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Overcoming Barriers to Advanced Placement: Bolstering the Self-Efficacy of Underserved Students

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by

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ABSTRACT OF THE DISSERTATION PROPOSAL

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by

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The College Board's Advanced Placement (AP) courses are among the most academically demanding classes available to secondary school students. There exists a strong correlation between AP access and success in high school and college completion. However, predominately first generation, minority, and/or low-income students (*underserved students*) remain largely absent or grossly underrepresented in AP courses when compared with their more affluent, non-minority peers. This study presents a theoretical framework for self-efficacy, the aspects that contribute to the development of self-efficacy, and demonstrates the positive relationship between academic achievement and self-efficacy in a variety of academic domains. Finally, this proposed mixed-methods case study seeks to explore and understand the role a socially supportive co-curricular school club designed to invite underserved students into AP has on those same students' sense of self-efficacy toward AP coursework. By investigating the specific words and actions that teachers, school staff, and peers use to help underserved students persevere through the challenges of AP, the study will contribute to a stronger understanding of how AP self-efficacy can be purposefully developed for underserved students, develop research-based interventions and supports designed to help underserved students access and ultimately succeed in rigorous AP coursework.

CHAPTER ONE: INTRODUCTION

The College Board's Advanced Placement (AP) courses are among the most academically demanding classes available to secondary school students. There exists a strong correlation between AP access and success in high school and college completion. However, many high achieving, underserved students are passed over for placement in the College Board's Advanced Placement (AP) program (Peters & Gentry, 2012). Black and Latino students with the same AP readiness as their White and Asian peers remain significantly less likely to enroll in AP courses (College Board, 2014). In fact, only 4 out of 10 Latino students and 3 out of 10 Black students enroll in the AP courses in which they are qualified. AP courses are designed to help prepare students for the rigors of college and are regarded as the most academically demanding courses available to high school students (Barnard-Brak, McGaha-Garnett, & Burley, 2011; College Board, 2014). Disparate educational opportunities and outcomes can readily be seen in the rates of enrollment and success in the AP program today. Black, Latino, English Learners (ELs), and/or low-income students are significantly underrepresented in AP classes (Klopfenstein, 2004b). Underserved students, with the same AP readiness metrics as their more affluent White and Asian peers, are significantly less likely to enroll in AP course work (College Board, 2014). Finally, once enrolled in AP, underserved students are less likely than their more advantaged peers to earn a passing score on the annual course-specific exams.

The benefit of a rigorous high school curriculum to a student's post-secondary success is widely reflected in research and literature. Enrollment in AP leads to better academic outcomes while in high school and also in college attendance and graduation

rates (Conger, Long, & Iatarola, 2012). Since a rigorous high school curriculum positively impacts the likelihood of success in college (Adelman, 1999; Handwerk, Tognata, Coley, & Gitomer, 2008), underserved students who enroll in AP find their chances of not only attending college, but also continuing past their first year markedly improve (College Board, 2014; Horn, Kojaku, & Carroll, 2001). When compared to their academically matched peers, research has consistently demonstrated that students who attain a passing score on an AP exam in high school earn higher GPAs in college, take more college coursework, are more likely to graduate within five years of college enrollment, and have higher rates of college graduation (College Board, 2014). In fact, even underserved students, who take an AP course, but do not pass the exam, enroll in college and persist at greater rates than their matched peers.

There is much room for improvement both in terms of affording underserved students the opportunity to enroll in AP courses as well as to foster their success once enrolled. I am interested in how disparate AP enrollment and success patterns can be fundamentally altered to afford underserved students the same prospects for college enrollment and completion and the chance for a more economically viable and secure future. My interests lay in the purposeful actions school leaders, teachers, and peers can take to bolster underserved students' academic mindset, specifically their sense of self-efficacy towards AP.

Statement of the Problem

In the United States, educational attainment has long been held as the great social and economic equalizer for underserved students. While it is believed that through education, underserved students can positively impact their own future and achieve the

same life success and economic future as their more affluent peers, great disparities exist in the schooling experiences of underserved students and their more affluent peers that serve to negatively impact this idealistic goal. For instance, access to rigorous high school coursework, like AP, that purposefully readies students for college has been stratified to the detriment of undeserved student populations (Farmer-Hinton, 2011).

Systemic barriers to AP coursework for underserved students is a complex web of factors like limited resources in poor, minority schools, de facto academic tracking, and lowered teacher expectations. These real barriers to underserved students' enrollment and success in AP have been well documented. African American, Hispanic, English Language Learners (ELLs), and low-income students remain grossly underrepresented in AP classes (Klopfenstein, 2004b). Even when enrolled in AP, underserved students are less likely to successfully pass the annual AP exam (College Board, 2014). Regardless of the cause or the barrier, underserved students remain underrepresented in both participation and success in AP (Handwerk, Tognata, Coley, & Gitomer, 2008).

For this historic underrepresentation to be fundamentally altered and underserved students afforded a real opportunity to enroll and succeed in AP coursework, a new mindset must be purposefully cultivated within these same students, their teachers, and school staff, historic systems critiqued, and new ones established that serve to afford underserved students greater access to, and success in, AP. Working to bolster an underserved students' sense of self-efficacy toward AP coursework, through the workings of a school club, proves a viable path forward in the development of a new system and theory. However, the majority of research regarding self-efficacy has focused on the curricular areas of science and mathematics and limited self-efficacy studies have

been conducted with underserved students (Riconscente, 2014). This study sought to address this gap in the research by studying the self-efficacy of underserved students towards AP coursework in general.

Research Questions

I conducted a mixed-methods case study to investigate the effects a formalized, social support co-curricular club can have on underserved students' sense of self-efficacy toward AP coursework. More specifically, I studied the effects an "I Am AP" Club had on underserved students' perceived sense of AP self-efficacy. The "I Am AP" Club had been specifically and intentionally created to acculturate underserved students to the rigors of AP through a socially supportive network of peers, teachers, and other school staff.

The following overarching research question and sub-questions guided this study: Can underserved students' self-efficacy toward AP be strengthened through the actions of teachers, school staff, and peers, and if so, what specific actions served to bolster their self-efficacy toward AP coursework?

1. Can the self-efficacy toward AP courses of an underserved, 1st-time AP student be bolstered?
2. In what ways can 1st-time AP students be socially supported to contribute to their sense of self-efficacy toward AP courses?

By investigating these questions, this study informed the conditions under which underserved students' sense of self-efficacy toward AP may be enhanced.

Conceptual Framework

The literature review focuses on two aspects critical to this study: the systemic

barriers to enrollment and success in AP for underserved students and the concept of self-efficacy. The identified barriers to AP along racial, ethnic, and/or socioeconomic lines include resource deprivation, socioeconomic status, academic tracking, oppositional culture, and lowered teacher expectations and are thoroughly presented in chapter two.

This study's conceptual framework is based on the seminal work of Bandura (1993) on self-efficacy. Self-efficacy is described as one's belief in one's ability to succeed in a given task or situation. An individual's sense of self-efficacy differs across areas and domains (Bandura, 2006). For instance, a student may be highly self-efficacious in mathematics but have low efficacy in reading. Self-efficacy is not a global trait, generalizable across all domains, but rather differentiated to discrete realms of functioning.

An individual's perceived sense of self-efficacy is largely developed through the internal interpretation and processing of information from four distinct sources (Bandura, 1997): mastery experiences, vicarious experiences, social persuasion, and psychological states. These four sources of self-efficacy development will be explored in the AP self-efficacy scale discussed in the methodology section and helped form the basis of the qualitative data gathered.

Mastery Experiences

The most influential and significant contributor to self-efficacy development is through the formation of mastery experiences (Bandura, 1997). An individual's prior success in a given task or situation serves to bolster confidence while experiences with tasks or situations that are interpreted as unsuccessful generally lower confidence (Britner

& Pajares, 2006). These internal interpretations of experiences form the basis for beliefs regarding the expectation of success in similar, future tasks and situations. Mastery experiences that result from overcoming challenges generally promote a more irrepressible sense of self-efficacy than those experiences that are more easily mastered. In short, mastery experiences alone do not promote self-efficacy, but the internalized process of the success itself, the perceived difficulty of the task, the effort exhausted in the endeavor, and help received or not in its ultimate completion.

Vicarious Experiences

Students also formulate their self-efficacy through the observation of others engagement and performance with a given task or situation (Britner & Pajares, 2006). Observational information is internalized to evaluate a student's own likelihood of experiencing success in the same task or situation. While not as strong of a contributor to self-efficacy as mastery experiences, vicarious examples prove more sensitive when a student has limited prior experience with a given situation, or task, or is uncertain in her abilities. When students with limited prior experience in a task, or situation, or who doubt their own abilities observe a model with similar characteristics as themselves, the interpretation of the vicarious experience is more profound and impactful. The observation of a model largely dissimilar to the observer does little to bolster self-efficacy.

Social Persuasion

Both the verbal and nonverbal judgments others provide regarding one's perceived ability with a given task or situation also help form the basis of a student's self-efficacy (Britner & Pajares, 2006). While positive persuasions and affirmations may

work to bolster a student's self-efficacious beliefs, negative assessments of ability and potential serve to weaken it. The negative verbal and nonverbal assessments more easily weaken self-efficacy than positive encouragement serves to strengthen it. Specific acts of social persuasion alone do not positively alter self-efficacy, but rather can when interpreted in harmony with self-efficacy's other sources.

Psychological States

An individual's interpretation of the emotional states like anxiety and arousal and the formation of stress associated with a given task or situation also contribute to self-efficacy formation (Britner & Pajares, 2006). The given emotional state held in expectation of, or during a task or situation, helps formulate an individual's extent of confidence in a positive outcome and experience. Generally speaking, anxiety, tension, and negative stress and emotional states may increase the probability of a negative outcome and lower self-efficacious beliefs. Conversely, positive arousal with a given task or situation serves to bolster self-efficacy.

These four, simultaneously occurring factors all are interpreted and internalized in the construction of self-efficacy (Britner & Pajares, 2006).

Methods

A mixed-methods approach to research, and the combination of both quantitative and qualitative data, offers a deeper, more complex understanding of the issue than either form of data would offer alone (Creswell, 2012). For this study, an AP self-efficacy scale, to measure underserved students' sense of self-efficacy toward AP courses in general, administered as a pre- and post-test, formed the basis of the quantitative data gathered. Qualitative data were collected in the form of observations, semi-structured

interviews, and document analysis. One hundred seventy-five students, all enrolled in at least one AP course, took the pre-test of AP self-efficacy. From these 175 students, 8 1st-time, underserved AP students were chosen for further study based on their generally lower sense of AP self-efficacy. Ultimately, 7 of these 8 students agreed to fully participate in the study. As with any study, limitations existed, in the form of generalizability, self-reporting, and positionality and will be discussed in greater depth as will the ethical considerations. Finally, the manner in which these limitations and ethical factors will be addressed and neutralized will also be addressed.

Significance

The mixed-methods case study researching the effects that a socially supportive club has on underserved students' perceived sense of AP self-efficacy has the promise to offer new knowledge and advance educational policy and practice. With limited research on underserved students' sense of self-efficacy generally and a lack of research on the sense of AP self-efficacy specifically, this study sought to better understand how underserved students internalize and process messages from teachers, school staff, and peers to develop their own sense of self-efficacy towards AP coursework. Specifically, the study addressed this gap in the literature by identifying the specific words and actions of teachers, school staff, and peers that underserved students interpreted as significant and meaningful to the development of their sense of self-efficacy to AP.

Completing a rigorous high school curriculum, with courses like AP, greatly improves a student's chances of enrolling and completing college. Experiencing the rigors of college-level coursework while still in high school greatly benefits students as they transition to college. Having already experienced the rigorous demands of the

coursework, students who have successfully completed AP courses in high school stand poised to experience greater success in college. They know the rigors, demands, and equally importantly, their ability to meet the academic challenge. Underserved students, who do not have the same opportunity to enroll and succeed in AP face a limited prospect of post-secondary educational access and success; a pre-requisite to a high-paying job in today's global economy.

Underserved students' historic underrepresentation in rigorous high school coursework, like AP, has served to marginalize this group of students and limit their educational options. Often relegated to lower tracked, less rigorous classes and courses since elementary school, underserved students conform to the lowered expectations, which ultimately hinders their later enrollment and success in academically challenging courses like AP. Once enrolled in AP, underserved students often encounter an academically and socially unfamiliar environment, which leaves them vulnerable and their ultimate success in question.

However, knowing a student's positive sense of self-efficacy is strongly related to academic achievement, the purposeful development of this aspect of personal agency can serve as a potential mitigating factor for underserved students' historic underrepresentation and success in AP. This study served to investigate and illuminate the specific words and actions from teachers, school staff, and peers that served to bolster underserved students' sense of self-efficacy toward AP. By more thoroughly understanding how underserved students sense of AP self-efficacy can be developed, this study will help educational practitioners design approaches, strategies, and interventions that can replicate the ensuing research-based best practices this study identifies.

Key Terms

In this study, several significant terms will be utilized that may be unknown or may have different interpretations. To bring clarity to the study, the following key terms will be defined:

1st-time AP students. Students who have not yet taken an AP class and have not been in the traditional AP pipeline of gifted/honors classes.

AP self-efficacy. The construct used to ascertain a student's belief in her abilities to be successful in AP coursework.

English Learners / ELs. Students whose primary home language is other than English and who have either not yet demonstrated fluency in English or have done so but only within the prior two years.

Low-income/Socioeconomically disadvantaged. Students who qualify for the National School Lunch Program's (NSLP) free/reduced price school meals.

School culture. The beliefs, perceptions, relationships, attitudes and the written and unwritten rules that shape and influence how a school functions (Hidden curriculum, 2014).

Self-efficacy. Bandura (1993), the seminal author on the theoretical concept of self-efficacy, describes this aspect of personal agency as one's belief in one's ability to succeed in a given task or situation. It is important to note that an individual's sense of self-efficacy is not a universally held phenomenon and differs across various areas and domains (Bandura, 2006). Self-efficacy is not a global trait, generalizable across all domains, but rather differentiated to discrete realms of functioning. For instance, a student may be highly self-efficacious in mathematics but have low efficacy in reading.

Underserved students. Students who, traditionally, have had limited access to educational opportunities, such as AP, because of misperceived limitations based on race, ethnicity, socio-economic status, gender, linguistic ability, and other deficit-associated limitations.

CHAPTER TWO: REVIEW of the LITERATURE

The focus of this literature review is to give a brief context and history of AP courses, highlight the benefits of AP enrollment for underserved students, note the disparities in underserved students' AP enrollment and success, identify the barriers to AP access and success, and demonstrate how these barriers have contributed to a generalized lower sense of self-efficacy among underserved students. Bandura's (1991) research on self-efficacy will be presented as the conceptual framework for the proposed study.

Rationale for AP Enrollment for Underserved Students

The College Board's Advanced Placement (AP) program is designed to help prepare students for college and provide a pathway to attain college credit while still in high school (Barnard-Brak, McGaha-Garnett, & Burley, 2011). AP is the most rigorous academic program available in a high school and encompasses 34 courses in mathematics, science, English, history/social science, art, and world languages (College Board, 2014). Given that a rigorous high school curriculum positively impacts the likelihood of success in college (Adelman, 1999; Handwerk, Tognata, Coley, & Gitomer, 2008), universities look favorably on students with AP experience (Klopfenstein, 2004b). Enrollment in AP leads to better academic outcomes as measured by test scores, high school graduation rates, and college attendance and/or graduation rates (Conger, Long, & Iatarola, 2012).

These college level classes and a student's success, or failure therein, can greatly shape one's post-secondary education trajectory (Klopfenstein, 2004b). When underserved students, whose parents most likely did not attend college, enroll in a

rigorous high school curriculum, like AP, their chances of not only attending college, but also continuing past their first year markedly improve (College Board, 2014; Horn, Kojaku, & Carroll, 2001). In fact, underserved students who complete rigorous AP coursework and rank in the top fifth of all students nationally are more likely to graduate from college than are their more affluent, non-minority peers who completed less rigorous high school coursework (Dougherty, Mellor, &, Jian, 2006).

Disparate Enrollment and Success in AP

At the outset of the creation of the AP program in the 1950s, these rigorous, college-level courses were designed to sort and separate the best and brightest students as a means to challenge them in a rigorous curriculum (Schneider, 2009). In 1958, the second director of the national Advanced Placement Program, David Dudley, wrote that "not all students are created equal" and held that the AP Program was intended to serve high achieving students at the best high schools in the country (Schneider, p. 817). Ever since, AP course enrollment has historically been dominated by middle-class, suburban white students (Klopfenstein, 2004b), and, as such, students from more affluent families have higher rates of college attendance and graduation than their less affluent peers (Crosnoe & Schneider, 2010).

As the AP program was largely for students deemed gifted, or in some way educationally superior to their underserved peers, disparate educational outcomes can readily be seen in the rates of enrollment in the AP program today. African American, Hispanic, English Language Learners (ELLs), and low-income students remain grossly underrepresented in AP classes (Klopfenstein, 2004b). Even when underserved students attain the same AP readiness metrics – as reported in Preliminary Scholastic Aptitude

Test (PSAT) scores – as their more affluent White and Asian peers, they are significantly less likely to experience AP course work (College Board, 2014). Still to this day, many high achieving, underserved students are overlooked for placement in the AP Program (Peters & Gentry, 2012).

These same enrollment disparities are also seen in student performance on the annual AP exams, which are administered in May of each school year. A student who earns a score of 3 or higher (on a 5 point scale) is considered to have passed the exam and is eligible for university credit. Students who earn a passing score on an AP exam in high school earn higher college GPAs, are more likely to graduate college within five years, and have higher overall college graduation rates. In 2013, of the 9.2% of AP examinees who were African-American, only 4.6% earned a score of 3 or higher. Comparatively, of the 55.9% of AP examinees who were White, 61.3% of them earned a passing score. Low socioeconomic-status students accounted for 27.5% of test-takers, yet only 21.7% earned a passing score. Not only are underserved students less likely to take an AP exam, but they also are less likely to earn a passing score (College Board, 2014).

As a leader of a school in which nearly 50% of our students are considered low-income and in which nearly 60% of the student population is minority, I am interested in how disparate AP enrollment and success patterns can be fundamentally altered. My interests lay in the purposeful actions teachers and school leaders can take to bolster underserved students' academic mindset, specifically their sense of *self-efficacy* – one's belief in one's ability to succeed in a given task or situation – (Bandura, 1993) towards rigorous academic coursework like AP.

One of the focal points of this literature review is to identify barriers toward

accessing the AP program for underserved students at both the school and individual level. The role a student's sense of academic self-efficacy may play in helping to overcome these barriers to AP will be discussed. Finally, the theoretical framework for self-efficacy will be presented.

Barriers to AP Access and Success

Underserved students have historically trailed their more affluent, nonminority peers in both AP exam participation and performance (Handwerk, Tognata, Coley, & Gitomer, 2008; Zarate & Pachon, 2006). AP enrollment data from 2013 show that while 43.8% of graduating seniors in California high schools were Hispanic, only 38.3% of the AP examinees from that same year were also Hispanic (College Board, 2014). Comparatively, and in that same year, 58.3% of the nation's high school graduates were White, while 55.9% of AP examinees were also White. Similar disparities are noted in California's low-income students' participation in AP in 2013; while 54.1% of California K-12 students classify as low-income only 42.3% of AP test-takers were considered low-income.

Similar disparities along racial and socioeconomic classifications are noted in the success rates on the annual AP exams. Again, AP enrollment data from 2013 shows that of the 38.3% of AP examinees in California who were Hispanic, only 35.2% of these same exam takers attained a passing score of 3+ during high school (College Board, 2014). Comparatively, 61.3% of all White AP examinees from that same year attained a passing score of 3+ during their high school years. The same disparate outcomes in AP exam performance exist for California's low-income students: of the 42.3% of examinees

classified as low-income, only 37.8% of these same students scored a 3+ during high school.

The factors that restrict access to, and success in, AP along socioeconomic, racial, and/or ethnic lines are referred to as access and success barriers and include resource deprivation, socioeconomic status, academic tracking, oppositional culture, and low teacher expectations. These interwoven, correlated factors exist at both the school and individual level and will be discussed in the ensuing sections.

Resource Deprivation. A commonly held view to explain the disparate access and success to AP for underserved students lies in the resource deprivation model, specifically a lack of resources, financial or otherwise, for schools to offer AP courses (Klugman 2013; Taliaferro & DeCuir-Gunby, 2007). Through their quantitative study of a national representative sample of over 12,000 students, researchers concluded that schools with high minority and low socioeconomic-status students offer fewer AP courses to their students than do more affluent, non/low-minority schools (Barnard-Brak, McGaha-Garnett, & Burley, 2011; Handwerk, Tognata, Coley & Gitomer, 2008; Zarate & Pachon, 2006). Specifically, of all public high school students nationally, only 81% of low-income students attended a school offering the AP program as compared to 88% of their more affluent peers (Handwerk, Tognata, Coley, & Gitomer, 2008). Even when they do attend a school offering AP, low-income students' schools offer fewer AP courses in total than schools attended by predominately affluent and/or non-minority peers.

Evidence of this resource deprivation model was also found in the largely all-minority, low-SES school district of Inglewood, California, which offered 2 AP courses

compared to the 18 AP courses offered at a neighboring, affluent, non-minority school district (Klugman, 2013). Suburban public schools with their largely affluent, non-minority population most commonly have not only the AP program but also offer a full complement of AP course offerings (Handwerk, Tognata, Coley & Gitomer, 2008). This helps to explain why schools with a large presence of Hispanic students are disadvantaged in their enrollment in old AP subjects (those created/offered prior to 1997) (Klugman, 2013).

When explicit actions are taken to bolster the resources and AP course offerings in traditionally poor schools, the disparate enrollment patterns remain. Between the years of 2000 and 2002, the state of California sought to increase AP offerings and enrollments in its most underserved schools. Despite the extra resources provided in the form of "AP Challenge Grants," including teacher training, instructional materials, and tutoring, this initiative did little to decrease the existing stratification of AP courses based on race and economic status (Klugman, 2013). Instead, while AP course offerings did increase in underserved schools, AP course offerings increased at a higher rate at more affluent schools in California, thus perpetuating the race and economic-status stratification. A similar pattern in advanced course-taking disparities emerged in Florida from 2002-2006 showing underserved students' enrollment in AP courses increased, albeit at a significantly lower rate than their more affluent White and Asian peers (Conger, Long, & Iatarola, 2009).

Although schools that serve largely underserved student populations seemingly lack the resources to offer and enroll their students in AP courses, several scholars conclude deficits in AP coursework offerings across schools account for but a small

portion of the enrollment disparities between underserved students and their more affluent peers (Theokas & Saaris, 2013; Zarate & Pachon, 2006). While the availability of AP courses in a school is needed to decrease unequal enrollment, it remains an insufficient factor in advancing actual student enrollment (Handwerk, Tognata, Coley & Gitomer, 2008). The expansion of AP course offerings to low-income and high minority schools and students is certainly needed, but from a disparate enrollment perspective, it is believed that if these same schools with an existing AP program concentrated on identifying and enrolling their own AP-ready students, the socioeconomic, racial, and/or ethnic gaps would be eliminated (Theokas & Saaris, 2013).

Socioeconomic Status. While idealistically tasked to help break the cycle of poverty presented to underserved students, schools unwittingly perpetuate this very cycle in hindering AP course access to low-income students regardless of their race or ethnicity. Low-socioeconomic, minority students are far less likely to enroll in AP and are even far less likely to take AP exams when enrolled (Contreras, 2011). A student's status as low-income was reported to reduce AP participation and alone counted for disparate enrollment patterns (Conger, Long, & Iatarola, 2009; Contreras, 2011; Klopfenstein, 2004a; Zarate & Pachon, 2006). Low-socioeconomic status hinders the AP participation of students across all racial and ethnic lines, but African American and Latino students are more likely, by a factor of three, to be low-income than their White counterparts (Klopfenstein, 2004a).

Prior researchers, in rigorous, multi-year studies, have demonstrated the correlation between socioeconomic status and AP course access for high school students in the two most populous states, California and Texas. This was evident through a multi-

year analysis of AP enrollment patterns among 1,302 California public high schools between 1997 and 2006. At a time when California was undergoing a concerted effort to expand access to AP courses for underserved students, an "upper middle class school" (those schools one standard deviation above the mean in upper-middle class composition), was found to have 25.2 students for every 100 enrolled in an AP course (Klugman, 2013). Conversely, in a school two standard deviations below the upper-middle class measure had but 14.8 students per 100 enrolled in AP. Similarly, from a logit regression analysis study of nearly 739,000 high school students from over 2,000 schools in the state of Texas who were enrolled in a school where at least one AP course was offered, it was noted that African-American and Hispanic students enrolled in AP at almost half the rate of White students (Klopfenstein, 2004a).

As evidence of this underrepresentation phenomenon, Klopfenstein noted that a *White* non-low-income male had a 47.2% probability of enrolling in at least one AP course during his high school career. However, if that same student was low-income, his probability of enrolling in AP dropped to 30.2%. Given nearly three-fourths of all minority students are also low-income, their very economic status disproportionately acted as a barrier to AP course participation (Klopfenstein, 2004a).

Evidence exists that the correlation between income level and rigorous course enrollment patterns is not limited solely to AP course work, but also to other rigorous courses. This evidence helps to explain, at least in part, how these two factors intersect. In a national, mixed-methods study with data from over 14,000 student transcripts and interviews conducted over a six-year period, researchers determined that family socioeconomic level differentiated students' starting and ending mathematics courses in

high school even among students of the same school with the same mathematics achievement entering high school (Crosnoe & Schneider, 2010). A student's economic status, apart from his/her mathematics acumen, served as the primary factor in upper level mathematics access and completion.

This divergent path for lower socio-economic status students into less rigorous mathematics courses was manifested through *decision points* (various academic choices one encounters in course selection) that occur throughout high school. These heavily favor more affluent families who are skilled in navigating the system requirements of schools and are more capable of advocating for their child's advanced course placement (Crosnoe & Schneider, 2010; Klopfenstein, 2004a; Taliaferro & DeCuir-Gunby, 2007).

While low-socioeconomic-status students and their families lack the social capital (network of relationships) and support needed to advance through the decision points in mathematics course enrollment and take lower level mathematics courses or stop taking mathematics altogether, other scholars noted the same holds true for less educated parents in their reluctance to advocate for their children's placement in advanced courses (Klopfenstein, 2004a). Underserved students, with less parental support and family knowledge of the educational system, have reduced probability of enrollment in AP courses.

This weakened enrollment pattern, attributed to the limited social capital low-income families have to navigate the decision points of course enrollment in AP, demonstrates how socioeconomic status hinders rigorous course enrollment for underserved students. Although schools cannot alter parental income level, some have successfully mitigated the negative impacts of low-income status. Contextual variables,

like socioeconomic status, minority status, and parental education level, commonly associated with student achievement can be lessened by a school and are not a sole determinant of a student's success in AP courses (Burney, 2010). Considering that fully three-quarters of Black and Hispanic students are considered low-income (Klopfenstein, 2004a), the socioeconomic barrier to AP enrollment is especially prominent and intertwined for the underserved student population.

Academic Tracking. Some schools and teachers exacerbate the contextual barriers associated with student achievement through *de facto* academic tracking (Lucas & Berends, 2002). Academic tracking is the process where some students are sorted away from AP and higher level classes and enrolled in less demanding courses purportedly on meritocratic criteria like prior academic achievement and assessment scores.

Middle school course grades, primarily in English and mathematics, and standardized test scores are both linked to track placement decisions in high school (Archbald & Farley-Ripple, 2012; Handwerk, Tongnata, Coley, & Gitomer, 2008). Student placement in middle school into a high level track, which ultimately leads to AP, is strongly correlated to tracking placement in high school and ensuing access to AP (Archbald & Farley-Ripple, 2012; Lucas & Berends, 2002).

However, student grades and assessment scores do not solely determine academic track placement. The phenomenon of academic tracking is more prevalent in racially and economically diverse schools (Lucas & Berends, 2002). In these schools, a student's family background, income level, and race/ethnicity are associated with their academic track assignment (Hallinan, 1994). As stand-alone measures, both income diversity and

racial/ethnic diversity are positively related to academic tracking wherein low-income and minority students are relegated to lower track placement (Lucas & Berends, 2002).

Even when controlling for correlated achievement in English and mathematics, the greater the socioeconomic diversity within a school, the more prominent the academic tracking becomes. Consequently, schools can aggravate the AP enrollment inequities and other educational outcomes that already exist between underserved students and their more affluent, non-minority peers (Hallinan, 1994). Therefore, academic tracking is a compelling hindrance of AP participation for underserved students (Klopfenstein, 2004a). African American, Latino, and low-income students are at a significantly diminished probability of enrolling in higher track courses like AP. These socioeconomic, racial, and / or ethnic traits account for nearly a quarter of the disparate enrollment patterns in higher track courses (Archbald & Farley-Ripple, 2012).

White, Asian, and/or affluent students are disproportionately represented in AP while underserved students are disproportionately assigned to lower track courses (Archbald & Farley-Ripple, 2012; College Board, 2012; Mickelson, 2001; Southworth & Mickelson, 2007). ELL (English Language Learner) students are also largely isolated from AP level coursework and thus relegated to lower level courses (Kanno & Kangas, 2014). The continued gap in AP enrollment for underserved students can largely be attributed to low expectations of these students and the ensuing tracking into less rigorous coursework (Burdman, 2000).

Academic tracking has long been condemned as discriminatory and particularly damaging to underserved students (Yonezawa, Wells, & Serna, 2002), and this process of academic tracking is not solely a meritocratic endeavor (Mickelson, 2001). Critics of

academic tracking contend that lower track courses are disproportionately inhabited by underserved students (Archbald & Farley-Ripple, 2012; Lucas & Berends, 2002; Mickelson, 2001; Southworth & Mickelson, 2007; Walker & Pearsall, 2012) and that the quality of the education received therein is inferior to the education received by more affluent, non-minority peers in higher track courses like AP (Archbald & Farley-Ripple, 2012; Mickelson, 2001).

Racial bias, multicultural insensitivity, and deficit views of underserved student potential have all been identified as contributing factors to underserved student underrepresentation in AP coursework (Walker & Pearsall, 2012). African American, Latino, and White students with markedly similar academic abilities and prior achievement are relegated to different academic tracks in which African American and Latino students are significantly more likely than their White counterparts to be placed in lower track courses (Mickelson, 2001). Academic tracking meaningfully influences learning opportunities, academic achievement, and post high school academic trajectories (Southworth & Mickelson, 2007).

Practices of "open enrollment" – or the ability to enroll in AP regardless of course pre-requisites and/or academic track placement – are a popular means to de-track. However, it is often unsuccessful at eliminating disparate enrollment patterns in AP because the onus in creating more equitable enrollment patterns rests with the students and not the school (Yonezawa, Wells, & Serna, 2002). Once relegated to a track, underserved students have less flexibility to move to a higher-level track than their more affluent, White counterparts and thus remain in less demanding courses and bypass AP (Klopfenstein, 2004a). The practice of moving from a lower academic track,

disproportionately populated by underserved students, into AP proves inherently more difficult for underserved students than their more affluent, non-minority peers (Klopfenstein, 2004a). The "open enrollment" practice to AP favors more affluent families who have the skill to navigate the decision points of school and also have the social capital to advocate for their child's AP course placement (Crosnoe & Schneider, 2010; Klopfenstein, 2004a; Taliaferro & DeCuir-Gunby, 2007).

Oppositional Culture. Some underserved students consciously choose to occupy the lower educational tracks in a school. These same students often bypass higher track classes, like AP, regardless of their academic ability, because they long to be in classrooms where they fit in with their peers, their cultural backgrounds are valued, and they are not racially isolated (Walker & Pearsall, 2012; Yonezawa, Wells, & Serna, 2002). Despite efforts to increase underserved students' enrollment in AP, many students remain reluctant because of the negative stigma from friends and family that is attached to their academic success (Saunders & Maloney, 2004; Shiu, Kettler, & Johnsen, 2009). Researchers concluded that Latino students exhibited a concern for doing better than their parents/siblings and formed their own reluctance and desire to enroll in AP (Walker & Pearsall, 2012).

Underserved students who have faced historic oppression, through academic tracking or otherwise, and/or current discrimination may actively resist doing well in school (Ogbu & Simmons, 1998). This oppositional culture, or an intentional repudiation to an academic focus, was noted as a strongly negative predictor of African-American and Latino AP course enrollment (Klopfenstein, 2004a; Ogbu & Simmons, 1998; Taliaferro & DeCuir-Gunby, 2007; Walker & Pearsall, 2012). Latino and African-

American students associated participation in AP and Honors courses as "becoming White" and this helped to form the basis for their oppositional culture (Walker & Pearsall, 2012; Ford, Grantham, & Whiting, 2008).

Low Expectations. Lower-level academic course tracks – where underserved students are disproportionately placed – become political spaces replete with meaning where underserved students create an identity as academically lacking (Yonezawa, Wells, & Serna, 2002). Latino students identify their own barriers to academic achievement, stemming from teacher labeling and from a lack of understanding of how to support their success (Becerra, 2012).

Institutionally, underserved students are quietly diverted from the rigorous AP courses into lower tracked courses where they encounter and conform to lowered expectations (Kanno & Kangas, 2014). Low teacher expectation of Latino students played a role in their tracking away from higher-level courses and into less demanding ones (Kanno & Kangas, 2014). These low teacher expectation effects are more damaging for students from low-income households (Jussim & Harber, 2005).

High-achieving, low-income students are frequently passed over for placement in AP (Peters & Gentry, 2012). Even high-achieving, recent EL students are also impacted as their probability of enrollment in AP is reduced by a full 30% (Klopfenstein, 2004a). Students who attend a disadvantaged school with fewer AP course offerings come to view themselves with a negative self-perception and as academically unworthy (Klugman, 2013). The lack of access to rigorous coursework also served to cement African-American students' lack of confidence to excel in AP and negatively impacted their enrollment therein (Taliaferro & DeCuir-Gunby, 2007). This negative mindset

served to further exacerbate existing educational inequities through self-selection behaviors and avoidance of AP course work on the part of students. Despite having the same AP readiness metrics as their more affluent White and Asian peers, African-American and Hispanic students are less likely to enroll in AP (College Board, 2014).

Additionally, a teacher's evaluation of a student's potential academic achievement holds important and significant consequences for a student's belief in her own academic abilities (Bandura, 1993). To be steered away from certain academic tasks, either in words or actions, conveys the message that a student is incapable of succeeding in that particular task and negatively predicts how a student will attempt future tasks and persist in the face of other academic obstacles (Usher & Pajares, 2006). Students who have seen themselves surpassed by others, as in academic tracking, damage their own belief in their abilities and hamper their own academic performance (Bandura, 1993). These negative academic evaluations and social persuasions discourage students from undertaking academic pathways that are well within their capabilities (Bandura, 1997). This could explain why African-American and Latino students are less likely to enroll in AP despite having the same readiness metrics as their more affluent, non-minority peers (College Board, 2014).

Despite the plentiful and complex access barriers to AP courses for underserved students, researchers have concluded that being targeted and directly invited to participate in particular programs like AP was especially meaningful to Latino and African American students and their academic success therein (McMahon & Furlow, 2015; Walker & Pearsall, 2012). A school can significantly increase underserved students'

rates of enrollment and high achievement in AP by recommending and encouraging students to enroll in these very courses (Burney, 2010; Walker & Pearsall, 2012).

With a limited view of themselves as academically capable students, formerly lower-tracked students, who are also disproportionately underserved students, once enrolled in AP courses struggle with the more challenging coursework and with forming a new identity in an unfamiliar environment (Yonezawa, Wells, & Serna, 2002). A new mindset as academically capable must be purposefully nurtured among underserved students to ensure their AP success.

That new mindset of being academically capable is rooted in a student's sense of self-efficacy. The present literature notes that student self-efficacy has profound implications for academic achievement and university enrollment (Britner & Pajares, 2006), and has potential merit as an identifier for AP access and success. The following section presents the theoretical framework for student self-efficacy, how it is developed, and how the purposeful cultivation of it in students may help counter the existing AP inequalities.

Self-Efficacy

People contribute to their own functioning, in all settings and interactions, through personal agency (Bandura, 1993). No aspect of personal agency is more fundamental or extensive than a person's *self-efficacy*; the beliefs one holds of her own capabilities and ability to positively exercise control over events in her life. In short, self-efficacy beliefs affect how people feel, think, act, and motivate themselves. An individual with a greater sense of self-efficacy sets more aspirational goals for herself and remains stronger in her commitment to them through challenges and adversity (Bandura,

1991).

Self-efficacy can shape an individual's life course as it strongly influences activities a person chooses to pursue and the environments one consciously inhabits (Bandura, 1993). Beliefs which students possess concerning their academic ability strongly influence their academic paths and educational and life outcomes (Bandura, 1997; Schunk & Pajares, 2005). Students will purposefully avoid activities and situations they believe exceed their abilities but will willfully engage in difficult tasks and environments they conclude they can readily handle (Bandura, 1993). Students with a strong sense of self-efficacy confront challenging tasks as activities and events to be mastered rather than avoided. An individual's sense of self-efficacy differs across areas and domains (Bandura, 2006). For instance, a student may be highly self-efficacious in mathematics yet have low efficacy in reading. Self-efficacy is not a global trait, generalizable across all domains, but rather differentiated to discrete realms of functioning.

Self-Efficacy Formation. Bandura (1997) theorized students form their own sense of self-efficacy, and subsequent academic self-efficacy, through interpretation of information from four sources: mastery experiences (derived from prior success in given situations), vicarious experiences (similar peers demonstrating success in a given task), social persuasion (the verbal and non-verbal judgments of significant others – parents, teachers, and peers), and psychological states (the ability to manage stress and anxiety and exhibit confidence in given situations). Students form and modify their sense of self-efficacy by cautiously judging the verbal and non-verbal messages communicated by significant others, their own mastery, vicarious experiences, and the regulation of their

own psychological states (Usher, 2008). Each of the four sources of self-efficacy strongly and independently relate to academic self-efficacy and to academic achievement in general (Usher & Pajares, 2006).

Academic Self-Efficacy. Studies have demonstrated variance in students' self-efficacy beliefs across academic domains and courses (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Britner & Pajares, 2006; Fast et al., 2010). For example, it is possible to be highly self-efficacious in mathematics but less so in the social sciences and vice versa across virtually every academic domain. Therefore, *academic self-efficacy* is considered a student's belief in her capabilities to succeed in academic course work irrespective of the specific course or domain.

Of the four components of self-efficacy, the most significant predictor of academic self-efficacy has been shown to vary among gender and across ethnic and/or racial lines (Risconscente, 2014; Usher & Pajares, 2006). Socioeconomic status also intersects with academic self-efficacy as higher socioeconomic status positively correlates to stronger academic self-efficacy (Bandura, Barbaranelli, Caprara, Pastorelli, 1996). Little research exists, however, to understand the relationship of academic self-efficacy and academic achievement among exclusively low-socioeconomic students (Pajares, 1996). Researchers have rarely studied self-efficacy among minority students (Riconscente, 2014), and, with variables in Latino students' upbringing and home lives, little is known about the formation of self-efficacy beliefs of these underserved students (Niehaus, Rudasill, & Adelson, 2012).

Academic Self-Efficacy and Achievement. With extensive evidence across a wide range of longitudinal and experimental studies, a student's sense of academic self-

efficacy has routinely been a dominant predictor of academic achievement (Acoach & Webb, 2004; Bryan, Glynn, & Kittleson, 2011; Fast, et al., 2010; Jiang, Song, Lee, & Bong, 2014; Pajares, 1996; Parker, Marsh, Ciarrochi, Marshall, & Abduljabbar, 2014; Schunk & Pajares, 2005; Usher & Pajares, 2006) as well as student choice/course selection, effort, and perseverance in academic tasks (Schunk & Pajares, 2005; Usher & Pajares, 2006). Across a wide range of student age groups and academic subjects, the link between academic self-efficacy and academic performance is considered "reasonably secured" (Pajares, 1996, p. 563).

Student academic self-efficacy has broad implications for a variety of other school-related factors aside from pure academic achievement. Students with a higher sense of academic self-efficacy not only have higher academic achievement but also show greater academic motivation, interest, and/or enrollment in broader and more challenging courses like AP than do students who lack a more positive view of their academic abilities (Bandura, 1993; Britner & Pajares, 2006; Kupermintz, 2002; Bryan, Glynn, & Kittleson, 2011; Pajares, 1996). Similarly, students with greater academic self-efficacy hold higher levels of engagement with school (Caraway, Tucker, Reinke, & Hall, 2003), attend school more regularly (Niehaus, Rudasill, & Adelson, 2012), and engage in more pro-social behaviors while at school (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Hughes & Chen, 2011).

With the strong and secure link between academic self-efficacy, academic achievement, and other school related outcomes, students' academic self-efficacy beliefs serve as a better predictor of future academic success than more formal, objective measures of ability, like grades and test scores (Bandura, 1993; Bandura, Barbaranelli,

Caprara, & Pastorelli, 1996; Britner & Pajares, 2006). Students with the same level of intellectual ability differ in their academic performance depending on the strength of their academic self-efficacy (Bandura, 1993). Students with greater academic self-efficacy are able to master more academically demanding courses.

However, access to and enrollment in AP remains almost exclusively linked to prior academic achievement and academic track placement (Conger, Long, & Iatarola, 2009). Relying solely on students' prior achievement data will only perpetuate the existence of the opportunity gap to AP for underserved students (Erwin & Worrell, 2012).

Teacher Support and Academic Self-Efficacy. Schools are largely social institutions and their effectiveness in educating their students is largely dependent on the quality of these interpersonal relations (Goddard, Salloum, & Berebitsky, 2009). The degree to which the relationships among teachers and students are positive and productive serves to augment underserved students' sense of connection to school and subsequent opportunities for success (Archer-Banks & Behar-Horenstein, 2012; Goddard, Salloum, & Berebitsky, 2009). The supportive communication from teachers to students serves to bolster students' academic self-efficacy (Bandura, 1997).

Research demonstrates a strong, positive relation between perceived teacher support and academic performance (Mercer, Nellis, Martinez, & Kirk, 2011; Riconscente, 2014; Taliaferro & DeCuir-Gunby, 2007), and there exists some evidence that this teacher support may have a stronger, more positive correlation for lower performing students (Mercer, Nellis, Martínez, & Kirk, 2011). These affective processes are a significant influence on student academic self-efficacy development (Bandura,

1993), and when students perceive their teachers to hold a vested, personal interest in their own success, they exhibit less anxiety and present a stronger academic self-efficacy (Fast, et al., 2010).

Students' perception of teachers' caring positively affects their academic self-efficacy in measurable ways (Fast, et al., 2010; Patrick, Ryan, & Kaplan, 2007). This sense of teacher concern positively correlates to the achievement of Latino students and serves as a strong predictor of their academic self-efficacy (Riconscente, 2014). The perceived interpersonal relationship between teacher and underserved student plays a critical role in Latino student academic success across a variety of academic and school contexts.

The achievement goals teachers hold for a student function as a substantial predictor of that student's academic self-efficacy and the academic goals that same student aspires to accomplish (Jiang, Song, Lee, & Bong, 2014). Students who report feeling recommended and encouraged to participate in school programs and classes by teachers develop a stronger sense of academic self-efficacy (Mcmahon & Furlow, 2015). Teachers who developed and maintained positive relationships with students of diverse backgrounds contributed to those same students' interest in the coursework and their sense of academic self-efficacy (Bolshakova, Johnson, & Czerniak, 2011). Students with the strongest sense of academic self-efficacy had the strongest student-teacher relationships (Bryan, Glynn, & Kittleson, 2011).

Again, prior research has shown the importance of positive and supportive relationships among teachers, peers, and disadvantaged students. Students who have established affirmative and helpful relationships with teachers and classmates alike

engender a sense of belonging with school, a positive student identity, and generally try harder and persist more when confronted with academic challenges (Hughes, Luo, Kwok, & Loyd, 2008; Furrer & Skinner, 2003). Mounting evidence from researchers also points to the fact non-white, low-income students are particularly receptive to positive, affective social relationships in the classroom among their peers and teachers (Baker, 2006; Hamre & Pianta, 2005).

Comprehensive research verifies the important significance of students' relationships with their teachers to their own academic and behavioral trajectories (Hughes & Chen, 2011). Current research suggests these relationships, particularly the teacher-student relationship, affects the academic reputation students hold of one another. In short, peers may draw on the reciprocal interactions between teacher and student to draw conclusions about a student's academic capabilities. Low-income, minority students may especially benefit from a positive, supportive relationship with their teacher as it serves to foster a peer reputation for academic achievement and develops a student's view of herself as academically capable

Until relatively recently, and despite plentiful research on academic self-efficacy, the social persuasion between teachers and students and the ensuing boost to academic self-efficacy and academic performance have been largely unexplored (Mercer, Nellis, Martinez, & Kirk, 2011). The positive teacher-to-student relationships and the development of academic self-efficacy can potentially serve as a mitigating force to the inherent access and success barriers for underserved students in AP.

Academic Self-Efficacy and AP. In limited studies of underserved students' sense of academic self-efficacy, it has been shown those who do enroll in AP course

work demonstrate more self-efficacious beliefs (Shiu, Kettler, & Johnsen, 2009). Researchers Davis, Davis, & Mobley (2013) sought to develop a new academically self-efficacious mindset among 13 selected African-American students encouraged to enroll in their first AP course. Students participated in weekly counseling sessions to develop positive social persuasion among their peers and to further develop their sense of resiliency and academic self-efficacy. Results from the annual AP Psychology exam revealed students who participated in the counseling program out-performed African-American students in the control group and African-American students nationally. Additionally, they achieved AP scores comparable to their White, in-school peers.

In another AP specific study, 58 Latino EL who were recommended and encouraged to enroll in AP Spanish in their 8th-grade year were more likely than the general population of freshmen to hold higher educational aspirations and more self-efficacious beliefs (Shiu, Kettler, & Johnsen, 2009). Researchers concluded the earlier success (i.e. mastery experience) positively impacted students' educational aspirations and their persistence in enrollment in rigorous AP courses. The effects of student-to-student relationships on achievement were shown to have a positive correlation for underserved students' AP access and success. The positive relationships among students and significant others formed the basis for underserved student success in AP (Bryan, Glynn, & Kittleson, 2011; McKillip, Godfrey, & Rawls, 2012). Klopfenstein (2004) also concluded positive adult role models served as an important factor in promoting AP course enrollment among black males.

CHAPTER THREE: METHODOLOGY

Problem and Purpose

The previous chapter detailed the importance AP enrollment and success can potentially hold for underserved students' futures yet highlighted the barriers underserved students face in accessing and succeeding in these various courses. The importance of Bandura's (1993) theoretical framework of self-efficacy and self-efficacy development as a means to both identify underserved students for enrollment in AP and to ultimately help them experience success in these rigorous, college-level courses once enrolled was also emphasized.

Of the many barriers negatively impacting underserved students' enrollment and success in AP, several revolve around the culture of the school in general and the traditional AP classroom specifically. Bandura's (1993) seminal work on self-efficacy development emphasizes the significance of social persuasion in self-efficacy development. With limited research in the specific acts that constitute social persuasion, the proposed study served to address this gap in the literature by identifying the specific words and actions of teachers, school staff, and peers that underserved students interpret as significant and meaningful to the development of their sense of self-efficacy to AP courses.

The proposed study was grounded and guided by the following research questions:

1. Can the self-efficacy toward AP courses of an underserved, 1st-time AP student be bolstered?
2. In what ways can 1st-time AP students be socially supported to contribute to

their sense of self-efficacy toward AP courses?

Research Design

This study was designed as a mixed-methods case study. Creswell (2012) contends a mixed-methods approach, and the combination of both quantitative and qualitative data, offers a deeper, more complex understanding of the research issue than either form of data would alone. Quantitative data were collected at two points during the course of the study in the form of an AP self-efficacy scale administered to all students who voluntarily participate in the *I Am AP Club* at the research site that will be detailed in the ensuing sections. Likewise, a more thorough description of the AP self-efficacy scale will be discussed in later sections of this chapter. The survey (see Appendix A) was initially administered in October of 2016 and included 40 items to measure students' sense of self-efficacy toward AP courses. After survey data were collected and analyzed, 8 first time AP students, who generally have a lower sense of self-efficacy toward AP courses, were selected for further participation in the study. One student ultimately declined to participate. Qualitative data were also collected in the form of observations, interviews, and other artifacts, based on the interactions of these 7 first time AP students, their peers, and teachers in the *I Am AP* club at the research site. The same survey was then administered to the 7 first time AP students, in June of 2017 to again measure their sense of self-efficacy toward AP coursework.

While the proposed study utilized both quantitative and qualitative aspects, a case study approach will form the basis for the majority of this study. Creswell (2007) characterizes a case study as an in-depth investigation of a real-life "bounded system" (or case) based on vast data gathering over time. The case or "bounded system" may take on

a variety of forms to include a single individual, several individuals separately or as part of a larger group, an event, activity, or program (Creswell, 2012). The *I Am AP* club, and the student participants who interacted with it, that I studied as part of my research fits this description of a bounded system or case.

A case study can either be an intrinsic or instrumental in nature (Creswell, 2012). An intrinsic case study is one where the "case" itself is of interest or unusual merit. On the other hand, an instrumental case study seeks to illuminate a particular issue, problem, or concern through the intensive study of a particular case. With limited research on the specific words, actions, and other experiences of underserved students that could potentially enhance their perceived sense of self-efficacy toward AP courses, the proposed study was designed to meet this gap in the research. The development of underserved student's sense of AP self-efficacy is an important issue warranted of further study and this instrumental case study, in part, satisfied this need.

In utilizing a mixed-methods case study approach, the priority given to each form of data, the order in which data will be collected, and how the data will be mixed during the findings phase of the study all requires careful consideration (Creswell, 2012). While all data collected as part of the study had value, priority were given to the AP self-efficacy scale data and follow up interviews with the 7 first time AP students as that helped me draw conclusions and answer my primary research question: Can the self-efficacy toward AP courses of an underserved, 1st-time AP student be bolstered through the socially supportive interactions of a club and AP mentors designed to acculturate 1st -timers into AP?

Throughout the study, data collection was both sequential and iterative. In

seeking to have a more thorough understanding of the AP self-efficacy development of first-time, underserved AP students, qualitative data, in the form of observations, interviews, and other artifacts, enhanced the findings of my primary research question by helping answer the secondary questions - What specific words and actions from within the "I Am AP" club/AP Ambassadors did the 7 selected 1st-time AP students find socially supportive and contributed to their sense of self-efficacy toward AP courses? Additionally, what did the club do/not do to build self-efficacy?

Case study design affords the researcher the ability to comprehensively understand significant, real-life phenomenon. The ensuing thorough description of the case gradually emerged from the multiple sources of data collected during the study, which included surveys, direct observation, semi-structured interviews, and other relevant documents and artifacts. Critical to the development of the comprehensive understanding of the case was the researcher's familiarity with the setting's context (Yin, 2009).

Sample and Population

Site selection. Creswell (2012) asserts that in qualitative research, study sites are purposefully selected that can best help the researcher understand the central issue. For this study, the comprehensive high school selected was one of two comprehensive high schools in the San Marcos Unified School District. The San Marcos Unified School District is in North County San Diego, encompasses 49 square miles, and enrolls approximately 20,000 students from the communities of San Marcos, Carlsbad, Vista, Escondido, and unincorporated portions of San Diego County (San Marcos Unified School District, 2013).

Mission Hills High School, the selected site, enrolls 2530 students in grades 9-12.

A slight majority, 51.4% of the students, self-identify as Hispanic or Latino and 35.7% as White. Approximately half of the student body (48%) qualify for Free/Reduced Lunch and are designated as socioeconomically disadvantaged. Nearly a third (33.5%) of the student body is categorized as Limited English Proficient. These school enrollment demographics have remained relatively unchanged over the past five years (Civil Rights Data, 2011).

AP course enrollment at the selected site is demographically skewed. Forty-eight percent of all AP students are White and yet only 31% of AP students identify as Hispanic/Latino compared to the school demographic make-up which is 37% White and 50% Hispanic (Civil Rights Data, 2011). From the 2015-2016 AP exam administration, 38% of the students were classified as low-income compared to the 50% of the school population categorized as low-income.

Mission Hills High School offers 16 different AP courses in Mathematics, Science, Foreign Language, English, Social Science, and the Visual/Performing Arts. In the 2015-2016 school year, 724 students took a total of 1372 AP exams. Nearly 46% (n=332) of the AP examinees took one test, 28% (n=208) took two tests, 17% (n=121) took three tests, and 9% (n=63) took four or more tests. The 724 AP examinees and 1372 total exams is the largest number of students and exams in school history, up from in the previous high of 622 students and 1205 exams the year prior. From the 2015-2016 school year, 70.3% of the students tested earned a passing score; both of which exceed the California state average (62.5%) and the national average (60.3%).

Beginning in the 2016-2017 school year, Mission Hills High School developed a co-curricular club, the "I Am AP" club, to acculturate 1st-time AP students to the rigors

of AP coursework as well as to create a socially supportive network for all students experiencing the rigors of AP. Beginning with the 2016-2017 school year, an AP Access and Support Teacher Leader position was created at the school site to assist the school in achieving more equitable and inclusive enrollment and success patterns in AP courses. This teacher leader will also serve as the advisor for the I Am AP club and was an Educator Participant in this research study (see Appendix J).

Participant selection. Purposeful sampling refers to the individual participants selected as part of the study based on their intimate knowledge or working within the studied issue (Creswell, 2012). Creswell (2013) describes maximum variation sampling as an approach that serves to pre-identify criteria that differentiate the study participants. As I worked to understand the self-efficacy and socially persuasive experiences of first-time AP students, I identified eight such students based on the results of the first self-efficacy survey administration in September 2016. Selected students were all first time AP students, demographically historically underserved, and generally held a lower sense of self-efficacy toward AP courses as compared to their peers. This approach of combining features of both purposeful and maximum variation sampling afforded me the opportunity to study students who had intimate knowledge of the studied issue and fit the pre-defined, unique criteria of being first-time AP students.

The AP Self-Efficacy Scale (see Appendix A) was used to measure a student's sense of self-efficacy toward AP coursework. Consistent with the work of Lent and Brown (2006), a student's numerical responses to the self-efficacy scale was totaled and divided by the total number of items to arrive at a self-efficacy score. All students' individual scores were then averaged to arrive at a mean composite score for the 175 AP

students who took the survey in October 2016. Eighty-three students scored below the mean score and were considered less self-efficacious toward AP than the 92 students who scored above the mean. Students who scored at or below the mean, who were first-time AP students, and met the other demographic qualifiers noted previously were invited to participate in this study. In all, eight students were identified as meeting the study criteria and were invited to attend; 7 student participants consented to fully participate in the study and became the subject of observations, interviews, and post-survey.

To protect the identity of each student participant, each was given a unique two-letter code known only to the researcher. Below is a brief snapshot of each student participant and the qualifying characteristics:

Table I: Student Participant Biography

Student (Gender)	Pre Self-Efficacy Score	Study Mean Score	Post Self-Efficacy Score	AP Class(es)	Grade Level	Demographic Info
A.K. (F)	2.525	2.9		US History, Language	11	Hispanic, Female, Low-Income, Home Language – Spanish
D.D. (F)	2.7	2.9		Government*, Environmental Science	12	Hispanic, Female, Low-Income, Home Language – Spanish
M.L. (M)	2.725	2.9		Environmental Science	11	Hispanic, Male, Low-Income, Home Language – Spanish
B.M. (F)	2.75	2.9		Government, Literature, Biology	12	Black, Female, Home Language – English
V.S. (F)	2.775	2.9		US History	11	Hispanic, Female, Special Education, Low-Income, Home Language – Spanish
T.D. (F)	2.875	2.9		Language	11	Hispanic, Female, Home Language – English
C.T. (F)	2.9	2.9		Environmental Science	12	Hispanic, Female, Low-Income, Home Language – Spanish

*class was dropped during the first semester.

For context purposes, the table below denotes the demographic make-up of the study site, the study site's AP course enrollment, and the student-participants of this study:

Table II: Site, AP, and Study Demographics

Category	Number	Male	Female	White	Hispanic	Black	Asian	Low-Income	Special Education	ELL
Site	2530	52%	48%	33%	51%	3%	5%	43%	13%	8%
AP Enrollment	1024	43%	57%	36%	43%	2%	8%	33%	1%	1%
Study Participants	7	15%	85%	0%	85%	15%	0%	71%	15%	71%*

*all have been re-classified as English proficient.

Data Collection Methods

Data collection in a case study involves an in-depth gathering of data from multiple sources of information including observations, interviews, audiovisual materials, and other documents and reports (Creswell, 2013). Yin (2009) elaborates further and emphasizes the collection of documents, archival records, interviews, direct observations, participant observation, and physical artifacts as the means to adequately understand and describe the case.

Data were collected over the course of the 2016-2017 academic school year beginning in October of 2016 under the auspices and authority of the school for its own data collection purposes (see Appendix K). All data gathered from the study participants were collected with their explicit and stated permission and in full observance of the Institutional Review Board (IRB) guidelines of California State University, San Marcos (see Appendix B). All electronic files constructed from the data collection process were stored and saved on the researchers' password-protected personal laptop computer. Paper files generated through the data collection process were stored and securely locked in a file cabinet in the researcher's home. Both measures were taken with extreme care to preserve the confidentiality of the study and its participants.

Self-Efficacy Survey. The study used a self-efficacy scale designed to measure a student's perceived sense of self-efficacy toward AP coursework and was adapted from a scale originally used and published by Lent, Lopez, and Bieschke (1991) to measure mathematics self-efficacy in high school students. The express written permission for use and adaptation of the self-efficacy instrument was granted by Lent (B. Lent, personal communication, August 6, 2016). As originally published, Lent's mathematics self-efficacy survey asked respondents to self-report their level of confidence with various statements related to mathematics (sample: "I would be upset if I had to take more math courses."). For the purposes of this survey and with the permission of the survey author, questions were adapted to focus on AP specifically (sample: "I would be upset if I had to take more AP courses.").

The adapted survey contained four subscales to assess the effects of each of the four domains of self-efficacy development (mastery experiences, vicarious experiences, social persuasion, and physiological states). Mastery experiences were measured through eight items (sample: "I got a good grade in my AP class last semester."). Vicarious experiences were assessed through 7 questions (sample: "My friends tended to avoid taking AP classes."). The social persuasion aspect was assessed through eight items (sample: "My teachers believe I can do well in the difficult AP course."). And finally, physiological states was assessed through eight questions (sample: "My AP course makes me feel uncomfortable and nervous.").

Beginning in October of 2016, the 40-question self-efficacy survey was administered to 175 students who were invited to complete the survey by their AP

teacher, the researcher, and/or the *I Am AP* club advisor at Mission Hills High School under the auspices and authority of the school for its own data collection purposes. Survey results were then uploaded to Microsoft Excel to compute a mean scale score and self-efficacy composite score for each survey respondent. Consistent with the work of Lent and Brown (2006), a student's numerical responses to the self-efficacy scale were totaled and divided by the total number of items to arrive at a self-efficacy composite score for each respondent. A mean scale score for the entire population of respondents was also calculated at 2.9 (5 being the highest). Results from the AP self-efficacy scale were used to identify eight first-time AP students who scored at or below the mean scale score and met the other study criteria. These eight students were invited for further participation in this study; 7 consented and became the subject of observations, interviews, and post-survey.

A second administration of the same self-efficacy survey was administered in June of 2017 at the conclusion of the annual AP tests to the 7 first-time AP students identified previously. Survey were again be uploaded to Microsoft Excel for self-efficacy measurement and to determine what, if any, growth in the participant students' sense of self-efficacy toward AP courses occurred over time as compared to the original cohort of survey participants.

Observations. Observations, as a means of data collection, afford the researcher the opportunity to record information as it naturally occurs in a given setting or context and to study the actual behavior of study participants in a naturally occurring setting (Creswell, 2012). The researchers role in observations can take the form of either a participant observer, nonparticipant observer, or both at different times and in different

scenarios. The researcher as a participant observer takes part in the activities of the observed setting alongside the study participants in order to see experiences from the perspective of the observed. As a nonparticipant observer, the researcher simply observes and records the interactions of others from a place on the periphery of the actual goings-on.

In this proposed study, I utilized both roles depending on the situation and the context. As a known individual on campus, with a vested interested in the program being studied, it was important and appropriate I participate in the meetings, dialogue and other activities as a participant observer. At other times and activities, it was appropriate for me to simply assume the role of a nonparticipant observer. For instance, during an awards ceremony or other such activity, I assumed the role of a nonparticipant observer. During each observation, I notated on my observational protocol (see Appendix F) the particular role I assumed during the particular observation.

Observations took place during the regularly scheduled academic day and were conducted during *I Am AP* club meetings and during the studied students' AP classes. The club meetings and observations were held during the students' lunchtime and after school hours, and I was an announced, regular participant observer and nonparticipant observer. Classroom observations were not conducted during the study to help protect the confidentiality of student participants. Analysis of the observational data helped inform questions to be posed to participants during the semi-structured interviews and follow-up interviews.

Interviews. Interviews of study participants afford the researcher the opportunity to more deeply understand the central issue from the participants' experience and

perspective (Kvale & Brinkmann, 2009). I used a process of semi-structured, in-depth interviews to gather extensive data from the study participants including the 7 student participants who were the focus of the study and the *I Am AP* club teacher leader to gain understanding in to how the focus students interpreted the acts of social persuasion that served to bolster their sense of self-efficacy to AP courses.

Semi-structured interviews are neither open-ended, free flowing conversation nor a rigid list of fully scripted questions (Kvale & Brinkmann, 2009). An interview protocol was used to guide the questions based on the literature of AP barriers and self-efficacy development (see Appendix G). To mitigate limitations in the study, interviews were conducted by the *I Am AP* club teacher leader to neutralize my positionality as school principal and researcher. The *I Am AP* club teacher also faced potential issues of positionality as students may be inclined to respond in a way that garners their club advisor and/or teacher's approval. To minimize this potential limitation, the interviewer reviewed the Student Assent to Interview form (see Appendix D) prior to conducting the interviews to explain clearly her desire to collect students' honest and candid responses to the questions.

Interviews were conducted individually rather than in a group setting to protect the study participants' confidentiality. Interviews took place in the *I Am AP* club teacher leader's classroom after school or at other mutually agreed upon times and lasted approximately thirty minutes. Interviews were audio-recorded to allow for the production of interview transcripts for the purpose of coding and the development of themes.

Timeline. To better illustrate the various phases and aspects of the data collection

involved in this study, a monthly snapshot of data gathering is detailed below:

October 2016: Administered AP self-efficacy survey to *I Am AP* club students and other AP students under the auspices of the school and part of its own data collection measures (see Appendix A). Uploaded survey data into Microsoft Excel to calculate mean score and individual composite scores; identified 8 first-time AP students who measured at or below the mean score all respondents for further study.

January 2017: Invited eight first-time AP students to participate in the research study. Ultimately, 7 students and their families consented to participate in the study as student participants. Began observations of the study participants in monthly *I Am AP* club meetings and biweekly breakout sessions and recorded interactions on observational data form (see Appendix F). Open coded data to begin to develop themes and patterns and to inform the iterative process of data collection. Journaled and reflected on my own experience as researcher. *I Am AP* club teacher leader also began journal and reflection (see Appendix J).

February 2017: Observed study participants in monthly *I Am AP* club meetings and biweekly breakout sessions and record interactions on observational data form (see Appendix F).

March 2017 – April 2017: Conducted initial semi-structured interviews with student participants. To mitigate the limiting factor of my positionality, interviews of student participants were conducted using the structured interview protocol and were audio-recorded by the *I Am AP* club teacher leader (see Appendix G). Transcribed interviews for coding and continued iterative process of data collection.

May 2017: Observed study participants in weekly *I Am AP* club meetings and recorded

interactions on observational data form (see Appendix F). Open coded data to further develop themes and patterns and to inform the iterative process of data collection. Journaled and reflected on my own experience as researcher.

June 2017: Conducted final semi-structured interviews with student participants using final interview protocol (see Appendix I). To mitigate the limiting factor of my positionality, interviews of student participants were conducted and audio-recorded by the *I Am AP* club teacher leader. Transcribed interviews for coding and development of findings. Second administration of AP self-efficacy survey to student participants (see Appendix A). Upload survey data into Microsoft Excel to calculate composite scores of the 7 student participants. Conducted semi-structured interview of *I Am AP* club teacher leader (see Appendix H).

Data Analysis

The data analysis phase of this study was an on-going, iterative process to continually inform the study and data collection process. I analyzed survey data, observation forms, interview transcripts, and other documents as they were collected. Qualitative data were extensively read and reviewed through the open-coding process to identify prominent elements and themes. The data analysis process was intended to establish common themes and patterns that helped form a deeper understanding of the second research question.

Coding of the data was conducted via the process of open coding to identify emerging patterns and themes. Once initial patterns and themes were identified, they were further explored and developed through follow-up observations, subsequent interviews, and other data collection means.

Throughout the study, I maintained field notes and a reflective journal and the teacher leader of the *I Am AP* club kept a journal as well. My journal served as a point of reflection on my research process and adds rigor to my qualitative inquiry as it afforded me the opportunity to meaningful reflect on my assumptions, expectations, reactions, and potential bias(es) regarding the research process. The teacher leader's journal also served as an important data source. The collected field notes served as an additional data source during the iterative analysis phase and helps confirm research validity. To further ensure validity in the study, I enlisted colleagues to review codes, themes, and validate my findings, triangulated collected data from various sources, and worked to develop a rich, thick description of the issue.

Limitations and Ethical Considerations

Generalizability. As is the norm for mixed-methods case study research that is inherently qualitative in nature, the intended outcome of this study is not to generalize to the larger population, but to develop an in-depth exploration and understanding of a central issue (Creswell, 2012). As such, the results gleaned from this study are not intended to be generalizable to all schools or students but rather to provide much needed insight into the role social persuasion and other aspects of self-efficacy play in bolstering underserved students' sense of self-efficacy to AP courses in this particular school and context. Each individual story of the student participants provides critical insight into this issue.

Self-reporting. Students self-reporting on their own beliefs and experiences can be a limiting factor as it may not be possible to independently verify what they report. To minimize this as a potential limitation for this study, all data, including self-reported data,

were triangulated with other data sources to help ensure research validity.

Positionality. Mission Hills High School was selected since I am the principal (and have been for the past four years) and am keenly familiar with the school and its context and will therefore have a more complete understanding of the policies, procedures, and practices that make-up the school and district's culture. The selection of a site with which I am so intimately familiar and act as the principal does present challenges and issues that will be discussed more thoroughly later. While serving as principal of the site in which my study was conducted afforded me an abundance of experience and contextual knowledge and understanding, it also introduced the potential for bias. As the principal of the school, students, teachers, and other school staff may have been reluctant to speak frankly with me or in my presence regarding their true experience. In short, it is possible study participants may have said what they think I want to hear.

Additionally, Kvale and Brinkmann (2009) assert the power differential inherent to qualitative research interviews poses a limitation. This inherent power differential may potentially be magnified by my positional authority as school principal. Here, and again, study participants may have said what they think I wanted to hear. To mitigate this concern, interviews of student participants were conducted by the *I Am AP* club teacher leader using questions I provided via the interview protocol. The *I Am AP* club teacher also faced potential issues of positionality as students may have been inclined to respond in a way that garnered the approval of their club advisor and/or teacher. To minimize this potential limitation, the interviewer reviewed the Student Assent to Interview form (see

Appendix D) prior to conducting the interviews to clearly explain her desire to collect students' honest and candid responses to the questions.

Throughout the data collection process, I took other concerted, purposeful efforts to minimize these limitations. Prior to beginning observations and interviews with all participants, I informed all involved that I genuinely sought their open, honest, and candid responses. Additionally, the informed consent protocol that was signed by each participant noted all observations, interviews, and other means of data collection were for the explicit purpose of this study and will not be used to evaluate staff, students, or programs for funding (see Appendices C-E). Finally, after each data collection session, I actively reflected on the role and possible limitations of my positional power on the study itself.

Survey Results. The 7 student participants in this research study all demonstrated significant growth in their measured sense of self-efficacy toward AP from their initial survey to the post-survey at the conclusion of the study. All student participants' post AP self-efficacy composite score was well above the initial survey's mean composite average. In fact, the sense of AP self-efficacy of all 7 student participants ranked in the top 98% of all 175 initial survey respondents. Three of the student participants' new sense of self-efficacy would have been the highest of all initial respondents.

This finding is significantly limited as it compares the 7 student participants' post survey self-efficacy score with the entire group's pre-survey scores. It can be assumed that the self-efficacy score of all survey participants would have shown similar gains had they been invited to take the post survey. This study was specifically designed to

measure if the AP self-efficacy of the 7 student participants could be bolstered. The post survey results indicate it was indeed bolstered. The survey was not designed to measure the student's AP self-efficacy growth in relation to their peers.

Objectivity. There existed an inherent limitation with me, as the site leader, analyzing data about my own school. It remains possible that I, and the *I Am AP* teacher leader, were so deeply embedded in the context, that our observations or reporting was not entirely objective. However, a purely objective approach to data, devoid of personal and emotional experience, clouds a potentially valuable avenue of insight into the nuanced processes of a given setting or context (Emerson, Fretz, & Shaw, 1995). Rather, to observe and understand fully, a researcher must "get close" to the activities and experiences of those studied (Emerson, Fretz, & Shaw, 1995, p. 4). Therefore, our close proximity to the research site and study participants may have proven advantageous. However, to help mitigate any concern with objectivity in such a scenario, a researcher should document his own activities and emotional responses as these shape the process of observing and recording qualitative data (Emerson, Fretz, & Shaw, 1995). My journaling, and that of the I Am AP teacher leader, served to mitigate our objectivity.

Ethical Considerations. The most significant ethical consideration revolved around my positionality as school principal discussed previously, but this was not the only consideration. Participation in the *I Am AP* club and attendance at any of the sessions was strictly voluntary and was not attached to a course grade or credit. Further, this study did not impact any students' standing in any AP course or any other class and posed no harm to any participant. Participants could have potentially enhanced their ability to meet the challenges associated with AP and other course work through their

participation in this study. Finally, only students and parents who consented to be a part of the study were analyzed.

CHAPTER FOUR: DATA ANALYSIS

"One time you gave us back one of our essays and I remember writing the essay and I felt confident in it. You gave it back and I did do well on it. I think you made a comment just like, 'Oh, you've grown a lot.' I don't know why but that made me feel like, 'oh yay!' I did see that growth in myself."

-T.D, 11th grader

"…AP Ambassadors are really smart people, really smart students and knowing that they struggle…I'm not the only one struggling. Others have the same challenges as me…so I feel a little relief. They struggled and got through. I can too."

-M.L., 11th grader

In this chapter, I will share data related to the two research questions that guided this study:

1. Can the self-efficacy toward AP courses of an underserved, 1st-time AP student be bolstered?
2. In what ways can 1st-time AP students be socially supported to contribute to their sense of self-efficacy toward AP courses?

Using Bandura's (1997) theory of self-efficacy as the framework on which this study was based, I will report how the student participants' involvement with the host site's *I Am AP* Club and their enrollment in their first ever AP course impacted their sense of self-efficacy toward AP. I will share themes in the data through the stories and experiences of 7 traditionally underserved students taking AP for the first time and their developing sense of self-efficacy toward the rigors of AP coursework.

Self-Efficacy

People contribute to their own functioning, in all settings and interactions, through personal agency (Bandura, 1993). No aspect of personal agency is more fundamental or extensive than a person's *self-efficacy*; the beliefs one holds of her own

capabilities and ability to positively exercise control over events in her life. An individual with a greater sense of self-efficacy sets more aspirational goals for herself and remains stronger in her commitment to them through challenges and adversity (Bandura, 1991).

Bandura (1997) theorized that students form their own sense of self-efficacy, and subsequent academic self-efficacy, through interpretation of information from four sources: mastery experiences (derived from prior success in given situations), vicarious experiences (similar peers demonstrating success in a given task), social persuasion (the verbal and nonverbal judgments of significant others – parents, teachers, and peers), and psychological states (the ability to manage stress and anxiety and exhibit confidence in given situations). Each of the four sources of self-efficacy strongly and independently relate to academic self-efficacy and to academic achievement in general (Usher & Pajares, 2006).

Below I will briefly re-iterate each component of self-efficacy development and highlight the appearance of each from the lived experience of the student participants as found from a thorough analysis of interview data with each participant.

Mastery Experiences

The most influential and significant contributor to self-efficacy development is through the formation of mastery experiences (Bandura, 1997). An individual's prior success in a given task or situation serves to bolster confidence while experiences with tasks or situations that are interpreted as unsuccessful generally lower confidence (Britner & Pajares, 2006). These internal interpretations of experiences form the basis for beliefs regarding the expectation of success in similar, future tasks and situations. Mastery

experiences that result from overcoming challenges generally promote a more irrepressible sense of self-efficacy than those experiences that are more easily mastered. In short, mastery experiences alone do not promote self-efficacy, but the internalized process of the success itself, the perceived difficulty of the task, the effort exhausted in the endeavor, and help received or not in its ultimate completion.

Given that none of the student participants involved in the research study had taken an AP class before, entering the rigors of AP for the first time as a high school junior or senior could prove daunting and provide limited opportunity for mastery experiences. However, those mastery experiences, once attained in the face of the challenge of inexperience, could prove to be incredibly powerful in the development of a more positive sense of self-efficacy in AP.

The rigors of AP courses are much more intense and the pace of the course is much more rapid than the traditional College Prep (CP) courses students had traditionally taken. One student participant who demonstrated great growth in her overall sense of self-efficacy toward AP, and in her mastery experiences in particular, B.M., spoke at length about the boost in her confidence from grasping the course material over time, "We really dreaded writing three essays in each block period, but now that we look back on it, it's helped us a lot and helped us for the AP exam, too." B.M. went on to describe her AP Literature exam, "But multiple choice was a breeze. It was so crazily easy."

Undoubtedly, B.M.'s ability to persevere in times of struggle in her AP courses formed the basis of her mastery experiences. This allowed her to speak with great confidence of her grades in AP, "I have a strong A in that class right now, and I've

always understood the material well. I can explain it." Similarly, she spoke with confidence in her ability to pass all of her AP exams, which she eventually did.

Likewise, another student participant, V.S., described her early struggles in AP, "There was this one time where I was really stressing because first semester I had an F. I was really thinking of dropping it once back when the semester started. With the help of my teacher, he motivated me to push that F into a C." V.S.'s perseverance formulated this mastery experience and allowed her to feel more successfully and ultimately remain enrolled in the AP course.

Another student participant, A.K., described her early struggles with the rigors of AP in a similar fashion, "It was kind of hard to like know how the test worked or how the class worked until I started to get into the like hang of it." She went on to describe, "…we just started to do more and more work in it. Then I like understood what it was. I got more comfortable writing essays." A.K. relied on these mastery experiences in subsequent challenges and described positive self-talk, "'Okay, like it's been done before. I can do it as well.'"

Finding mastery experiences in their new AP coursework enabled all 7 student participants to remain enrolled in at least one AP class through the duration of the school year. In fact, D.D. was the only student to drop an AP class.

Vicarious Experiences

Students also formulate their self-efficacy through the observation of others' engagement and performance with a given task or situation (Britner & Pajares, 2006). Observational information is internalized to evaluate a student's own likelihood of experiencing success in the same task or situation. While not as strong of a contributor to

self-efficacy as mastery experiences, vicarious examples prove more sensitive when a student has limited prior experience with a given situation, or task, or is uncertain in her abilities. When students with limited prior experience in a task or situation or who doubt their own abilities observe a model with similar characteristics as themselves, the interpretation of the vicarious experience is more profound and impactful.

Knowing many first-time AP students have limited prior experience in the demands of their new courses, the *I Am AP* Club, led by AP Ambassadors and Mentors, created a series of "Breakout Sessions" to help acculturate new students to AP. One of the early sessions hosted by this group involved Ambassadors and Mentors publicly sharing their own struggles with AP with their first-time peers.

Overwhelmingly, those study participants in attendance at this particular session, felt a profound sense of validation. As one student participant, B.M., described it,

> I felt so good knowing that even people who are the smart ones, the extremely smart ones, struggle too. It makes me feel normal. Like it's okay to struggle. We all struggle. I felt very good about myself…validation is a big part of everything in life. If you don't feel like, validated, I think you doubt yourself…For that peer validation to finally like come into existence, I think, did help me a lot.

B.M. would go on to use this vicarious experience and knowledge at other times of challenge in her AP classes when she reminded herself, "Oh, Brian said it's okay to struggle." This experience provided her with the reminder to "take my time and not be so hard on myself."

Another student participant, T.D., shared a similar sentiment from this "Break Out Session" when she shared, "When I think of AP Ambassadors, I think all of AP was just so easy for them, like it just came naturally to them, like they just easily got an A…but to

see that they also struggled and they had difficulty going through the class, it definitely makes me feel better knowing that I'm not the only one struggling. Like it's normal."

For M.L, another student participant, hearing the struggles of AP Ambassadors/Mentors was equally as compelling, "…AP Ambassadors are really smart people, really smart students and knowing that they struggle…I'm not the only one struggling. Others have the same challenges as me…so I feel a little relief. They struggled and got through. I can too."

To the student participants, and to T.D. in particular, hearing the struggles from peers and learning how they worked to overcome their challenges was more impactful than hearing from an adult:

> Of course, like a teacher, like a superior, they obviously know what they're talking about, but with students they personally know like exactly how you're feeling because they should be facing the same problems you're doing with your work and stuff and stress and stuff. So to have their input on the same problems, it's easier in my mind to apply it because I know if it works for them then it should be helpful for me, too.

Social Persuasion

Both the verbal and nonverbal judgments others provide regarding one's perceived ability with a given task or situation also help form the basis of a student's self-efficacy (Britner & Pajares, 2006). While positive persuasions and affirmations may work to bolster a student's self-efficacious beliefs, negative assessments of ability and potential serve to weaken it. The negative verbal and nonverbal assessments more easily weaken self-efficacy than positive encouragement serves to strengthen it. Specific acts of social persuasion alone do not positively alter self-efficacy, but rather can when interpreted in combination with self-efficacy's other sources. Likewise, the affirming

verbal and nonverbal judgments must come from others the student both trusts and respects for the judgments to hold value in the formulation of self-efficacy.

Consider T.D.'s discussion of a moment when she received positive affirmation from her teacher, who she had come to respect and admire, and notice the interplay of other sources of self-efficacy, "One time you gave us back on our essays and I remember writing the essay and I felt confident in it. You gave it back and I did do well on it. I think you made a comment just like 'Oh, you've grown a lot.' I don't know why but that made me feel like 'oh, yay!' I did see that growth in myself."

The verbal judgment and affirmation from her teacher, someone T.D. greatly admires and respects, served to bolster her own confidence in her performance and further acknowledged her own mastery experience. The affirmation from her teacher was subsequent to her own confidence in her performance.

B.M. had a similar experience with affirmation from her AP teacher as she prepared for the upcoming AP exam. Nervous that she was not quite prepared, B.M. went to her teacher, who she would later describe as "really cool," for a private one-one meeting in which she relayed his reply as, "He said that I'm 'set.' I was making a big deal out of it. I was worried myself…" She experienced this apprehension despite having "a strong A in that class right now." The positive affirmation from her teacher, someone she trusted and respected, came after developing her own mastery experiences as noted by her class grade.

M.L. also described the affirming commentary from a teacher as impactful to the development of his own confidence in AP. "...she's like, 'oh, you got a C on your test. Great job! You passed this class! And stuff like that…and she would always give us one-

on-one" pep talks. He reported that when, "…I'm in my AP class and it's getting difficult, then that's when her support comes in…" M.L.'s teacher's words of affirmation, bolstered by his strong affinity for her, served as a buoy when he struggled knowing that she always pushed him to take AP classes.

Psychological States

An individual's interpretation of the emotional states like anxiety and arousal and the formation of stress associated with a given task or situation also contribute to self-efficacy formation (Britner & Pajares, 2006). The given emotional state held in expectation of, or during a task or situation, helps formulate an individual's extent of confidence in a positive outcome and experience. Generally speaking, anxiety, tension, and negative stress and emotional states may increase the probability of a negative outcome and lower self-efficacious beliefs. Conversely, positive arousal with a given task or situation serves to bolster self-efficacy.

Negative outcomes associated with negative stress resulting in less self-efficacious beliefs were highlighted by D.D., a student participant, when she described her early struggles with AP and getting "nervous" when the teacher called on her because she felt "maybe other people answering way better than I can." She went on to describe that there were, "…a lot of questions that I really didn't know and I was getting really stressed out…" D.D. described her struggles in this AP class by saying, "I feel like I was just stressed all the time." D.D. would subsequently drop this AP class, but remain enrolled in another, as she felt too "overwhelmed" by the stress.

On the other hand, C.T., another student participant, described her study sessions with friends in preparation for class tests and quizzes as an effort to combat her stress

with the rigors of the class noting that she would feel less stressed because, "we were prepared for the test."

Even D.D., in her one remaining AP course, would describe her peer support network and study group – something that was missing from her other class – as a purveyor of a more positive stress response to her AP coursework. By studying in a group and preparing for class and tests, D.D said she, "…felt more like comfortable in a way…more comfortable in class just knowing the material a little bit better."

Two other study participants, A.K. and T.D., had a strong sense of determination fostered from their parents that provided them reassurance in times of stress. A.K.'s mom's mantra of "You can do it" stuck with her and she called on it when she felt overwhelmed, "It always sticks with me and it's like, 'You can do it. You can do it.' And just keep going. And, 'it'll be worth it.'" D.T. described that her father "enforces the importance of just doing good in school..." and she used that to remain determined and knew she, "can make it through…Personally, if I'm doing worse it only makes me want to do better." D.T's competitive spirit allowed her to deal with the stress of her AP coursework in a positive manner.

Measuring AP Self-Efficacy

The first research question sought to determine if the self-efficacy toward AP courses of an underserved, 1st-time AP student be bolstered. To answer this question, a self-efficacy scale designed to measure a student's perceived sense of self-efficacy toward AP coursework was adapted from a scale originally used and published by Lent, Lopez, and Bieschke (1991).

In October of 2016, the 40-question self-efficacy survey was administered to 175

students at the host site. Of the voluntary survey respondents, 30 were enrolled in an AP course for the first time. The voluntary student participants were invited to complete the survey by their AP teacher, the researcher, and/or the "I Am AP" club advisor. Survey results were then uploaded to Microsoft Excel to compute a mean scale score and self-efficacy composite score for each survey respondent. Consistent with the work of the authors of the original scale, a student's numerical responses to the self-efficacy scale were totaled and divided by the total number of items to arrive at a self-efficacy composite score for each respondent. A mean scale score for the entire population of respondents was also calculated.

"I Am AP" Club Intervention

The "I Am AP" Club was designed to foster a sense of community and social support for students enrolled in AP and specifically for those enrolled in AP for the first time. While the Club was made up of many students, some in AP for the first time and others veterans of the AP program, the club's stated purpose was to, "Build an inviting, inclusive, and supportive AP program…where all students feel valued in AP classes, where all students who want to challenge [themselves in] a rigorous course feel the ability to do so, and where all students feel that they have a support system to guide them through the obstacles and difficulties of AP classes."

The club was led by a group of officers made up of successful AP students with a group of AP Ambassadors who worked to further carry out the stated purpose of the club. The club met on a monthly basis during the scheduled lunch hour during the normal school day at the host site. The meetings were typically held in the host site's theater in which approximately 75-100 students would typically attend. These meetings covered

topics like introducing students to the "I Am AP" Club purpose, planned events, tutoring schedule, and available tutors.

The AP Ambassadors who helped lead the monthly "I Am AP" Club meetings also acted as formal and informal mentors and tutors to students who wished to receive support. Their stated role within the club was to, "Support students in their AP experience…, advertise and promote important AP events, and hold small group meetings with students." These bi-weekly small group breakout sessions were held after school in the educator participant's classroom and addressed specific topics of interest to students new to AP. Topics of discussion included strategies to manage stress, time-management, study habits, preparing for the AP exam, among others.

All student participants involved in this research study were given a monthly schedule of the club events and personally invited by the researcher to attend the monthly "I Am AP" Club meeting and breakout sessions. Of the 7 student participants, 6 of them frequently attended both the monthly meeting and the bi-weekly breakout sessions. The lone student participant who did not attend had a unique school schedule in which she finished her classes at the school's lunch hour. She left campus at that time to work an afternoon job and as such was unable to attend the Club's lunch meetings and after-school breakout sessions.

All the student participants who were able to attend the Club meetings and breakouts sessions attended regularly and stated they found value in them either from the course specific support they received or because of the more general support with AP. Student participant B.M. described how at a breakout session she exchanged phone numbers with an AP Ambassador who provided her help and support in thesis writing, a

topic she stated she struggled in, "…she helped me with thesis writing. That has helped me. I need all the thesis help I can get." When asked how she felt after going to Club meetings and breakout sessions, B.M. responded simply by staying, "Helped."

M.L. similarly described the Club meetings and breakout sessions as helpful and the pathway that linked him to an AP Ambassador, "…I had a conversation with Sabrina and she told me what I can do to make AP Environmental [Science] a little easier even though it might be a little difficult [for me] to learn…she actually guided me…to find different ways of learning in that class…"

A.K. shared that, "Yes, they [the Club meetings and breakout sessions] have helped me. All of them that I've come, I've always gotten something out of it, and I always like learned something new about every, at a meeting or breakout session." A.K. described the help and support she received from the Club and Ambassadors as particularly helpful because, "…the people that are like in it are my age and they're kind of going through what I'm going, so they, okay, I know that I can trust them with it. Yeah, a lot of it [the Club and meetings] has helped."

T.D. also spoke of the significance and importance of the peer support connections she formed in the club meetings and breakout sessions when she stated, "…but with the students they personally know like exactly how you're feeling because they should be facing the same problems you're doing with your work and stuff and stress and stuff. So to have their input on the same problems, it's easier in my mind to apply it because I know if it works for them then it should be helpful for me, too."

Perhaps V.S. summed up the help she received in the Club meetings and breakout sessions best when she stated, "Yes. They have helped me because I'm able to realize

like some extra resources I can go to now. I have my AP Ambassadors."

The lone educator participant in this study, who served as the formal "I Am AP Club" advisor and was the AP teacher for two of the student participants, shared her perspective on the importance on benefit of the club based on her own observations,

> I learned a great deal about the power of peer mentorship. Whether students told me about the relationships they built with their AP Ambassador,…I was pleasantly surprised by the impact that peers make on one another. Students repeatedly told me about how they no longer felt alone and isolated when they struggled with rigorous course content. They also told me about how peers offered a level of empathy and perspective that adults can't, enabling them to feel supported in a genuine and relieving way.

Survey Results

The average composite score for the initial 175 survey participants was 2.9, with a 5 representing the highest possible score. Students who fall above the composite average have a higher sense of self-efficacy toward AP coursework while those students who fall below the composite average are generally seen as having a lower sense of AP self-efficacy. In all, 83 students fell at or below the mean composite score, while 92 students scored above the composite average.

First-Time AP Students. In all, 14 first-time AP students scored at or below the mean composite score. 6 of those 14 students did not meet various components of the study criteria (i.e. were not low-income and/or a minority student) and were not invited to participate. Of the eight who met the study criteria, 7 consented to participation in the study; 6 females and 1 male. All 7 students who agreed to participate in the study scored at or below the mean composite score and 5 of them scored in the lower 20% of all survey respondents.

Post Survey Results. A second administration of the same AP self-efficacy survey was administered in June of 2017 to only the 7 student participants from the study. The 175 initial survey respondents were not reassessed. Post-study, all 7 student-participants had an AP self-efficacy composite score well above the initial survey's mean composite average. In fact, the sense of AP self-efficacy of all 7 ranked in the top 98% of all initial respondents; 3 students' new sense of AP self-efficacy would have been the highest of all initial respondents. It is important to note that the post-survey gains realized by the 7 student participants are compared against the initial survey results of the entire group and represents a significant limitation of this study. It is possible these gains would have been consistent with the gains made by all of the initial survey respondents and would not have represented anything other than growth experienced by all students irrespective of participation in the "I Am AP Club."

Table III: Post Survey Results

Student (Gender)	Pre Self-Efficacy Score	Study Mean Score	Post Self-Efficacy Score	Total Gain	AP Class(es)	Grade Level	Demographic Info
A.K. (F)	2.525	2.9	4.025	+1.5	US History, Language	11	Hispanic, Female, Low-Income, Home Language – Spanish
D.D. (F)	2.7	2.9	3.425	+0.725	Government*, Environmental Science	12	Hispanic, Female, Low-Income, Home Language – Spanish
M.L. (M)	2.725	2.9	3.325	+0.6	Environmental Science	11	Hispanic, Male, Low-Income, Home Language – Spanish
B.M. (F)	2.75	2.9	4.4	+1.65	Government, Literature, Biology	12	Black, Female, Home Language – English
V.S. (F)	2.775	2.9	3.5	+0.725	US History	11	Hispanic, Female, Special Education, Low-Income, Home Language – Spanish
T.D. (F)	2.875	2.9	3.375	+0.5	Language	11	Hispanic, Female, Home Language – English
C.T. (F)	2.9	2.9	3.35	+0.45	Environmental Science	12	Hispanic, Female, Low-Income, Home Language – Spanish

While all of the student participants in this study demonstrated growth in their sense of self-efficacy toward AP coursework, as measured by the adapted self-efficacy scale, the overall results yield some insight into *how* or in what ways their sense of self-efficacy was strengthened. The particularly self-efficacy scale adapted and used for this study was selected as it measured each of the four components of self-efficacy development – mastery experiences, vicarious experiences, social persuasion, and psychological states.

Self-Efficacy, Mastery Experiences

Bandura (1997) described mastery experiences as the most significant and impactful contributor to an individual's perceived sense of self-efficacy in any endeavor. Entering new and difficult environments, it also proves to be the most difficult aspect to readily alter. This notion held true in the measurement of student participants' sense of mastery experiences through their AP courses.

Table IV: Mastery Experiences

Student (Gender)	Pre Self-Efficacy Score	Study Mean Score	Post Self-Efficacy Score	Pre Master Exp. Score	Mastery Exp. Mean Score	Post Mastery Exp. Score	Growth
A.K. (F)	2.525	2.9	4.025	2.1	3.1	3.1	1.0
D.D. (F)	2.7	2.9	3.425	3.0	3.1	2.6	(.4)
M.L. (M)	2.725	2.9	3.325	2.6	3.1	2.9	.3
B.M. (F)	2.75	2.9	4.4	3.1	3.1	4.0	.9
V.S. (F)	2.775	2.9	3.5	2.3	3.1	2.9	.6
T.D. (F)	2.875	2.9	3.375	3.0	3.1	3.2	.2
C.T. (F)	2.9	2.9	3.35	2.9	3.1	2.3	(.6)
Average Self-Efficacy Growth – Mastery Experiences							**.286**

In this survey, mastery experiences were measured from questions like, "I received good grades in my AP class(es).", "I got high scores on my AP exam(s) from last Spring.", "I am rarely able to help my classmates with difficult AP course work.", and others. While all student participants earned grades of C or higher in each of their AP classes, only one, B.M. would attain a passing score on the AP exam. Not

surprisingly, building mastery experiences in new, rigorous courses, proved to be most challenging for most students. It is also noteworthy that B.M. had the highest overall gain in the self-efficacy pre to post survey and may have contributed to her passing score on the exam.

Self-Efficacy, Vicarious Experiences

Britner and Pajares (2006) described vicarious experiences are formulated through an individual's observations of others' engagement and/or performance with a given task or situation. Observants utilize their observation to evaluate their own likelihood of experiencing success in the same or similar task. Vicarious experiences prove particularly sensitive if an individual has limited prior experience with the given situation or task. Given this knowledge, student participants' growth in their vicarious experiences across the duration of this study was expected.

Table V: Vicarious Experiences

Student (Gender)	Pre Self-Efficacy Score	Study Mean Score	Post Self-Efficacy Score	Pre Vicarious Exp. Score	Vicarious Exp. Mean Score	Post Vicarious Exp. Score	Growth
A.K. (F)	2.525	2.9	4.025	2.4	2.75	4.2	1.8
D.D. (F)	2.7	2.9	3.425	2.4	2.75	3.3	.9
M.L. (M)	2.725	2.9	3.325	2.7	2.75	3.0	.3
B.M. (F)	2.75	2.9	4.4	2.6	2.75	4.5	1.9
V.S. (F)	2.775	2.9	3.5	2.6	2.75	3.6	1.0
T.D. (F)	2.875	2.9	3.375	2.5	2.75	3.1	.6
C.T. (F)	2.9	2.9	3.35	2.5	2.75	3.3	.8
Average Self-Efficacy Growth – Vicarious Experiences							**1.043**

Vicarious experiences were measured in this survey from questions like, "Some of my closest high school friends excelled on their AP exams in the spring.", "My favorite teachers are my AP teachers.", "My friends tended to avoid taking AP classes.", among others. With questions such as these, and given each of these students entered AP for the first time, it was not unexpected that students would encounter more, and more meaningful, vicarious experiences simply by being enrolled in AP. Within this new

context, each had the opportunity, and in most cases, a peer assigned to them to help them navigate their new environment. To some degree, their social circle, and those who inhabit it, was altered.

Self-Efficacy, Social Persuasion

The verbal and nonverbal judgments, persuasions, affirmations, and/or denials individuals receive from significant others are internalized and processed and contribute to a student's perceived sense of self-efficacy.

Table VI: Social Persuasion

Student (Gender)	Pre Self-Efficacy Score	Study Mean Score	Post Self-Efficacy Score	Pre Social Persuasion Score	Social Persuasion Mean Score	Post Social Persuasion Score	Growth
A.K. (F)	2.525	2.9	4.025	2.5	2.9	5.0	2.5
D.D. (F)	2.7	2.9	3.425	3.1	2.9	4.5	1.4
M.L. (M)	2.725	2.9	3.325	2.6	2.9	4.1	1.5
B.M. (F)	2.75	2.9	4.4	2.5	2.9	4.7	2.2
V.S. (F)	2.775	2.9	3.5	3.5	2.9	4.8	1.3
T.D. (F)	2.875	2.9	3.375	2.8	2.9	4.4	1.6
C.T. (F)	2.9	2.9	3.35	3.0	2.9	4.0	1.0
Average Self-Efficacy Growth – Social Persuasion							**1.643**

In this survey, social persuasion was measured with questions like, "My friends have encouraged me to take AP classes.", "Other people generally see me as being a poor AP student.", "My counselor or teachers have singled me out as being a good student and have encouraged me to take AP classes.", among other similar questions. Many of the student participants in this study spoke at length about the positive affirmations they received from teachers who they consider to be their strong advocates. Several of these teachers were significant contributors in the student participants' decision to enroll in AP for the first time and also went on to provide them support and affirmation in times of struggle.

Self-Efficacy, Psychological States

A student's anxiety and negative stress in a new and demanding curricular environment can serve to diminish her sense of confidence in a positive outcome while the opposite can be true with a more positive sense of stress, like excitement or optimism, in the same situation. In the early stages of this research study, most student participants described a sense of being "overwhelmed" in terms of the workload and in their ability to manage their time effectively. This knowledge helped form the basis for "I Am AP Club" sessions in which time management practices and other strategies to curb anxiety were specifically discussed.

Table VII: Psychological States

Student (Gender)	Pre Self-Efficacy Score	Study Mean Score	Post Self-Efficacy Score	Pre Psych. States Score	Psych. States Mean Score	Post Psych. States Score	Growth
A.K. (F)	2.525	2.9	4.025	3.2	2.91	3.8	.6
D.D. (F)	2.7	2.9	3.425	2.4	2.91	3.3	.9
M.L. (M)	2.725	2.9	3.325	3.0	2.91	3.0	0
B.M. (F)	2.75	2.9	4.4	2.8	2.91	4.0	1.2
V.S. (F)	2.775	2.9	3.5	2.7	2.91	2.9	.2
T.D. (F)	2.875	2.9	3.375	3.1	2.91	3.1	0
C.T. (F)	2.9	2.9	3.35	3.1	2.91	3.8	.7
Average Self-Efficacy Growth – Psychological States							**.514**

Psychological states were measured in this survey from questions like, "My mind goes blank and I am unable to think clearly when working on my AP work.", "I get really uptight while taking tests or quizzes in my AP classes.", "I usually don't worry about my ability to complete the work in my AP class(es).", and other similar questions. At least two of the student participants' spoke of their own perfectionist tendencies and it is possible these feelings were simply exacerbated in their new, unfamiliar environment and proved difficult to alter or ameliorate.

Growth in AP Self-Efficacy

For the second research question, the study was designed to determine in what

ways can 1st-time AP students be socially supported to contribute to their sense of self-efficacy toward AP courses. Through an extensive analysis of participant survey data and observations, the following themes and ideas shed light on what specifically led to the student participants' growth in self-efficacy toward AP coursework.

Teacher Support

The supportive communication from teachers to students serves to bolster students' academic self-efficacy (Bandura, 1997). The affective processes between teacher and student are a significant influence on student academic self-efficacy development (Bandura, 1993), and when students perceive their teachers to hold a vested, personal interest in their own success, they exhibit less anxiety and present a stronger academic self-efficacy (Fast, et al., 2010). Students' perception of teachers' caring positively affects their academic self-efficacy in measurable ways (Fast, et al., 2010; Patrick, Ryan, & Kaplan, 2007). This sense of teacher concern positively correlates to the achievement of Latino students and serves as a strong predictor of their academic self-efficacy (Riconscente, 2014).

Not surprisingly, these research findings bore out in the present study and affirmed the importance of teacher support in the development of self-efficacy toward AP coursework, a previously unstudied topic. Through data analysis, a series of more comprehensive descriptors of teacher support were developed:

Affirmation. Given the overwhelmingly positive growth in the student participants' sense of self-efficacy toward AP coursework, it was not surprising to learn of the power the socially persuasive, positive affirmations delivered from teachers to students seemed to contribute to that growth. In coding the extensive interview data, the

theme of teacher affirmation consistently emerged as a positive aspect of students' developing confidence in their own abilities in their new AP classes.

In some situations with the student participants, teachers' affirmations concerning their ability to be successful in AP was the driving force in their enrollment in the classes. Left to question her own ability, A.K. described her AVID teachers "pushing me to be like, 'Oh, do AP classes.'" Similarly, M.L. discussed the role his AVID teachers played in getting him to enroll in AP,

> …in my AVID class, I was always encouraged to try to do anything to try to be successful to get ready for college and stuff…and she (my AVID teacher) was always pushing us for AP classes. She would always tell me…'why aren't you in honors?...'you should be in an AP class.' She's always supportive of that. Yeah. That's how she is.

D.D. also experienced the positively affirming comments of her AVID teacher as a motivating factor in her decision to enroll in multiple AP courses for the first time during her senior year, "…it was my AVID class because my teacher would encourage us really to try AP to see like how next year would feel like just going into college."

Not only was a teacher's affirmation a strong motivator to enroll in AP for some of the student participants, but often times they were also a strong sense of reassurance for student's own budding sense of confidence to the new rigors of AP. Student participant T.D., who's AP teacher was the educator participant in this study, highlighted the importance of her teacher's affirmation of her writing abilities, a key component to her mastery of her AP Language class, as a significant contributor to her belief in her own abilities:

> One time you gave us back one of our essays and I remember writing the essay and I felt confident in it. You gave it back and I did do well on it. I think you made a comment just like, 'Oh, you've grown a lot.' I don't

> know why but that made me feel like, 'oh yay!' I did see that growth in myself.

Not only was this teacher's affirmations a trigger for T.D.'s confidence in her abilities within the course itself, her teacher's positive comments would also play into her belief about her ability to pass the annual AP exam, "At the time, I didn't really feel 100% prepared, and to have someone that has read my writing and had become familiar with how I work and stuff, to say that they think I can pass it was kind of, it was very reassuring."

A.K. also revealed that having her teacher as a "cheerleader" by her side to offer her encouragements, help, and affirmations like, "'you can do it!'" helped push her along in times of struggle. Given that the development of self-efficacy is heavily reliant on mastery experiences and that mastery experiences in which challenges were overcome generally promotes a more robust sense of self-efficacy than those experiences that are more easily mastered, it is interesting that A.K. had the highest growth in her perceived mastery experiences with AP and that she found her teacher's affirmations of significance.

These dialogues closely reveal the power a teacher's stated belief of a student's ability holds in the formation of their own belief in their own ability. More simply stated, it seems to demonstrate that T.D. felt she did not have permission to believe in her own ability until that thought/question was affirmed by her teacher. T.D. described this interaction as helping her feel more confident in the class.

The close affinity T.D. had for her teacher certainly gave her teacher's affirming comments much more significance in T.D.'s mind. She would go as far as to describe

herself as "lucky" for having been placed in this teacher's AP class, "Everyone always talks highly about you [the educator participant]…It makes me feel glad that I go lucky and I got you instead of other teachers." Without this close affinity, it is left to wonder if these affirming comments would have carried such significance.

Similarly, B.M. would describe an unease with her confidence in her ability to successfully pass the AP Government exam, but after an affirming conversation with her teacher, she walked away feeling reassured and more confident in her abilities. B.M. described that interaction thusly, "He said that I'm 'set.' I was making a big deal out of it. I was worried myself, but I'm really good in AP Gov." Her feelings of being "really good" only came after an affirming comment from her teacher of the same.

Unsurprisingly, B.M. would also talk about this teacher, whose affirming comments she took to heart, with a strong sense of attraction, "…he's just a cool guy. He's great. He's not strict or hard on us. He gives us the work to do, and he makes sure we do it." Again, without the trust and respect B.M. places in her teacher as a significant adult, it's left to wonder if these affirming comments would have carried such significance.

Caring and Individual Attention. The role students' perception of teachers' caring and how that positively impacts their own sense of self-efficacy has been well reported in the literature and it was unsurprising to see that same theme develop through research data in this study. Many student participants shared the role "perceived acts of teacher caring" played in their own comfort and developing sense of positive self-efficacy toward AP. T.D. who spoke extensively about her AP Language teacher, who also served as the educator participant in this study, said that having her as a teacher, "It

was like very supportive and I feel like you genuinely care about all of your students. And you just you go out of your way to do so many things, and provided us with the resources needed to succeed in your class. Your after school tutoring…and then also when we would meet up…it helped a lot."

L.M. shared similar thoughts on his teacher's demonstrated caring for him and other students, "…she's always had that drive, that passion to always help us. Every time you walk in her classroom, you can always feel that passion that she has for all of us…" His perception of his teacher's caring for him proved to be a life-vest in times of struggle in his AP class and M.L. would describe how he would return to her sense of caring and affirmation to remind himself that "…if you set your mind to something then it can be done." Which, not surprisingly, was a mindset he latched onto from this same teacher.

Several students described the time commitment of their AP teachers as a strong demonstration of their sense of caring and served as a strong motivator for them to want to do well. Student participant, B.M. described it this way,

> …he offered…tutoring every day before AP exams…he puts a lot of time and dedication into making sure his students understand the material as much as he possibly can, I think, without completely sacrificing his family life…I felt like I wasn't alone…I didn't have to try it all on my own. My teacher was there."

Likewise, student participant A.K. described her teacher's time commitment in her AP Language class as a sense of caring, "when you weren't here you still did that Saturday School thing, and it's just like, 'Oh, she's taking this on. She really cares (about me and my success).'"

One student participant, V.S., the only Special Education student in the study, spoke extensively of this sense of caring she perceived from her AP US History teacher,

"I know that he wants me to do good. We both kind of like just crossed paths and we just both communicated so well that even today, he's been helping me…he's my number one supporter." Her knowledge that her teacher wanted her to perform well and be successful in his class offered V.S. a sense of reassurance as she contemplated dropping the class earlier in the year, "I was really thinking of dropping it (the class) once back when the semester started. With the help of my teacher, he motivated me to push that F into a C…Even then, I knew that I had him as a supporter…a resource." Throughout her challenges and struggles in the class as a first-time AP student, she took comfort in her teacher's care and noted, "…he will be right beside me to do good in the class."

The sense of connection and deep respect V.S. had for her teacher potentially made his care and support of her all the more meaningful. She would describe him, "He's just a really great teacher. Really, really great AP teacher. I look up to him in a way."

The teacher's individual attention paid to the student participants further demonstrated a strong sense of caring that allowed them to feel greater comfort in the class and to seek help in times of struggle. V.S. shared that although she missed things in class, she knew she could connect with her teacher, "And sometimes I don't catch things. I talk to him about it, 'like can you send me an email of the PowerPoint?' We talk after school. Like if I don't feel confident in a work or an exam we talk about it…he lets me retest…just so I can better myself and my grade."

"Because he's done things that others (teachers) wouldn't do, and I'm like so appreciative of that because he understands like my weaknesses...He's trying like everything for me to pass. He's going beyond and beyond."

In each of these interactions with their respective AP teachers and with each of these students, they described a strong sense of admiration in which they readily saw each teacher as a significant individual in their lives. B.M. went so far as to say, "My teacher in AP Bio, he's my hero…", V.S. would describe her teacher as her "cheerleader", K.A. would describe her teacher as her "number one sources of support", and T.D. would share that she considered herself "lucky" to have been placed in her teacher's class. All of them would similarly describe having frequent one on one meetings with their AP teacher.

Every student who made above average growth in terms of their perceived sense of self-efficacy when compared with the other student participants, spoke extensively of the support and experience with their AP teacher specifically. The vast majority of the student participants who grew less than the average did not speak at all about their AP teacher. This would suggest the AP teacher plays a significant role in the development of a first-time, underserved AP students' sense of self-efficacy and warrants further study.

AP Mentors and AP Ambassadors

At the school research site and as part of the "I Am AP Club" that was designed and developed to help acculturate first-time AP students, each of the student participants was assigned an AP Mentor. The AP Mentors were generally senior students who had successfully navigated the challenges and rigors of AP and were willing to act as a private tutor and role model for first-time AP students. Many of these AP Mentors, and other students who did not take on a formal mentoring role, served as AP Ambassadors and led the "I Am AP Club" meetings and breakout sessions where particular topics relevant to the life of an AP student were discussed and presented.

The idea to marshal some of the host site's best and brightest students in this capacity was intentionally done to create a stronger link between students, but to also have a ready source of vicarious experiences and models for first-time AP students.

Validation. Feeling all alone in a new environment, particularly when that environment is wrought with challenges and struggles, can be overwhelming especially when a student is left to question not only their own competency, but whether or not they are the only one who struggles. As a first-time AP student in classes filled with students who have navigated AP before, this sense of being all alone and lacking in ability can prove to be incredibly detrimental.

Knowing this to be the case and a struggle of many first-time AP students, AP Ambassadors, in several "I Am AP Club" venues, spoke candidly about their own struggles and challenges with AP. Virtually all of the student participants spoke of the intense relief, reassurance, and validation that came from hearing regularly hearing of the struggles from either their individual AP Mentor or the AP Ambassadors.

Many of the study participants spoke of feeling as though they were "alone" or the only ones who struggled with the rigors of the course content. As a first-time AP student, M.L. wondered if he was the only one in his classes who struggled which began to cause him to question his own ability. But, in hearing from AP Ambassadors on their own struggles he felt reassured, "…that its just sort of a relief that they're not, like I'm not the only one." T.D. shared a similar sentiment by stating,

> When I think of AP Ambassadors, I think all of AP was just so easy for them. Like it just came naturally to them. Like they just easily got an A…but to see that they also struggled and they had difficulty going through the class it definitely makes me feel better knowing that I'm not the only one struggling. And like, it's normal.

A.K. shared a similar sentiment and stated that knowing that AP Ambassadors struggle, "…before I will just feel like, 'Am I the only one?'" helped me see that I'm not alone…[smart] people can also have the same struggles." "Knowing I'm not the only one who struggles puts me more at ease seeing the smartest kids in the school have the same challenges as me." I see it (the struggle) as just part of the process."

How to Prepare and What to Expect. Entering the world of AP for the first time, it was unsurprising to learn that many of the student participants struggled with knowing how exactly to prepare for their new classes and what to expect. The AP Mentors and Ambassadors proved to be a reliable source of support in both of these areas.

B.M. described the "I Am AP" Club sessions and the support from the AP Ambassadors and Mentors as pivotal to her success. In discussing the Club, she described it as,

> most helpful…I like how the AP Ambassadors give their insight towards typical AP class problems…Their support helps when I'm sitting taking a test or writing an essay to remember that, 'Oh Brian said its okay to struggle. Take your time. Don't be too hard on yourself.' And, 'Oh, Kiana said this' and Jorine said this.'

Likewise, she described her work with her AP Mentor in particular as helpful in navigating the rigors of her new classes, "We exchanged numbers and she helped me with thesis writing. That has helped me. I need all the thesis help I can get."

A.K. also described the role AP Ambassadors and Mentors played in helping her understand AP when she described that she would, "…meet up with an Ambassador because I did that a couple times and it really helps. They gave us some good tips

because obviously they've gone through the class before. They told me kind of what to expect, and that's what helps me become like better before, like know what to expect."

When thinking of the specific role and supportive actions her AP Mentor played in helping K.A. know what to expect and to get the hang of it, she described a one-on-one meeting she had with her Mentor:

> 'Okay, I have this class. I have this going on. How could I do it?'...She's helping me out kind of pinpoint like what I need to know, especially for AP US because that's kind of like a weaker subject for me. So she tells me to look at like the cause and effect of a certain thing. Like a point and that's more on what you need to focus not necessarily the definitions…she also gave me tips on how she used to study…she has a book, I think, that she did notes on and stuff like that. She's going to kind of help me on how to do that [too].

Before this interaction and the support of her AP Mentor, A.K. described being confused by the course expectations, "…because it's kind of difficult to like read this long chapter and then be like, 'okay, what do I need to know for the test? Do I need to memorize anything.'" Once she was able to learn how to prepare and what to expect in her new classes from the help of her AP Mentor, K.A. felt much better and shared that, "It was kind of hard to like know how the test worked or how the class worked until I started to get into the like hang of it."

T.D. shared a similar sentiment in relying on AP Ambassadors and her AP Mentor to know what to expect in her class, "…it's good to know her experience and what she did and how she got an A in this class and how I should just push through. She's a senior and so she's already gone through all of this…It's good to know what to expect…to discuss what I should do like how to prepare myself…You know?"

Knowing that her AP Mentor had successfully navigated the class the year prior, T.D. found her to be a valuable source of support in learning how to create her own

success in the same class, "It really just takes me a long time to figure out what I'm going to write. That's why I met up with Sabrina…talking about how to prioritize and how to arrange my decision time…since she already took this class and passed the AP test. She had tips on just like my problem."

T.D.'s AP Teacher, who was also the "I Am AP" Club Advisor and sole educator participant in this study, confirmed the support she received from her AP Mentor as being critical to her overall growth in writing when she shared, "after numerous tutoring sessions…she showed great progress and growth related to both her confidence and ability." It was only after these numerous tutoring sessions and the individual, targeted support provided by her AP Mentor that T.D. would begin to describe feeling more confident in her writing.

M.L. also relied on an AP Ambassador for help navigating the complexities of AP, "…I had a conversation with Sabrina and she told me what I can do to make AP Environmental a little easier even thought it might be a little difficult to learn…she actually guided me and some other students that were in that class to find different ways of learning rather than just relying on the teacher's notes." When he was faced with uncertainty, M.L. would often rely on an AP Ambassador who was enrolled in the same class for support and guidance, "…so I always ask him, 'What should I study?' and stuff like that, 'What are you studying?' And we help each other out actually."

Similarly, V.S. shared her experience in receiving help from AP Ambassadors and her assigned AP Mentor, "They have helped me because I'm able to realize like some extra resources I can go to now. I have my AP Ambassadors…if I don't understand a

certain topic or when it comes to essays, which is like my biggest weakness, I know that I can reach out to him at any time and still be able to get the help I wish to receive."

D.D.'s experience was similar to the above students when she spoke of the AP Ambassadors help in figuring out her new AP class, "…she has taken AP Environmental Science before and she told me that doing the whole reading on the book whatever chapters are assigned to us will help me a lot and that has helped me a lot." In general, D.D. also felt supported by the AP Ambassadors because, "I got to hear all these different methods AP students do when they need help or are struggling…I know someone talked about different ways to take notes in class and that got me thinking…" Through the advice of her AP Mentor and the AP Ambassadors, D.D. began exploring other ways to engage with the class and the content but still struggled with managing the reading, note-taking, and studying. Again, she turned to her AP Mentor for help, "…she helped me plan out what my homework was in my planner and what I have to do in order to work on my time management." Her AP Mentor even suggested, "…getting every chance to study, even if you have 10 minutes or 20 minutes. I know it sounds like a little bit, but at least it's something. I started doing that whenever I have time…" With the support of her AP Mentor in learning not only what to study, but how and when, D.D. arrived at the point where she exuded a level of confidence in her ability to pass the annual exam.

The lone educator participant in this study, and the teacher advisor for the "I Am AP Club", spoke of the power and importance of the AP Ambassadors and Mentors in helping to acculturate new, first-time students to the rigors of AP,

> I learned a great deal about the power of peer mentorship. Whether students told me about the relationships they built with the AP Ambassadors and Mentors…I was pleasantly surprised by the impact that peers make on one another. Students repeatedly told me about how they

> no longer felt alone and isolated when they struggled with rigorous course content. They also told me about how peers offered a level of empathy and perspective that adults can't…

So profoundly impacted by the collective stories of the first-time AP students and the importance of their AP Mentors and Ambassadors had in helping them learn what to expect, the educator participant/club advisor began thinking of plans for next year and is intent in, "…growing our mentorship opportunities with the knowledge that they're the most effective means of motivating and calming AP students."

Comfort and Reassurance. Entering a new arena where the students were prone to question their ability to successfully master the rigors of their new courses, some student participants shared that their AP Mentors served as a source of comfort with their initially fragile confidence.

The assurances M.L. received from his AP Mentor allowed him to develop a mindset where he had greater confidence in his ability to do well. He described, "…I was always concerned about how other seniors or other people in AP classes felt, and I didn't really go around and ask people you know?...when I met with my Mentor he explained how he felt and how I should deal with AP classes and how I should just relax and have that mindset that I'm gonna do well…" Although M.L. would assert that, "With AP I'm doing very well right now", he did share that he knew he could reach out to his Mentor whenever he had a concern.

V.S., much like M.L., found the knowledge that an AP Mentor was available to support her whenever she needed to be of comfort. Although she spoke extensively about the help and support she received from her AP teacher specifically, she found having an AP Mentor to be particularly reassuring, "I know that I have Jessie as a

resource when I have like any trouble in something. It's just kind of a nice feeling knowing that he's there."

T.D. also experienced a level of comfort from her AP Mentor and described that she, "…reached out to her sometimes when I'm feeling overwhelmed." Her feelings of being overwhelmed often stemmed from her perceived performance with her writing. Again, she would turn to her AP Mentor for reassurance, "…after talking with Sabrina, I felt relieved in knowing that, okay, even though I did struggle this time, I know what to do next time. I was one step ahead of what I was before."

Aside from the general comfort and reassurance T.D. received from her AP Mentors provided, she also came to serve as a sounding board and stress reliever. After one timed-writing exercise, she described a desire to use her Mentor as an outlet for her frustrations,

> Honestly when I was writing the essay I was also thinking, 'okay, I can't wait to meet up with Sabrina so I could vent about this.' I just wanted to be able to talk to her and yeah just open up about my problems…it was good to vent to her and see what she had to say and how to do better next time…

While T.D. described herself as very competitive, "obsessed with her grades", and was pushed to do well in school by her father, she remained the only student participant who openly talked of seeking avenues to vent her stress. Nearly every student participant described at one time or another during the study as feeling overwhelmed, none went on to describe a particular stress outlet or what they did to mitigate their current psychological state beyond simply "trying not to think about it." Given the importance the management of emotional states plays in the development of self-efficacy,

it remains unknown as to why T.D. was the only participant who openly spoke of her desire to "vent" her stress.

Peer Support

While every study participant benefited from the support of an AP Mentor or Ambassador, one student, C.T., was unable to capitalize on this formal support due to her unique schedule that left her unable to stay on at school beyond the lunch hour when the club sessions were held. Fortunately for her, C.T. was able to rely on a ready supply of friends who were also enrolled in her AP class. Their support, much like the support provided by the formal AP Ambassadors and Mentors, proved crucial to C.T.'s confidence in her ability to master her AP class.

C.T. described her biggest source of support as her, "…friends in the same class that we would take." Her friends in her new AP class helped her make sense of the content and helped, "…me understand the material because my friends used to sit next to me…They'd be like, 'oh, you have to do this'…and then they would explain it…and we would work on it together."

What began as a one-way form of help in understanding the course content for C.T., over time she became a source of help for her friends as well. C.T. described this evolution in her support system by stating, "…and then my friend, she'd be calling and she's like 'I don't know how to do this.' She's like, 'help me.' And I'm like, 'I got the answer to this one, let's just help each other out.'" This friend group and budding source of mutual support began convening study sessions where, "…we would go to Barnes and Noble after or before a unit test and then we would study there…We do it very often."

This study group, in which friends helped each other overcome their struggles

with AP coursework and preparing for exams, also became a venue to support one another's efforts. C.T. described it accordingly, "…and then after (studying) we'd go eat lunch and talk about it more. We're like, 'we have to pass this.' We'd encourage each other." Through their collective support, studying, and encouragement, C.T. would describe feeling, "…prepared for the tests."

D.D., who enjoyed the more formal benefits of the AP Ambassadors and Mentors would, nevertheless, describe the peer group she found in one of her AP classes as her biggest source of support,

> ...because a lot of them (her friends) take AP Environmental Science and we all just talk about it and one time we had Saturday School for APES, so I went to that and we all just got together and just did the practice test book and everything and we just helped each other out.

This same group of friends were there for D.D. when she got stuck, "…I would go to my friends and they would help me through it by just asking me questions and then helping me…we would figure it out from there."

The support D.D. was able to both give and receive from her friends enabled her to feel more confident in her AP class as, "I kind of felt more like comfortable in a way because I, whenever I would maybe like answer someone's question and like teach them…I would kind of like memorize it and learn it better and I would feel more comfortable in class just knowing the material a little bit better."

B.M. also spoke of her friends and classmates in AP as strong sources of support in her quest to understand and make sense of the rigorous course content. She described, "…I've asked my classmates 'how did you answer this question' or 'what does this question even mean' because I would be lost on it." Likewise, when she struggled to begin her essay writing, B.M. relied on her friends, "…I would ask my classmates how

they started off or what broad themes they found in the poem if I struggled finding them myself."

Perhaps B.M. summarized the power and importance of friends as a source of support for underserved, first-time AP students best when she said, "I felt like I wasn't alone…I didn't have to try it all on my own. My classmates…were there [to help]." Having classmates to assist with the challenges of AP clearly helped these three student participants not only feel more comfortable with their understanding of the content but also more confident in their ability to successfully master the course.

Lack of Peer Support. Nowhere did the significance of a strong social support network, whether through their own friends or the more formalized support from AP Mentors and Ambassadors, appear more strongly than in the case of D.D. and her early struggles in her AP Government class.

D.D. started the school year enrolled in two AP classes, AP Government and AP Environmental Science. As she described above, D.D. was readily able to rely on her friends to support her, and she supported them, in AP Environmental Science, unfortunately, that was not the case in Government. When the year started and before the I Am AP Club began, D.D. was left floundering with the challenges of this class in particular, "…there's a lot of questions that I really didn't know and I was getting really stressed out…" Struggling to attain any mastery experiences, she described not knowing the content was causing her to, "…not get the grade I want…and I really didn't want that to happen."

D.D. went on to describe that she felt she was without a solution to help her understand the content and ultimately raise her grade. "I felt like 'cause I didn't really

know anyone in AP Government so I didn't really know who to go to or how to ask for help." When prompted, D.D. would state that if she had an AP Mentor from the outset of the course, "I think it would, yeah [have helped]."

Conclusions

This research study was specifically designed to take an in-depth look at the lived experiences of 7 traditionally undeserved students as they attempted to navigate the rigorous challenges of college-level work on their high school campus for the first time. Further, the study was constructed to determine whether the perceived sense of self-efficacy towards AP of these same 7 student participants could be enhanced through the social support of intentionally designed school club. Finally, the study sought to determine what specific words, actions, and experiences served to bolster this same student participants' perceived sense of self-efficacy toward AP.

From the analysis of the data and by using the specific adapted self-efficacy measurement scale from this study, it is readily apparent that the self-efficacy toward AP courses for an underserved, 1st-time AP student can indeed be bolstered. In fact, all 7 student participants experienced significant growth in their perceived, and self-reported, sense of self-efficacy toward AP over the course of the study.

Through analyzing interview, observational, and journaling data, broad themes emerged that served to highlight the significant and meaningful lived experiences of the 7 student participants and what contributed to their generalized growth in perceived self-efficacy toward AP coursework. The student participants' AP teachers, their formalized peer support network through the "I Am AP Club" and its Ambassadors and Mentors,

and the informal support of their own friend group all positively influenced their burgeoning sense of self-confidence in their new curricular environment.

Every student participant who demonstrated significant growth in terms of their reported sense of self-efficacy, spoke extensively of the support and experience with their AP teacher specifically and other teachers more generally. Positive affirmations from their teacher allowed students to believe more strongly in their own ability to master AP content. These positive affirmations carried the most significance and were only reported as consequential by student participants who had a meaningful relationship with their teacher. Further, the individual attention from teacher to student, through one-on-one meetings, tutoring sessions, and other personal communications, deepened the students' perception that the teacher held a vested interest in their own success.

Perhaps the perceived caring, individual attention, and vested interest in their success that some students received, allowed for the positive affirmations to carry meaning. However, what actually allowed some students to develop a strong personal bond with their teacher was not a focus of this study, but certainly warrants further attention and study.

Just as the role of the teacher was a significant contributor to the self-reported growth of the student participants' sense of self-efficacy, so to was the support garnered from peers. Whether that support came through the formalized role of the AP Ambassadors and/or AP Mentors or the less structured and formal support of the student participants' friends and classmates, these actions ultimately helped first-time AP students feel more confident and ultimately attain a growing sense of mastery with their new coursework. Peers provided the study participants with a sense of validation, guided

them in how to prepare and what to expect, and offered comfort and reassurance in times of stress.

The power and significance of this peer support was fully demonstrated in the case of D.D. As the only student participant who ultimately chose to dis-enroll from an AP class, D.D. did so because she had no friends in that particular class with whom she could identify or rely on for help and support. This finding, albeit from one student, indicates the necessity of purposefully and strategically pairing first-time underserved AP students with a friend or Mentor in each AP class. Clearly, leaving an underserved first-time AP student to navigate the complexities and rigors of the class alone is detrimental to the student and the overall goals of creating access and success.

The "I Am AP" Club at the host site provided the context and the mechanism for much of the social persuasion and vicarious experiences the student participants encountered throughout this study. The "I Am AP" Club was lead by the AP Ambassadors and the ranks of the AP Mentors were filled from club members who had more exposure and experience in the AP classroom. The exposure and experiences of the AP Mentors and Ambassadors in AP was shared extensively with the student participants and other club members. These vicarious experiences, in which the student participants heard first hand of their Ambassadors and Mentors struggles in AP, helped them form more self-efficacious beliefs regarding their own likelihood for success.

Likewise, the social affiliation the student participants encountered as members of the "I Am AP" Club served to bolster their budding sense of self-efficacy. In this environment, students developed a social network of peers and, in most cases, adults who were mutually aligned in the effort to successfully navigate the rigors of AP. Whether it

was through the socially supportive and affirming messages of their peers, the study tips, or the understanding that all students struggle, the “I Am AP” Club provided the mechanism for students to socially connect around AP.

CHAPTER FIVE: DISCUSSION

This chapter provides a summary of the data analysis, the findings, and the implications for educational leaders. Additionally, this chapter presents a discussion of the findings as well as suggestions for future research and professional practice.

Summary of the Data Analysis

Utilizing a mixed-methods case study research approach, the goal of this study was twofold: to learn if underserved, first-time AP students' sense of self-efficacy toward AP courses could be bolstered through the purposeful and socially supportive actions of teachers, school staff, and peers and then to be able to identify the concrete words and/or actions that the study participants identified as meaningful and contributing (or not so) to their sense of self-efficacy toward AP.

While this study focused on one high school, and a small number of first time AP students, the intended outcome of this study was not to widely generalize the findings. Rather, this study was intended to more deeply understand how a student's sense of self-efficacy towards AP coursework can be purposefully developed and enhanced. With limited research into how self-efficacy can be purposefully developed in underserved students, this study served to help narrow that research gap to the benefit of other such students in other schools across the country. The results of this study can provide a means for other schools and school leaders to begin to support more adequately their underserved students for the rigors and challenges of AP coursework and a more promising post-secondary educational future.

The disparate enrollment patterns seen in the Advanced Placement Program between affluent White and Asian students and their underserved peers is a daunting

reality. African American, Hispanic, English Language Learners, and/or low-income students are drastically underrepresented in AP (Klopfenstein, 2004b). Even those underserved students with the same probability of AP success as their more affluent, non-minority peers, remain significantly less likely to enroll in AP (College Board, 2014).

The limited resources of poor/minority schools, the low-socioeconomic status of students, academic tracking, an oppositional culture, and low expectations of teachers and students all create a complicated web of barriers to AP access and success for underserved students. Through their very absence from AP, underserved students damage their own belief in their academic ability and hinder their future academic performance (Bandura, 1993). This short-sighted view of themselves and their capabilities discourages underserved students from enrolling in rigorous academic courses that are within their abilities (Bandura, 1997).

Fortunately, knowing a student's sense of academic self-efficacy, strongly influences her academic paths and educational and life outcomes (Bandura, 1997; Schunk & Pajares, 2005), the outlook for underserved students' access and success in AP is promising. School leaders can take purposeful actions to nurture the academic self-efficacy of their underserved students to help them not only access but also, and perhaps more importantly, succeed in AP, college, and beyond. Because students with a strong sense of academic self-efficacy readily confront challenging tasks, have greater academic achievement, academic motivation, interest, and/or desire to enroll in broader and more challenging courses (Bandura, 1993; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Britner & Pajares, 2006; Bryan, Glynn, & Kittleson, 2011; Kupermintz, 2002; Pajares,

1996), this relatively unexplored area has potential positive consequences for underserved students' enrollment in AP.

Statement of the Problem

In the United States, educational attainment has long been held as the great social and economic equalizer for underserved students. Yet access to rigorous high school coursework, like AP, that purposefully readies students for college has been stratified to the detriment of undeserved student populations (Farmer-Hinton, 2011). Even when enrolled in AP, underserved students are less likely to successfully pass the annual AP exam (College Board, 2014). Regardless of the cause or the barrier, underserved students remain underrepresented in both participation and success in AP (Handwerk, Tognata, Coley, & Gitomer, 2008).

For this underrepresentation to be fundamentally altered and underserved students afforded a real opportunity to enroll and succeed in AP coursework, a new mindset must be purposefully cultivated within these same students in which they see themselves as academically capable and worthy. Working to bolster an underserved students' sense of self-efficacy toward AP coursework, through the workings of a school club, proves a viable path forward in the development of a new mindset, system, and theory. While the majority of research regarding self-efficacy has focused on the curricular areas of science and mathematics and limited self-efficacy studies have been conducted with underserved students specifically (Riconscente, 2014), this study was designed to address this gap in the research by studying the self-efficacy of underserved students towards AP coursework in general.

Purpose and Research Questions

This mixed-methods case study was designed to investigate the effects a formalized, social support co-curricular club can have on underserved students' sense of self-efficacy toward AP coursework. More specifically, I sought to explore the effects an "I Am AP" club had on underserved students' perceived sense of AP self-efficacy. The "I Am AP" club was specifically and intentionally created to acculturate underserved students to the rigors of AP through a socially supportive network of peers, teachers, and other school staff.

The following overarching research question and sub-questions guided this study: Can underserved students' self-efficacy toward AP be strengthened through the actions of teachers, school staff, and peers, and if so, what specific actions served to bolster their self-efficacy toward AP coursework?

1. Can the self-efficacy toward AP courses of an underserved, 1st-time AP student be bolstered?
2. In what ways can 1st-time AP students be socially supported to contribute to their sense of self-efficacy toward AP courses?

By investigating these questions, this study informed the conditions under which underserved students' sense of self-efficacy toward AP was enhanced.

Conclusions

Lower-level academic course tracks – where underserved students are disproportionately placed – become political spaces replete with meaning where underserved students create an identity as academically lacking (Yonezawa, Wells, & Serna, 2002). Having gone the majority of their high school career taking lower level courses, the vast majority of student participants in this study came to see themselves as

academically inferior to their AP counterparts. They described the school's AP Ambassadors and Mentors, who have their own academic struggles and challenges, as "…really smart people, really smart students…", while at the same time some questioned their own place in these same classes.

However, by hearing first hand the very real academic struggles of these same "smart people" in an "I Am AP" Club meeting, the first-time AP student participants began to see the academic rigors of AP and the ensuing challenges as "normal." Student participant, V.S. described the knowledge that AP Ambassadors and Mentors struggle thusly "...Now like after realizing that they can struggle too, it's like we all have our challenges and our weaknesses, and that I know that I'm not the only one. I always had that perspective, that they were like 'Oh, they're smart. They understand everything,' but at the same time, they struggle too."

Student participant, K.A. initially wondered, "…because sometimes I will just feel like, 'Am I the only one (who struggles)?'" Later, knowing she was not alone in her struggles, she said, "…it helped me see that I'm not alone and that…smart people can also have the same struggles. It's just a part of the process…" This revelation fostered a sense of relief with K.A. and allowed her to see herself on an equal footing with her peers.

All the student participants in this study felt this knowledge, that the school's AP Ambassadors and Mentors also struggled with AP coursework, was significant to finding their own worth and place within AP. Student participant M.L. perhaps said it best when he opined, "They struggled and got through. I can too." This sentiment aligns with Bandura's theory on the development of self-efficacy, in part, from vicarious

experiences. Perhaps it is not that these first time AP students lack the ability to handle the rigors of AP, but rather it is that they lack a sense of familiarity with their new environment and can gain that knowledge by hearing of the experience of their peers. Acculturating first time AP students to the demands and potential struggles of AP as something normal, is an important component of any plans to create greater access to AP for first-time students.

Academically able students often bypass higher track classes, like AP, regardless of their academic ability, because they long to be in classrooms where they fit in with their peers, their cultural backgrounds are valued, and they are not racially isolated (Walker & Pearsall, 2012; Yonezawa, Wells, & Serna, 2002). Similarly, with a limited view of themselves as academically capable students, formerly lower-tracked students, who are also disproportionately underserved students, once enrolled in AP courses struggle with the more challenging coursework and with forming a new identity in an unfamiliar environment (Yonezawa, Wells, & Serna, 2002). A peer support network, in part to help form a new identity, proved pivotal to the ultimate success of the student participants.

The vast majority of student participants involved in the study were either readily able to establish new supportive networks of friends, rely on existing friend networks, or take advantage of the school's social support through the "I Am AP" Club and/or an AP Mentor to help them navigate their new academic surroundings. The social persuasion and vicarious experiences these students encountered from this elaborate peer network helped bolster their sense of self-efficacy as Bandura theorized.

One notable exception, however, was discovered in the case of student

participant, D.D. Entering her senior year, and at the urging of her AVID teachers and counselor, D.D. enrolled in two AP courses for the first time in her high school career: AP Government and AP Environmental Science. The absence of a socially supportive network of peers in AP Government proved overwhelmingly daunting for D.D. and she would ultimately drop the course early on in the school year. D.D. described her struggles with that class and her lack of peer support in particular by stating, "Yeah, I felt like…'cause I didn't really know anyone in AP Government so I didn't really know who to go to or how to ask for help." D.D.'s isolation, lack of a peer network, and not-fitting in proved damaging to her performance and ultimately led to her decision to drop the course despite her academic potential.

This negative happening contrasted significantly from her discussion of her experience in AP Environmental Science, a course where more underserved students traditionally enroll for the first time and where D.D. had a ready supply of friends: "…whenever I have a question or I can't find it in the book or something, I would go to my friends and they would help me through it by just asking me questions and then helping me on what they know…We figure it out from there." I feel "that comfort around them." She lacked that same comfort in an equally demanding course because she lacked the social support of her peers.

When reflecting on her decision to drop AP Government, D.D. described AP Mentors as a potential life vest that would have helped her remain enrolled: "I think I would stick with the class…having a mentor I would just be on track…and just like knowing how like to study and all those study habits that I can learn from AP Mentors…I would be learning what my AP Mentor would tell me…and just keep getting better and

better." Clearly, intentionally connecting first-time AP students to a peer support structure, both inside and outside the AP class, is a vital consideration when seeking to broaden access to traditionally underserved students.

Limitations

In this section, the limitations presented in Chapter 3 are addressed as a means of reflection on the research process and as an acknowledgement there were limitations.

Sample Size and Generalizability

With a relatively small sample size of 7 traditionally underserved and first-time AP students, it was not practical to generalize the findings of this study to a larger population. Additionally, the intended outcome of this research study was not to generalize to the larger population, but rather to develop an in-depth exploration and understanding of the issue of underserved students' sense of self-efficacy toward AP coursework and a means to mitigate them. Therefore, the results from this study are not intended to be generalizable to all schools or students but rather served to provide insight into the role the "I Am AP" Club had in bolstering the self-efficacy of the student participants in the selected context. The individual stories of the student participants provided insight into this issue and relate to their own unique experience and serve to highlight how self-efficacy can be purposefully enhanced through the actions and activities of this particular club at this particular site.

Self-Reporting

Each student participant self-reported on their own unique beliefs and experiences in multiple data points in this study. This self-reporting of data is potentially problematic as it was possible student participants' simply shared what it was believed the researcher

and/or educator participant wanted to hear. To mitigate this concern, student participant data was triangulated with other data sources throughout the course of the study to ensure accuracy.

Positionality

As the principal of the research site, I had a unique experience and contextual knowledge and understanding that allowed me to more thoroughly explore the research topic. However, my position as principal may have made the research participants reluctant to speak honestly or frankly. To mitigate this concern, the educator participant conducted both student interviews and an outside colleague interviewed the educator participant.

Despite these efforts to lessen the concern of positionality, the educator participant was the AP teacher for two of the student participants and this may have influenced their responses to the interview questions. Likewise, all research participants knew I was the researcher and this may have influenced their candor. While these concerns were intentionally minimized through the research design and data triangulation, it is not possible to completely limit or measure the impact of positionality.

Objectivity

Both the "I Am AP" Club teacher leader, as the educator participant, and me, as the researcher, were deeply embedded in the context of this study. While this proved advantageous to our understanding of the students, their lived experiences, and the school and general setting, it may have clouded our complete objectivity. As the researcher, I documented my own activities, emotional responses, and thoughts and feelings throughout the course of the study to help ground my potential bias. The educator

participant completed the same journaling experience to help maintain her neutrality.

Post-Survey Results

The post survey results that demonstrated the growth of the student participants' perceived sense of self-efficacy toward AP were significant. By the end of the study, the 7 student participants' sense of self-efficacy measured above 98% of the initial 175 survey respondents. These 7 student participants became among the most self-efficacious AP students. However, it is important to note that these post-survey results were compared against the initial survey results of all 175 respondents.

The central question of this research study was, "can the self-efficacy toward AP courses of an underserved, 1st-time AP student be bolstered?" In measuring the growth of the self-efficacy of the student participants over the course of the study and in this way, I effectively answered the primary research question. However, it is possible this growth in self-efficacy would have been consistent with the growth made by all of the initial survey respondents if they were re-assessed at the end of the school year. When compared and measured this way, it is possible the growth in self-efficacy would not have represented anything other than growth experienced by all students irrespective of participation in the "I Am AP Club."

Recommendations for Future Research

This research study was an initial foray to explore if this line of inquiry – can the self-efficacy of first-time, underserved AP students be bolstered, and if so, how – was worth pursuing. Given the promising results from this initial, limited study, future studies should delve more deeply into this topic to see if the results can be replicated in other sites with similar students and with a larger population. The results reported in this

study were based on the lived experiences of 7 underserved, first-time AP students only and cannot be generalized to larger populations of students and school sites. Future studies should seek to mitigate this study's designed shortcoming and broaden the lessons learned from a larger population of underserved students.

Most self-efficacy research reported in Chapter 2 has focused on science or mathematics almost exclusively. In fact, the survey scale used to measure self-efficacy toward AP coursework was adapted from a scale designed to measure self-efficacy in mathematics. This survey did not focus on a particular subject matter, but more broadly focused on any AP class. The student participants in this study took a broad range of courses in various disciplines, yet no student participant was enrolled in an AP Mathematics course. Future research may be needed to explore the enrollment decisions of underserved students enrolling in AP for the first time and what can be done to address what appears to be a conscious decision to avoid AP Mathematics.

Given the importance the management of psychological states plays in the development of self-efficacy, and the relatively little growth the student participants demonstrated in this single aspect of self-efficacy, it remains unknown as to why T.D. was the only participant who openly spoke of her desire to "vent" her stress. While T.D. self-identified as being "obsessed about grades" perhaps she was more readily able to identify the extra stress and anxiety she placed on herself and therefore consciously explored healthy avenues to relieve it. Future research may want to explore more deeply how first-time undeserved AP students come to identify the stress of their new courses and what strategies they use to overcome it. Research in this area may help identify stress-relieving strategies that can be incorporated by all students.

Every student who made above average growth in terms of their perceived sense of self-efficacy when compared with the other student participants, spoke extensively of the support and experience with their AP teacher specifically. The vast majority of the students who grew less than the average did not speak at all about their AP teacher. This would suggest the AP teacher plays a significant role in the development of a first-time, underserved AP students' sense of self-efficacy and warrants further study to confirm, deny, or qualify this finding. Future research should also explore the mindset and belief of the AP teacher when leading underserved, non-traditional AP students; what is it that seems to make certain teachers stronger advocates for the success of their students than others?

The vast majority of student participants in this study were females. While the lone male student participant did also experience growth in his sense of self-efficacy similar to that of his female counterparts, it is currently unknown how social persuasion, self-efficacy toward AP, and gender interact on a broader scale. Perhaps intentional acts of social persuasion and peer influence are more impactful for females than males. Further, the self-efficacy scores reflect a composite score. Perhaps some aspects of self-efficacy interact with culture, personality, learning styles, or gender in unique and particular ways. Future research should seek to explore the topic of gender, culture, personality, learning styles and self-efficacy toward AP more thoroughly.

The students who ultimately were selected to participate in this study self-selected into the "I Am AP Club" at the host site and therefore took part in the initial self-efficacy assessment in October 2016. Given the host site had over one thousand students enrolled in at least 1 AP course at the time of the initial survey and several hundred who

were taking AP for the first time, what was unique about these 7 student-participants that prompted them to voluntarily participate in a club specifically designed to support them in their new curricular environment? Why did other students not self-select into the club? With the overwhelmingly positive results from this initial study into the this topic and the students' participation in the "I Am AP Club", future researchers may want to explore what prompts some students, and perhaps equally as important, and not others, to join a club designed to enhance their academic experience.

Finally, this study was designed to gain critical insight into the lived experiences of 7 underserved students who had enrolled in AP for the first time. While this study presents a comprehensive view of these students' experience, it does not delve deeply into the experience of the educator participant as an AP teacher nor of the AP Ambassadors and AP Mentors. Future researchers may want to investigate the experiences of those directly involved with similar efforts to nurture the self-efficacy of underserved students in AP for the first time. Specifically, did their experience benefit them and/or how did it shape their perceptions and beliefs about students enrolling in AP for the first time?

Implications for Professional Practice

This research study, while limited to one site and a relatively small number of underserved students enrolling in AP for the first time, was designed to learn if students' self-efficacy could be enhanced and how so. The positive findings from this study highlight several critical aspects of how exactly the student participants came to feel more self-efficacious toward their AP coursework. Given the strong correlation between academic self-efficacy and academic achievement and our schools' desire to create more

equitable access and success in rigorous courses for all students, school leaders should consider implementing several practices.

Given the widely understood importance of the classroom teacher in delivering positive outcomes for students regardless of the academic rigor, it was not entirely unexpected to find AP teachers also play a significant role in helping underserved, first-time AP students develop more self-efficacious beliefs in their ability to be successful with the rigors of AP. Given this, and before embarking on a campaign to broaden access to AP for students who do not traditionally enroll in the courses, it is important to ensure students are being directed to the right AP teachers and AP classes. Just as it took these 7 student participants time to develop a new mindset about their chance for success in AP, it is likely to take some teachers time to develop their own, new mindset, one in which they view their role as supporters of all students success and not as "gatekeepers" to the rigors of AP. If first-time underserved students are enrolled in AP classes in which teachers see it as their job to weed students out, rather than support and help develop a new student mindset, the likelihood of the students developing more self-efficacious beliefs would be greatly diminished. School leaders would be wise to intentionally develop a mindset and culture with AP teachers in which they see their role as not only teaching the "best and brightest" but also creating avenues to success for other equally capable students who are challenging AP for the first time.

In helping teachers develop a new mindset, efforts should be placed in providing concrete examples of how underserved students in AP for the first time came to view the supportive role of their teacher. Supporting students, an overly broad term, does little to give specific ideas or suggestions teachers can incorporate to help students develop more

self-efficacious beliefs about their ability to successfully navigate AP. Teachers should know the importance of developing a meaningful relationship with their students wherein they are viewed as a "cheerleader" from their care, words of affirmation, individual attention, and a demonstrated vested interest in the success of their students. Student participants in this study were all positively impacted by these same acts of support from their AP teachers.

In order to provide this specific support, it is important AP teachers know, from the first day of class, the names of their first-time AP students. With this knowledge, teachers can be more intentional in their interactions and create opportunities to demonstrate care and a vested interest in the success of these students. Similarly, and given the understanding of the significance formal and informal student mentors played in the development of this study's first-time AP students sense of self-efficacy, teachers can intentionally create study groups and support networks among the students in their classes.

Finally, and based on the findings of this study, underserved students enrolling in AP for the first-time, have a better opportunity to develop more self-efficacious beliefs regarding their new course work by participating in a formalized social support network like the "I am AP" Club at the host site. Knowing underserved students who enter AP for the first time feel as though they are academically lacking, now inhabit an unfamiliar environment, and need guidance in how to successfully navigate their new coursework, assignments, and exams, the formalized social network and mentoring opportunities afforded from this club were essential to the development of their self-efficacy.

One of the strongest discoveries made from this study was the significance of the

validation the 7 student participants gained when they learned other students, particularly the "smartest kids in the school", the AP Mentors, struggled too. Knowing "it was normal to struggle" offered reassurance to all the student participants and helped them view their own struggles not in terms of their perceived limited ability, but rather as "just part of the process." Affording underserved, first-time AP students a similar opportunity to hear of the struggles, and ultimate success, of their peers is an essential component of their self-efficacy development.

The support the AP Ambassadors and Mentors offered the student participants by sharing their own time management strategies, their approaches to handling stress, or how to more fully grasp the course content through their own study strategies, allowed these students to feel more comfortable and at ease with their AP classes. What was once seen as an unfamiliar, difficult environment, became more manageable through the shared strategies of their peers. Whether it was the sense of validation that others struggle, the help with what and how to study, or the comfort and reassurance the formalized mentors provided, as T.D. shared, "it means more coming from a student." It is critical that underserved, first-time AP students have the opportunity to hear and learn from their peers.

By intentionally cultivating a mindset among AP teachers in which they fully understand their role in helping underserved students experience success in AP through their own support mechanisms, demonstrated caring, words of affirmation, conveying a vested interest in the success of their students, and providing individual attention, coupled with a formalized, peer support network for these same students, school leaders can create a more equitable, inclusive, and successful culture for all students in their schools'

most rigorous coursework.

APPENDICES

Appendix A: AP Self-Efficacy Scale

Directions: Using the scale listed below, please circle the number that represents your level of agreement with each statement.

1= Strongly Disagree **5= Strongly Agree**

1.	I got high scores on my AP exam(s) in the spring.	1	2	3	4	5
2.	My favorite teachers were usually my AP teachers.	1	2	3	4	5
3.	My friends have discouraged me from taking AP classes.	1	2	3	4	5
4.	I get a sinking feeling when I think of trying hard AP course work.	1	2	3	4	5
5.	I received good grades in my AP classes.	1	2	3	4	5
6.	While growing up, many of the adults I most admired took AP classes.	1	2	3	4	5
7.	Other people generally see me as being a poor AP student.	1	2	3	4	5
8.	I would be upset if I had to take more AP courses.	1	2	3	4	5
9.	In AP classes, I rarely get the answer before my classmates do.	1	2	3	4	5
10.	Most friends of mine did poorly in AP classes.	1	2	3	4	5

11.	I get really uptight while taking tests in my AP classes.	1	2	3	4	5
12.	My counselor or teachers have singled me out as being a good student and has encouraged me to take AP classes.	1	2	3	4	5
13.	Among my friends I'm usually the one who figures out our AP assignments.	1	2	3	4	5
14.	My parents have encouraged me to be proud of my ability in my AP class(es).	1	2	3	4	5
15.	My mind goes blank and I am unable to think clearly when working on my AP work.	1	2	3	4	5
16.	I have received special awards for my ability in AP.	1	2	3	4	5
17.	My career role models (i.e., those people I'd like to be like) are mostly in fields that do not need AP classes.	1	2	3	4	5
18.	My friends have encouraged me to take AP classes.	1	2	3	4	5
19.	AP courses have always been difficult for me.	1	2	3	4	5
20.	I almost never get uptight while taking tests in AP.	1	2	3	4	5

21.	My friends tended to avoid taking AP courses.	1	2	3	4	5
22.	My parents did not take any AP courses.					
23.	Teachers have discouraged me from taking AP classes.	1	2	3	4	5
24.	I am rarely able to help my classmates with difficult AP course work.	1	2	3	4	5
25.	People I look up to (like parents, friends, or teachers) are good at AP.	1	2	3	4	5
26.	I usually don't worry about my ability to complete the work in my AP classes.	1	2	3	4	5
27.	I was often encouraged to enroll in AP classes.	1	2	3	4	5
28.	I took fewer AP courses than most other students did.	1	2	3	4	5
29.	Some of my closest high school friends excelled on their AP exams in the spring.	1	2	3	4	5
30.	My AP classes make me feel uneasy and confused.	1	2	3	4	5
31.	People I look up to have told me not to take AP courses.	1	2	3	4	5
32.	When I come across a tough assignment in AP, I work at it until I solve it.	1	2	3	4	5

33.	Many of the adults I know are in occupations that required success in AP classes.	1	2	3	4	5
34.	I have usually been at ease during tests in my AP classes.	1	2	3	4	5
35.	I have always had a natural talent for my AP classes.	1	2	3	4	5
36.	High school teachers rarely encouraged me to continue taking AP classes.	1	2	3	4	5
37.	My AP classes make me feel uncomfortable and nervous.	1	2	3	4	5
38.	Many of my friends are in, or intend to enter, fields that do not require AP classes.	1	2	3	4	5
39.	My parents have encouraged me to do well in my AP classes.	1	2	3	4	5
40.	I have usually been at ease in my AP classes.	1	2	3	4	5

Source	**Questions**
Performance Accomplishments / Mastery Experiences	1, 5, 9, 13, 16, 19, 24, 28, 32, 35
Vicarious Experiences	2, 6, 10, 17, 21, 22, 25, 29, 33, 38
Social Persuasion	3, 7, 12, 14, 18, 23, 27, 31, 36, 39
Emotional Arousal / Psychological States	4, 8, 11, 15, 20, 26, 30, 34, 37, 40

Reversed items	3, 4, 7, 8, 9, 10, 11, 15, 17, 19, 21, 22, 23, 24, 28, 30, 31, 36, 37, 38

Appendix B: Invitation to Participate in Mixed-Methods Case Study

Dear Mission Hills Advanced Placement Student,

I am a student in the Joint Doctoral Program in Educational Leadership at the University of California, San Diego (USCS) and California State University, San Marcos (CSUSM). I am conducting a research study, as part of my dissertation, to explore the self-efficacy development of students who have not been traditionally enrolled in Advanced Placement (AP) courses. I am contacting you because you are new to the AP program and have valuable insights and perspective.

Through the course of my research, I hope to identify specific actions that serve to bolster the self-efficacy of non-traditional AP students. Self-efficacy is defined as "one's belief in one's ability to succeed in a given task or situation." I believe this research study, and your involvement in it, has the potential to shape educational policies, practices, and interventions to advance the success of non-traditional students in AP.

If you choose to participate in this study, you will be asked to complete a brief 40 question survey at two times throughout the school year (Fall and Spring) to measure your sense of self-efficacy toward AP coursework. Additionally, I will join the I Am AP club occasionally to observe how the club is conducted. Finally, you will be interviewed either individually or in a small group to discuss your experience in AP and the I Am AP club. The interview will last approximately one hour. With your signed permission, the interview will be audio recorded and transcribed. You will be provided a typed transcript of your interview to verify its accuracy and to clarify any information.

Your confidentiality will be highly regarded and respected throughout your involvement in the research study. Your name will never be used in any reporting of the data or findings, and your identity will be protected. Additionally, all surveys and data files associated with observations and interviews will be securely locked in filing cabinet in my office and any information stored on my computer will be password protected.

It is my sincere hope you will agree to participate in my research project as I feel you have a unique and valuable perspective that could help to shape future school policy and practices. To compensate you for your time and to thank you for your participation, I will provide you with two AMC movie passes. If you are willing to participate in this study, please respond by September 20, 2016. If you choose not to participate in the study, you are welcome to continue as a member of the I Am AP club. Please do not hesitate to let me know if you have any questions or concerns.

Sincerely,

Courtney Goode, Doctoral Student
UC, San Diego and CSU, San Marcos
(760) 290-2710; courtney.goode@smusd.or

Appendix C: Student Assent Form, AP Self-Efficacy Survey

Self-efficacy, one's belief in one's ability to succeed in a given task or situation, is an important component of student success in school and academic courses and other aspects of life. This survey is designed to measure your sense of self-efficacy toward your Advanced Placement (AP) course(s) and is an important element of this research study.

With your consent, I would like you to complete the 40 question AP Self-Efficacy Survey. This survey will take approximately 10 minutes of your time and will ask you questions about your background and your beliefs in your ability to be successful in your AP course(s). Your survey responses will help me better understand how a student's sense of self-efficacy toward AP coursework can be intentionally bolstered through the supportive actions of others.

Before taking the survey, please keep these important considerations in mind:

1. There is no "right" or "wrong" answer to any survey question. Your honest answer to each question is your best answer.
2. If there is a question you do not want to answer, you may skip the question and move on to the next one.
3. If at anytime after starting the survey you wish to stop, you may do so.
4. This survey is not a requirement for your participation in the I Am AP club nor is it part of your grade in your AP course(s) or any other of your courses.
5. Your participation is purely voluntary.

Your signature below indicates you have read this form and consent to participate in the AP Self-Efficacy Survey.

_____	_____	_____	_____
Student Signature	Date	Researcher Signature	Date

Appendix D: Student Assent Form, Interviews

Your interactions in the I Am AP club may be important to the development of your sense of self-efficacy toward your AP course(s). Understanding self-efficacy, one's ability to succeed in a given task or situation, is an important component of this research study.

With your consent and as a part of this research study, we would like you to ask you questions about your experiences in the I Am AP club and your AP class(es). As a student in this club and in AP, you have unique knowledge and perspective that is a valuable component of this study. Your responses to the interview questions will help me better understand how a student's sense of self-efficacy toward AP coursework can be intentionally bolstered through the supportive actions of others.

Before participating in this interview, please keep these important considerations in mind:

1. There is no "right" or "wrong" answer to any interview question. Your honest answer to each question is your best answer.
2. If there is a question you do not want to answer, you may tell the interviewer to move on to the next question.
3. If at anytime after starting the interview you wish to stop, you may do so.
4. This interview is not a requirement for your participation in the I Am AP club nor is it part of your grade in your AP course(s) or any other of your courses.
5. Your participation is purely voluntary.
6. Your interview will be audio recorded and transcribed. You will be provided a typed copy of your interview transcription and will be allowed to review it for accuracy or to remove any of your comments you feel may reveal your identity or you would otherwise wish not be included.

Your signature below indicates you have read this form and consent to participate in the interviews.

_____	_____	_____	_____
Student Signature	Date	Researcher Signature	Date

Appendix E: Parent Informed Consent Form, Self-Efficacy Study

California State University, San Marcos
Consent to Have Your Child Act as a Research Subject

Overcoming Barriers to Advanced Placement: Bolstering the Self-Efficacy of Underserved Students

Courtney Goode, under the supervision of Dr. Laurie Stowell, Professor and Chair, CSUSM School of Education, with approval from the San Marcos Unified School District, is conducting a research study to learn how the self-efficacy toward Advanced Placement (AP) course work of under represented students is developed. Self-efficacy is defined as, "one's belief in one's ability to succeed in a given task or situation." As a parent of an under represented student enrolled in AP for the first time, your permission is requested for your child to participate in this research study.

If you grant permission for your child to participate in this research study, he/she will be involved in the following:

1. Attend monthly meetings of the I Am AP club during lunch.
2. Students will take an AP Self-Efficacy survey two times throughout the school year. The survey will first be administered in the Fall and then will be administered a final time in the Spring. The survey is designed to measure a student's belief in his/her ability to be successful in AP coursework.
3. Students will participate in interviews regarding their experiences in their AP class(es) and the I Am AP club. The interviews will be conducted by the I Am AP club teacher leader in her classroom and will take place in January and June 2017. The interviews will last approximately one hour and will be audio recorded and transcribed. Your student will be provided a typed transcript of his/her interview to review before its use in the study.

Participation in this research study may involve minor risks. The risks associated with this study include:

1. A potential for a loss of confidentiality for research participants. This is highly unlikely as no names or any identifying information will be used in reporting the data. All research data and records will be kept in a locked filing cabinet inside a locked office. All research data kept on a computer will be password protected. The CSUSM Institutional Review Board provides oversight to minimize risks and may review research records and protocol.
2. Students may become bored or fatigued with the interview process. As the interviews are voluntary, students may skip questions or ask that the interview be discontinued if they become bored or tired.

Since this is a research study, there may be some unknown risks that are presently unforeseeable. Should any new risks be known, you will be informed immediately.

Participation in this research study is purely voluntary and in no way will be used as a component of a student's grade in any course or standing in any program affiliated with the school. Consent to participate in the study may be revoked by the parent or student at any time. **Revocation of the consent to participate in the study will not adversely affect a student's ability to participate in the I Am AP club, grade in any course, or standing in any program affiliated with the school.**

Participation in this study may or may not benefit your student. The I Am AP club was explicitly created as a supportive resource for students engaged in the academic rigors of AP coursework. Participation in this club and the study may help your student feel more confident and comfortable in his/her AP classes. However, it may be that there is no benefit to participation in this club or this study. If you or your student chooses not to participate in the research study, s/he can still participate in the I Am AP club.

Unanticipated events may arise, however unlikely, which will necessitate your child be removed from the research study. If the researcher feels it is the best interest of your student or the study to no longer participate, he/she may be removed without your consent. Your student may also be removed from the study if he/she does not follow the survey or interview instructions as presented. Your child will be able to ask questions or seek clarification at any time during any aspect of the study.

If, during the course of the study, new information becomes available that may affect your willingness to have your student to continue to participate, you will be notified immediately.

To compensate your student for his/her participation in this voluntary research study, he/she will provided two AMC movie tickets.

Courtney Goode has explained this research study to you and has answered any questions you may have had and you have been provided a copy of this signed consent form. Should you have any further questions or encounter any problems related to this study, please contact Courtney Goode at (760) 290-2711. Additionally, you may contact the California State University, San Marcos Institutional Review Board (IRB) at (760)-750-4029 to inquire about this research study, your rights as a research subject, or to report any research-related problems or concerns.

I give consent for my child to participate in this research study.

_____	_____	_____
Subject Signature & Date	Parent Signature & Date	Witness Signature & Date

Appendix F: Observational Protocol

Date	
Time of Observation	
Specific Location of Observation (Separate Protocol to be used for each Setting)	
Observer's Role	
Who is Being Observed	
Notes	

The purpose of these observations is to gather data that may contribute the self-efficacy development of underserved students in AP courses. The specific components of self-efficacy development are listed below in four distinct categories. The listing of components is included to expressly guide the researcher in his observations.

Mastery Experiences – An individual's prior success in a given task or situation serve to bolster confidence while experiences with tasks or situations that are interpreted as unsuccessful general lower confidence. These internal interpretations of experiences form the basis for beliefs regarding the expectation of success in similar, future tasks and situations. Mastery experiences that result from overcoming challenges generally promote a more irrepressible sense of self-efficacy than those experiences that are more easily mastered. In short, mastery experiences alone do not promote self-efficacy but the internalized process of the success itself, the perceived difficulty of the task, the effort exhausted in the endeavor, and help received or not in its ultimate completion.

Vicarious Experiences – Students also formulate their self-efficacy through the observation of others engagement and performance with a given task or situation. Observational information is internalized to evaluate a student's own likelihood of experiencing success in the same task or situation. While not as strong of a contributor to self-efficacy as mastery experiences, vicarious examples prove more sensitive when a student has limited prior experience with a given situation or task or is uncertain in her abilities. When students with limited prior experience in a task or situation or who doubt their own abilities observe a model with similar characteristics as themselves, the interpretation of the vicarious experience is more profound and impactful. The observation of a model largely dissimilar to the observer does little to bolster self-efficacy.

Social Persuasion – Both the verbal and nonverbal judgments others provide regarding one's perceived ability with a given task or situation also help form the basis of a student's self-efficacy. While positive persuasions and affirmations may work to bolster a student's self-efficacious beliefs, negative assessments of ability and potential serve to weaken it. The negative verbal and nonverbal assessments more easily weaken self-efficacy than positive encouragement serves to strengthen it. Specific acts of social persuasion alone do not positively alter self-efficacy but rather can when interpreted in harmony with self-efficacy's other sources.

Psychological States –An individual's interpretation of the emotional states like anxiety and arousal and the formation of stress associated with a given task or situation also contribute to self-efficacy formation. The given emotional state held in expectation of or during a task or situation helps formulate an individual's extent of confidence in a positive outcome and experience. Generally speaking, anxiety, tension, and negative stress and emotional states may increase the probability of a negative outcome and lower self-efficacious beliefs. Conversely, positive arousal with a given task or situation serves to bolster self-efficacy.

Appendix G: Initial Semi-Structured Interview Protocol, Student

Date	
Time	
Location	
Interviewer	
Participant	
Grade	

Thank you for agreeing to participate in this interview. The purpose of this study is to learn and understand how a student's sense of self-efficacy toward AP coursework can be intentionally bolstered through the supportive actions of others.

This interview will be audio recorded. Your interview data will be kept strictly confidential and will be made available only to the researcher for analysis purposes only. Only the researcher and a professional transcriptionist will listen to and transcribe your responses to the interview questions. The audio recorded will be destroyed following the completion of the research study (approximately, January 2018).

Your participation in this study and interview is entirely voluntary and may be withdrawn at any time for any reason. If the length of the interview becomes too long you may ask to stop at any time. If there is a question you would rather not answer, please simply ask me to move to the next question. Your participation in this interview will in no way affect your grade in your AP class(es) or any other class.

Questions:

1. Please tell me about a time when you felt successful in one of your academic / AP classes.

2. Thinking of your AP classes, who do you aspire to be like in terms of study habits?

3. Can you tell me about a time when you felt you were stuck with your AP schoolwork and someone supported you?

4. Can you tell me about a time when you were "stressed" with your AP class? How did you handle that?

Appendix H: Semi-Structured Interview Protocol, I Am AP Teacher Leader

Date	
Time	
Location	
Interviewer	
Participant	

Thank you for agreeing to participate in this interview. The purpose of this study is to learn and understand how a student's sense of self-efficacy toward AP coursework can be intentionally bolstered through the supportive actions of others.

This interview will be audio recorded. Your interview data will be kept strictly confidential and will be made available only to the researcher for analysis purposes only. Only the researcher and a professional transcriptionist will listen to and transcribe your responses to the interview questions. The audio recorded will be destroyed following the completion of the research study (approximately, January 2018).

Your participation in this study and interview is entirely voluntary and may be withdrawn at any time for any reason. If the length of the interview becomes too long you may ask to stop at any time. If there is a question you would rather not answer, please simply ask me to move to the next question. Your participation in this interview will in no way affect your evaluation as a teacher, the AP/Honors Access and Support Teacher Leader, or any other program or component of your job as an educator in San Marcos Unified School District.

Questions:

1. Tell me about a time where you feel you encouraged a student who was struggling with AP.

2. Tell me about a time when a student was stressed either in your AP class or with another AP class.

3. Tell me about a time when you feel you helped a student experience success in your AP class or in any of their AP class(es).

4. Tell me about a time when an AP ambassador connected with a first-time AP student.

Appendix I: Final Semi-Structured Interview, Student

Date	
Time	
Location	
Interviewer	
Participant	
Grade	

Thank you for agreeing to participate in this interview. The purpose of this study is to learn and understand how a student's sense of self-efficacy toward AP coursework can be intentionally bolstered through the supportive actions of others.

This interview will be audio recorded. Your interview data will be kept strictly confidential and will be made available only to the researcher for analysis purposes only. Only the researcher and a professional transcriptionist will listen to and transcribe your responses to the interview questions. The audio recorded will be destroyed following the completion of the research study (approximately, January 2018).

Your participation in this study and interview is entirely voluntary and may be withdrawn at any time for any reason. If the length of the interview becomes too long you may ask to stop at any time. If there is a question you would rather not answer, please simply ask me to move to the next question. Your participation in this interview will in no way affect your grade in your AP class(es) or any other class.

Questions:

1. Please tell me what you thought when you saw your semester grade card for your AP class.

2. Please tell me about a time you talked with one of the AP Ambassadors.

3. Can you tell me about a time when someone encouraged you in your AP class?

4. Can you tell me about a time when you were able to overcome being "stressed" in your AP class?

Appendix J: Informed Consent, Educator Participant

California State University, San Marcos
Consent to Act as a Research Subject

Overcoming Barriers to Advanced Placement: Bolstering the Self-Efficacy of Underserved Students

Courtney Goode, under the supervision of Dr. Laurie Stowell, Professor and Chair, CSUSM School of Education, with approval from the San Marcos Unified School District, is conducting a research study to learn how the self-efficacy toward Advanced Placement (AP) course work of minority students is developed. Self-efficacy is defined as, "one's belief in one's ability to succeed in a given task or situation." As an educator of AP students and the teacher leader of the I Am AP club, your permission is requested to participate in this research study.

If you agree to participate in this research study, you will be involved in the following:

1. Keep a reflective journal regarding your interactions with the I Am AP club students.
2. Participate in a semi-structured interview with the study researcher regarding your involvement with the I Am AP club and as an AP teacher. You will be paid the hourly teacher rate, by the researcher not the San Marcos Unified School District, for your time conducting the semi-structured interviews and other activities associated with the study that extend your contracted day.
3. Conduct semi-structured interviews with study participants. You will be paid the hourly teacher rate, by the researcher not the San Marcos Unified School District, for your time.

Participation in this research study may involve minor risks. The risks associated with this study include:

1. A potential for a loss of confidentiality. This is highly unlikely as no names will be used. All research data and records will be kept in a locked filing cabinet inside a locked office. All research data kept on a computer will be password protected. The CSUSM Institutional Review Board provides oversight to minimize risks and may review research records and protocol.

Since this is a research study, there may be some unknown risks that are presently unforeseeable. Should any new risks be known, you will be informed immediately.

You will be compensated for your participation in this research study as noted above. Compensation for your participation will be paid directly by the researcher and not the San Marcos Unified School District. Your participation in this study will not be used as a component of your teaching evaluation nor an evaluation of you acting in the role of the AP/Honors Access and Support Teacher Leader at

Mission Hills High School. You may revoke your consent to participate in this study at any time. Revocation of the consent to participate in the study will not adversely affect your standing or evaluation as a teacher or the AP/Honors Access and Support Teacher Leader or any other program affiliated with your employment with the school.

Participation in this study may or may not benefit you as an educator. As a participant in this study, you may gain unique insight into the thoughts and perceptions of students in your classroom. However, it may be that there is no benefit to participation in this club or this study.

If, during the course of the study, new information becomes available that may affect your willingness to continue to participate, you will be notified immediately.

Courtney Goode has explained this research study to you and has answered any questions you may have had and you have been provided a copy of this signed consent form. Should you have any further questions or encounter any problems related to this study, please contact Courtney Goode at (760) 290-2711. Additionally, you may contact the California State University, San Marcos Institutional Review Board (IRB) at (760)-750-4029 to inquire about this research study, your rights as a research subject, or to report any research-related problems or concerns.

I grant my consent to participate in this research study.

_____ _____

Subject Signature & Date Witness Signature & Date

Appendix K: Approval for Research Study

September 7, 2016

Courtney Goode
1576 Via Paloma
Escondido, CA 92026

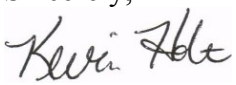
RE: Request to Conduct Research in the San Marcos Unified School District

Dear Mr. Goode,

I have reviewed your research proposal, *Overcoming Barriers to Advanced Placement: Bolstering the Self-Efficacy of Underserved Students.* Your proposed study is designed to measure and investigate the self-efficacy of first time AP students at Mission Hills High School and is in line with District initiatives to create greater access and success for traditionally underserved student populations. As such, I grant you permission to conduct your study at Mission Hills High School with the understanding participation in the study by students and staff remains purely voluntary.

Upon completion of your study, please provide my office with a summary of your findings.

Sincerely,



Kevin D Holt, Ed.D
Superintendent
San Marcos Unified School District

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