started to get a little harder. Sometimes, I don't pass a class and then you just get tired and hopeless.

She said the Jump Start program (an onboarding program through SRJC) made her feel

confident about college. She felt the JC would be a good school and had strong family support.

"My family has been really supportive. My sister was the first one in the family to go to college

and they have been supportive generally. If I want to transfer to university, they support that

[too]." She said she felt some pressure to continue her studies. "My parents did so much to give

me a good life. It's like an obligation to give back."

At SRJC, she is a full-time student. "I'm taking one summer class, 3 units. But regularly

I take 12–14 units. Twelve units currently [the last semester, ending in May 2018]." When

asked how many credits she had completed, she wasn't sure. "I have completed a good amount.

I'm really not sure how many I have. "

Her goal is to earn her certificate for veterinary technician. She is debating whether to get her AA in animal science or natural science, saying she will need to take more classes for the animal science AA. She thinks she needs nine more units for the major and six general education classes. One day, she said, she might go to vet school, but she is focused on her certificate right now.

She has done some job shadowing through the JC at 12 different clinics around the county, but she hasn't yet interned or made a connection with a veterinary practice. Her motivation at college is self-ranked as an 8. "I think (I'm doing) well at this point. I struggle in one or two classes." She credited programs at SRJC for connecting her to school:

I joined a Connections learning community. That's probably why it was easier in the beginning. We took English 1A and an accounting class. We would all help each other, go on trips to UC. We ended up taking the next English class together.

Briana said the NSLP program helped her. "I would get breakfast and during tutorial and lunch. I wouldn't have to worry about food." When asked whether it would have benefited her if her teachers knew her status, she was unsure. "Um, I think it could go either way. They could be an advocate for you, but it could also cause conflicts." In the end, she said, it might depend on the teacher.

Summary of Participant Responses

Each student cited unique circumstances in their responses. The interviewed students pointed inward, citing more personal reasons for relative underperformance, what we could call a "mindset gap." For example:

My freshman and sophomore year I wasn't focused on school. I thought I probably wouldn't be able to get in a university.

Honestly, when I was there, it was fine. I wouldn't add anything.

There was something being developed for each one of us. Staff can't force students to be involved. I feel like a lot of students talk about their personal experience and think that it is the same for all students.

It's not just going to be given to them. When the student gets a good grade, they think they did it but when they don't they blame the teacher.

You guys offered a lot of the help. The other half needs to be the person. I felt like there was a lot of support.

I remember people came from different universities to give people stuff. I could hear through the intercom of the school. Inside of me wanted to go but somehow I refrained myself from doing so.

I feel like we do talk about [college], it's just we don't make sure we actually have a plan for ourselves.

Obviously, then with the whole college thing, that wasn't their (the counselor's) fault, that was my fault.

I was living and experiencing rather than studying.

These pull quotes describe an almost wistful reflection on high school. The eight students interviewed generally described that they had heard the possibility of college but other things were in the filter and the future possibilities didn't rise to the surface. They appear to be saying that they were not actually "college ready" even though they may have felt that way at graduation. They commented that once college began and they were in the college experience, they realized it was different, more rigorous and with less academic support.

However, he said that once he started at SRJC, he came to realize that he was not (college-ready). He said he felt he was a 3 in terms of college readiness. He says, "I had no clue about college."

When asked about his college readiness at the time of graduation, Matt said he was probably a 3. When he was shown his high school transcript, he said, "It's funny to look back at now…it's just completely different. I have a 4.0 now."

"I wasn't really motivated to take math. Then I realized I wasn't going to school because of me but for other people. I still hate math. But I'm not going to let a math class get in the way of me succeeding."

"I have become a better writer. My mind has expanded. I learned not to be selfish."

"I was not ready to jump in. Just how different of a system it is. The different types of expectation they need from you. Showing up to class and everything. Turning in your homework."

"Once I got there (to Pomona) I was not ready. No. Not even academically. I thought I was. But when I went to college I realized OMG I'm not ready."

The impact of family environment may be stronger than the role of school, but this study does not specifically reach that conclusion. When asked what more the school could do to assist in the quest for postsecondary success, the interviewees struggled in general to come up with suggestions. The one area that was identified was more personal attention rather than program shifts.

In the final chapter, I look more closely at the quantitative and qualitative data and findings and draw some conclusions.

CHAPTER 6

Summary and Conclusions

Quantitative Findings

High School Performance

The first research question asked how low-income PHS graduates perform academically while at PHS, as well as in the postsecondary environment, specifically at the largest receiving institution (SRJC).

The quantitative portion of this study first describes PHS relative to other comprehensive high schools in the surrounding areas. The data with regards to attendance, graduation rate, a–g completion rate, AP scores, overall GPA, and collegiate acceptance all point to a high school that is educating its students at a high level. In other words, one can conclude that the educational program *in general* is meeting and exceeding the needs of the school's students.

According to the data collected, PHS is performing well relative to SED student performance. PHS SED students rank second in the county in CAASPP scores in English and math. PHS also has the highest graduation rate among SED students in the county. However, as previously mentioned, SED students at PHS and all 13 of the Sonoma County comprehensive high schools outlined in this study are performing at a significant deficit compared with their non-SED peers. There is a clear correlation between socioeconomic status and student performance, and it is clear that PHS and its peer high schools in the county have not done enough to close this gap. This is particularly true in math; all these schools need to pay greater attention particularly to SED students.

PHS is an example of the "typical" suburban comprehensive high school. While PHS is a relatively high-performing school, it also enrolls a more advantaged student population, as measured by the percentages of low-income and EL-status students, relative to its peer high schools. Like all schools, PHS must continue to pay attention to the performance gap between students.

The study presented here captures a set of student performance and perception data that can be used as a starting point for a more robust development of individualized and personalized interventions with students early in their high school path. What follows documents the general performance of low-income students at PHS and at the community college that they transitioned to.

Postsecondary Performance

The data within the study show a measurable performance gap between low-income PHS students (participants in NSLP) and the overall student population, both at PHS and in postsecondary school (SRJC), as demonstrated through the following:

- Though the a–g rate has risen in the last six years, the gap between PHS NSLP students and all PHS students remains, and in fact has grown.

- There is a growing performance gap between PHS NSLP students and all PHS students in EAP scores (as measured in the CAASPP test) in both English and math.

- PHS NSLP graduates take longer to earn a degree or certificate at SRJC relative to all PHS graduates, suggesting the deficit in relative performance has a direct effect on postsecondary performance.

- PHS NSLP graduates earn a lower average GPA at SRJC, suggesting that the gap entering the postsecondary environment has a negative (and logical) effect.

In summary, the quantitative data demonstrate that PHS low-income students underperform the general population of students at PHS and at postsecondary school (SRJC). Though there is a continuing attempt to address this gap (College Dream Team, 10,000 Degrees, individual pull out counseling services), the gap continues to be evident.

Within this context, we can better analyze the qualitative portion of the study.

Qualitative Findings

The question that is asked in the qualitative section is: given the overall strong educational program, why do some of the students at PHS, particularly those from low-income families, struggle at times, and how do these students perform if and when they enter the postsecondary environment? My preconceived hypothesis prior to the interview stage was that students would identify gaps in the educational program, gaps in counseling or outreach or information flow, or lack of access to tutoring services. Instead, what became clear is that each student essentially felt the school had done a reasonable job offering services but that the individual's connection to those opportunities had been missing.

Because the total number of interviewed subjects was eight, it is with caution that I draw any collective conclusions. This study was intended to uncover perceptions about the high school program that are individual and in depth. There are, however, some points that bear consideration:

- All eight participants worked while attending college.
- Five of the eight lived at home; only one of the eight lived on campus. The connection to a campus may be a key factor in determining success for an SED student.
- Six of eight were still enrolled and taking classes at college, with an average of 38 credits

completed as of June 2018.

- The two special education students rated themselves a 3 in college readiness, though they were both close to the average credits earned at SRJC. Is confidence a factor in reaching degree objectives?

- All eight either felt that teachers should be aware of a student's NSLP status or that it would not hurt. None described a feeling of stigma as a result of participation in the program.

Counseling

With regard to counseling support at PHS, I separated the eight students into three categories, based on each participant's response: well connected (to counselor), neutral, or not well connected. I identified three students as well connected. Each of these students self-scored his or her college readiness as relatively strong (7, 9, and 6). Three students were not well connected. Their college readiness scores were 3, 3, and 5.

Building a strong relationship between student and counselor would appear to be a factor in determining college readiness and performance. However, in this study, students who did not establish a connection with a counselor still performed well at the receiving institution (SRJC). While an excellent counseling relationship helps, it may not be a determining factor for success. The number of students in this sample is too small to draw any conclusion.

The NSLP

The interviewees were also asked about the impact of the NSLP. All of the subjects were generally positive about participation in the NSLP. Though they had generally critical ratings on the type of food served, they appreciated the assistance of the program, both in terms of access to breakfast and lunch and in terms of reduced fees for AP tests and other school programs.

Five of the eight said they believed teachers should be aware of their NSLP status, and that this knowledge would have possibly assisted the students further. The other subjects were neutral on this question, saying they didn't think that knowledge would make any difference.

This study is not intended to closely examine whether teachers in North America should know when a student lives in poverty or not. Teachers are made aware of students who have other specific conditions, including Individualized Education Plans (IEPs), 504 plans, Gifted and Talented Education Program identification, or other defining characteristics. But poverty appears to be a significant factor in high school performance as well as postsecondary performance, both in this study and across the nation. Of course, students of poverty also may attend schools that have fewer resources to support students academically. It seems odd and ironic that we continue to point out the achievement gaps between low-income students and their wealthier peers, yet do nothing specific as a remedy.

Conclusions (Qualitative)

My attempt to find any collective, broad commonality among this group has not led to any definitive result. Instead, what was most surprising to me in conducting and analyzing the interviews is the unique nature of each student's experience. School has a tendency to look for group treatments, applicable at the class, grade, or site level. As described earlier, I found that each student's story came from an entirely different place; innumerable circumstances and variables placed each student at PHS as freshmen, and their individual passage through the institution was, of course, unique.

In conclusion, the school is missing an opportunity to work more specifically with each student. Instead of focusing almost exclusive attention on college-ready *academic* skills, it is possible that school staff is simply swinging and missing at cogently describing to students why

they are learning. Perhaps because of their relative distance from the college goal (I can't afford it, no one in my family has attended, no one talks about college, my grades started off bad), many low-income students don't see a 4-year college experience as a likely outcome. *The school must place itself in that context and work one-to-one with students to alter that perception.*

Limitations of the Study

Though Venezia and Kirst's work (and others) describes the problem of disarticulation between K–12 and college, there is a relative lack of research regarding how low-income students perceive their college readiness as well as their perception regarding what programs were most beneficial relative to their postsecondary persistence. Venezia et al. (2008)

Low-income students appear to view their college prospects as less promising than students who are relatively affluent ("achievement typical"). Caroline Hoxby and Sarah Turner's 2013 study on high-achieving, low-income students (whom they call "income typical") found hauntingly that "the vast majority of very high-achieving students from low-income families do not apply to any selective college or university." Hoxby and Turner reasoned that achievement-typical students tend to be concentrated in a small number of schools in metropolitan areas, whereas income-typical high-achieving students are dispersed, often only a few per school. A lack of targeted information, Hoxby and Turner said, leads many of these income-typical students to assume they cannot afford selective colleges and universities. So the problem is defined, but not directly from the student perspective. Why do they not apply, and what can we do to alleviate this problem?

This initial work is limited in scope and is intended only to capture student perceptions related to high school transition to college. It is my view that researchers often look for

treatments that will affect portions of the general population, new systems that affect the *group*. The governing premise here is that only individualized intervention will produce real results.

As an example, the state of California is currently earnestly putting together a College and Career Readiness Indicator (CCI) in an attempt to measure a successful high school's career and college preparation (Leal, 2016). The measures include pathways and possible certifications. The assumptions regarding student readiness based on generalized criteria inherent in the CCI are in part my motivation to study a more individual approach.

The study has several specific limitations.

As a sitting principal within the district, my own presence may have influenced student response. Students may perceive that there is a "right" answer to a posed question based on the interviewer.

Because I relied on students replying to a query letter, the eventual sample is with a population of students who responded as willing to participate. It is likely that other students who chose not to participate would have skewed the data in a more negative direction. In other words, the students who responded are likely to be students who were performing at the high end of all PHS low-income graduates.

It is also important to realize that each student's experience may be entirely unique. One of the conundrums implicit in this study is the outlier student who overcomes obstacles and gains acceptance to selective colleges and succeeds there. I recognize that internal drive, personality, and character, as well as family dynamics, play important roles in accessing higher education quite outside systemic failures to provide equity and access. It may be difficult to derive general conclusions when, in a sample of this size, outlier performance may skew the overall data.

One other factor is that this study does not include students at our local continuation school (San Antonio High School) or the two small-necessary schools (Carpe Diem High School and Sonoma Mountain High School) on our campuses. Including these student populations in the random sampling would provide a more accurate picture of low-SED students within the district.

It is important to remember that the student data are simply a snapshot in time and may not have applicability, particularly outside the general area of Petaluma.

Positionality Statement

I am the sitting principal at PHS and have been working at the site since 2008. I care deeply about the school and the outcomes for our students, and the research I am undertaking is far more than a task to complete a dissertation. I view this work as "action research" in the sense that I intend to act on any findings that may help current and future PHS students.

By example, 2 years ago, the school contracted with David Elliot and the College Dream Team, a service that provides college counseling to students who could not otherwise afford it. Using LCFF site supplementary funds, we have targeted 12–15 current low-income PHS juniors each year who are potentially 4-year-college bound. The team works with each student to provide him or her with counseling services and college preparation services (SAT/ACT prep, etc.). We are working in the dark to some extent, making assumptions about what will best serve this student population. My research will ideally elicit specific recommendations that we can put into practice via the Dream Team. The individual approach to counseling each student is one good first step.

I am aware that some of the students I come in contact with during the interview process may be students I have worked with in the past. I don't expect there to be any conflict of interest

from my perspective. I realize that a former student might be less willing to criticize a teacher or program given that I am their principal first and the interviewer second, but I will make it clear to the interviewees that their honesty and clarity will best serve future students.

Implications of the Study

This study is important because low-income students significantly trail the non-economically disadvantaged population in college readiness, college access, and college attainment (Balfanz, 2009; Bracey, 2009; Carnevale & Strohl, 2013). Recent (2016) National Student Clearinghouse data on high- versus low-income schools report that income is the strongest correlate to college degree completion; 45% of all students from higher income schools in the class of 2009 completed degrees six years after graduation, versus 24% for students from low-income schools.

CDE data from 2015 underline the disparity: 31% of SED students met or exceeded standards in English versus 64% for those not economically disadvantaged; for math, these figures are 21% versus 53% (CDE News Release, 2015). Clearly, there is a gap between SED students and the general population. This study can gather information to change not only PHS practices but those of other high school and K–12 schools too.

It is crucial that high school and postsecondary educators become aware of the perceptions of low-income students with regard to their college readiness so that school systems can integrate that information and allocate resources more efficiently to close the readiness gap. Though it is secondary to this study, the under matching work of Hoxby and Avery (2012) accents the problem in this study. At present, even high-achieving low-income students tend not to apply for admission to selective colleges and universities. Hoxby and Avery (2012). Though they have earned sufficient grades and SAT scores, these high achievers do not see themselves

as candidates for selective colleges. Hoxby has determined a variety of factors that may cause

this, primarily a lack of consistent counseling and information about college options and

affordability. Access to information, then, is one critical variable to examine.

Other studies (Berliner, 2009; Bracey, 2009; Payne and Biddle, 1999) connect poverty

with classroom performance. Bracey (2009) pointed out that American schools actually perform

very well relative to other countries; it is with low-income students that America struggles:

In fact, then, the majority of American students did very well on this measure [Progress in
International Reading Literacy Study]: the only American schools with scores well below the
national average were those whose student population was composed almost entirely of students
from poor homes. (p. 3)

School administrators and teachers are charged with closing this gap. If students are

poor, it is the school, the funding system, and the support structure that are expected to address

the impact of poverty. Low-income students can provide information and direction for schools

to truly focus how to spend dollars and provide resources to reach every student. My research

explored the perceptions of a sample of low-income students who have matriculated to college,

and analyzed their sense of what high school provided and what it did not. Currently in

California schools, the LCFF targets "supplementary" resources to ELs, foster youth, and low-

income students. However, high schools struggle with targeting resources to the low-income

population since information on the status of these students is shielded from teachers and other

staff. In schools without programs aimed at low-income students (the Advancement Via

Individual Determination program, for example), there may be few specific resources assigned

to low-income students.

Recommendations for Practice

My interviews led me to believe that many excellent programs and caring adults work

with these students at PHS. The school should continue to monitor its programs and how it is

serving all students. The following recommendations are aimed at PHS but also *any* school system:

- Counseling services must be more robust.

- Clear and specific information about college and career must be consistently and frequently be shared with students?

- All students need access to SAT/ACT prep. Tutoring supports for test prep must be a right for all students, not based on parent income and affordability.

- Student-to-student peer connections must be established and reinforced.

- Significant time and resources must be spent working one-to-one with each student. We have to alter the mindset of students who truly do not believe college is in their future.

- The student "story" – the narrative of the journey each student takes from kindergarten to graduation – must be captured more effectively, and then moved on to college advisors for use with each student.

School administrators charged with closing readiness (achievement) gaps would benefit from deeper qualitative data from the student perspective. This study can alter current practice and ultimately change the way low-income students are supported. As these students share their perceptions and educational goals, site and district administrators can determine how best to serve their needs. Though school administrators cannot alter the levels or treatments of poverty per se, they can consider student input and apply this learning to change the academic and social trajectory of significant numbers of students.

There is one more conclusion that I draw from the quantitative study. Many students, particularly those in the "middle," are relatively ignored. In my observations at PHS, the average student with a 2.8 GPA, Bs and Cs on the report card, is rarely called into the

counseling office for support. There are apparently so many other more needy students—those seeking recommendation letters to college, those with IEPs or 504 plans that require meetings and updates, or those in psychosocial crisis who need repeated treatment from counseling staff and marriage and family therapy (MFT) interns. PHS is relatively rich in counseling services. According to the CDE, the ratio of students to counselors in California averages 945 to 1, compared to the national average of 477 to 1. PHS has four full-time counselors, with a student to counselor ratio of 340 to 1, as well as two MFT interns and a Project Success counselor who sees students struggling with substance abuse. Yet despite this wealth of support, many PHS students go unseen.

However, even with this support, it is difficult to establish a true personalized environment for each student. My previous anecdotal conversations with students suggest a continuing lack of support from a caring adult for the average student. The school has added specific support for a target group of low-income students through the 10,000 Degrees program. (10,000 Degrees offers group services for low-income students who are interested in college and are seeking support.) In addition, PHS has contracted with the College Dream Team, targeting 12–15 low-income students with GPAs that suggest college aptitude.

My professional experience of students and of people in general is that the occasional spotlight on each student or person can have a powerful effect on performance. An example from my days as a kindergarten aide and a Montessori teacher was the act of sharing. Students would bring in a personal or family item and, for a few moments, describe to the class what it was and why it was important. Questions would follow. This staple of elementary school life often disappears as students move into junior high and high school; instead, students at PHS share in academic settings, Socratic Seminars, or literature circles. For those who struggle in

those settings, sharing becomes a thing of the past. The simple narrative of a student's life is lost. Instead, we could develop a system to capture the student story and reflect it into post-secondary life; there, the story might find resonance and ensure that the student and the receiving institution are on the same page.

There are some truths in Hollywood's depiction of high school life. Films like *Fast Times at Ridgemont High* (Azoff, Erickson, Linson, & Heckerling, 1982) point out that most high school students simply want someone to notice their attributes. "[*Fast Times at Ridgemont High*] holds up remarkably well because it feels honest," said Ben Mankiewicz of Turner Classic Movies. "The pain that they feel, the humiliation that these kids feel, the frustration, the doubt and insecurities that all feels authentic" (King, 2017). More recently, *Lady Bird* (Bush et al., 2017) similarly captures the yearning to be noticed and recognized at the American high school.

These dramatizations collectively capture a commonality, that high school life is extremely complex and utterly unique. A student's path through the K–12 public system is dependent on an almost infinite set of variables, including socioeconomic status, family dynamic, peer group, physical characteristics, athletic ability, personality, learning style, learning disability, teacher placement, and countless more. Given that this is the case, schools like PHS would be better off devoting greater resources toward reaching each student on a more personal basis. Just as doctors meet and assess each patient individually, teachers and staff should search for ways to reduce whole-group generalized instruction in favor of more targeted, differentiated instruction. Then and only then can we have a chance to alter the outcomes for our low-income students.

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Appendix 1

Recruitment Letter

(sent via email and U.S. Mail)

April 10, 2018

Dear _____,

My name is David Stirrat, the principal of Petaluma High School. I am conducting a study of Petaluma High School graduates who participated in the National School Lunch Program about their transition to college, as part of my doctoral work at the University of California at Davis. Because you participated in the National School Lunch Program list at Petaluma High, you are invited to participate in this study. If you agree, you are invited to a short interview where you will be asked to describe your high school experience and how it supported your transition to college. The interview is anticipated to take no more than 30 minutes. I will audio record the interview for accuracy.

If the former Petaluma High student listed above is not living with you, please forward this on to him/her, or relay my contact information on.

Participation in this study is voluntary. Your identity as a participant will remain anonymous during and after the study. I will use a pseudonym and strict confidentiality will be preserved. For your time, I am offering a $25 gift card.

If you have questions or would like to participate, please contact me at the email address below or by calling or texting to the number provided.

Thank you for your participation,

David Stirrat
University of California–Davis
Doctoral Student - Educational Leadership

djstirrat@ucdavis.edu

707-364-2843

Appendix 2

Interview Questions

Date:_____   Site:_____   Interview Subject:_____

Introductory Protocol:

Thank you for talking with me today. As I said earlier, I am conducting research about student transition from high school to postsecondary education. You have been selected to speak with me today because you have been randomly selected from students who have attended postsecondary institutions who previously (in high school) participated in the NSLP (National School Lunch Program). I am currently in the doctoral program at UC Davis (CANDEL) and working on a dissertation that aims to determine why many students are unprepared for college, particularly students who are classified as SED (Socioeconomically Disadvantaged) as recognized by participation in the NSLP. I am particularly interested in student perceptions of college readiness.

To help me capture everything accurately, I would like to record our conversations today. Please sign the release form. For your information, only researchers on the project will be privy to the audio files. These files will be transcribed and you will be not be identified by name.

Please take a look at the permission to interview form. Essentially, this document states that: (1) all information will be held confidential, (2) your participation is voluntary and you may stop at any time if you feel uncomfortable, and (3) I do not intend to inflict any harm. Thank you for your agreeing to participate.

I have planned this interview to last no longer than 30–60 minutes. During this time, I have several questions that I would like to cover. If time begins to run short, it may be necessary to interrupt you in order to push ahead and complete this line of questioning.

Introductory Questions: (Section One)

What year did you graduate from Petaluma High School?

When you graduated from PHS, you indicated your intention to enroll at a postsecondary institution. Are you currently an active student?

Are you living at home, on campus, or in your own apartment/house?

Do you currently have a job?

Would you say you are financially stable or are you struggling financially?

Petaluma High School performance: (Section 2)

What is the highest-level math course you completed at Petaluma High School?

What is the highest-level English course you have completed at Petaluma High School?

Did you take any ACT/SAT test prep courses?

What was the highest score you achieved on the ACT/SAT?

During your time at PHS, did you attempt an honors or AP class?

Did you take any AP exams while at PHS? Which ones and what scores did you earn?

Did you take the EAP (Early Assessment Program) test? Score?

Postsecondary Experiences: (Section 3)

When did you begin postsecondary education (JC or college)?

Can you describe the choice you made to apply and enroll at your choice school? Did you have other options?

How has your family interacted with your college-going decision? What kind of family support have you experienced?

What is your present course/credit load? Are you a "full-time" student?

What objective do you have? Four-year degree? Certificate? Transfer ready?

On a scale of 1–10, 1 representing great struggle at postsecondary and 10 representing strong success so far, rank your current sense of how college ready you believe you were at the beginning of your postsecondary experience.

Please rank your level of motivation in college at the moment (1–10 scale)

If you are currently attending, how are you performing in your classes up to this point?

Open-ended question—describe your college-going experience, in terms of successes and challenges.

Petaluma High Reflection: (Section 4)

What specific parts of your high school experience at PHS prepared you for your college experience?

What specific elements do you think were missing or should be added to help all students with college preparation?

Would you have described yourself as "college ready" after PHS graduation?

How motivated were you to attend college after PHS graduation?

What was the impact of PHS counseling services in your college-going decision? How helpful were those services?

Did you ever have access to private tutoring?

You were identified for this study based on previous participation in the NSLP. Describe the benefits and/or challenges that come with being a part of the free and reduced lunch program.

Do you think it would have been a benefit if your teachers in K–12 were aware of your socioeconomic status?