Evaluating High School Principals' Perceptions of Barriers to Black Students' Enrollment in Advanced Placement (AP) Academic Coursework in Northeast Ohio

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ABSTRACT

Black students in high schools do not matriculate in advanced level coursework, such as advanced placement (AP) classes, at the same rate as their White peers. The opportunity to participate in AP in high school has been shown to influence enrollment in college, earning higher overall grades, and better performance on high stakes assessments such as the ACT. A quantitative survey tool was administered to high school administrators from the Cleveland Area Minority Educators Recruitment Association (CAMERA) consortium, whose main objective was the recruitment and retention of minority educator candidates through networking opportunities, hiring, supporting minority educators, and promoting multicultural and multiracial relations. The study explored the relationships between the factors of poverty, caregiver education, teacher and school counselor expectations, Black teacher exposure, and peer influence and enrollment in advanced placement coursework. Additional influences were examined to determine if a correlation could be drawn between the demographic information of building administration and AP enrollment. The study showed certified staff and personal/familial factors as having the greatest influence on Black student AP enrollment. Leveraging current staff, recruiting, and retaining a more diverse staff, and removing any financial barriers for minority students were all possible solutions offered to improve AP enrollment. The outcomes of this study benefitted school principals, other school administrators, teachers, school counselors, and community members to mitigate the negative impact of these barriers. In turn, addressing these issues will help to shrink the current opportunity gap found between Black and White students in AP courses.

Keywords: advanced placement, Black students, enrollment barriers

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CHAPTER I: INTRODUCTION

Black students in predominantly White schools were consistently determined to be under-enrolled in Advanced Placement (AP) courses even when access to such courses was present (Jeffries & Silvernail, 2017; Patrick et. al, 2020; Ricciardi & Winsler, 2021). Understanding the reasons why Black students do not enroll in these courses is important so that ways to improve matriculation can be determined and implemented. High school principals are instrumental in bringing about effective change with this issue because of their involvement in scheduling, staffing, and supporting students. Ideally all students, but especially those from marginalized populations, should be involved in AP level coursework because of the advantages that these types of classes offer them. Students who participated in AP coursework were more likely to go to college, earn higher grades, and perform better on high-stakes tests like the ACT (Atahuene, 2021; College Board, n.d.; McKillip & Rawls, 2013; Ricciardi & Winsler, 2021).

Background of the Problem

The AP program was initially introduced in the 1950s as America's response to worldwide events threatening our status as the only superpower (Rothschild, 1999). The Cold War and Korean War convinced many that reforms in the American educational system were necessary to show that American democracy was better than Communism. There was a demand for talented engineers and scientists in the United States because the nation hoped to expand its influence on the global scene (Rothschild, 1999). At the onset, the AP program was designed to cater to elite students as evidenced by a passage from the General Education in School and College committee report which stated, "while we have tried to outline a program of study which would offer all students of college caliber a better education, we have been particularly concerned about the superior students" (Rothschild, 1999, p. 177). Several decades after the

inception of the AP program, the first commentary about racial disparity in the AP program was mentioned. Professor William R. Hochman of Colorado State University in 1970 noted, "Because there have not been many Black students in AP courses, some people regard the program as touched with…'institutional racism', that is, the very structure of the program results in an unintended exclusion of Blacks" (Rothschild, 1999, p. 186). High school administrators must acknowledge past racism in the AP program and should work passionately with students, parents, and the community to break down the racial barriers for Blacks who do not enroll in AP courses.

While there has been some improvement over the past two decades for increased participation in AP courses by Black students, hurdles remain for why they are underrepresented in these classes. Research has already identified some of these disadvantages, which included: poverty, caregiver educational levels, counselor relationships, teacher expectations, and a lack of minority teachers (Flanagan et. al, 2020; Grissom et. al, 2020; Houston & Xu, 2016; Jeffries & Silvernail, 2017; Monaghan et. al, 2020; Ricciardi & Winsler, 2021). While Black students have the same academic goals as other subgroups, they are negatively impacted by the perception of poor academic motivation, which may be a product of an environment that prioritizes the White, American, middle-class as the norm by which all other groups are judged (Rust, 2019).

The College Board, who oversees SAT exams and AP exams for the successful transition from high school to college, has developed recent programs to make AP courses accessible for low-income students, many of whom are Black and Latino, because they are aware of the "equity gap" that exists (Jaschik, 2019). Data reported from Jaschik (2019) showed that Black students represented 8.8% of exam takers and 4.3% of exam takers who earned a three or higher on at least one exam, whereas White students represented 49.5% of exam takers and 54% of exam

takers who earned a three or higher on at least one exam. This study will clarify, by describing principals' perceptions, the barriers affecting Black students' enrollment in AP coursework. The high school principals selected for participation in the study were all members of the Cleveland Area Minority Educators Recruitment Association (CAMERA) consortium, which focused on the recruitment and retention of minority educator candidates. The CAMERA consortium aims to increase the number of minority educators through networking opportunities, hiring, and supporting minority educators, promoting multicultural and multiracial relations, and supporting the Future Educators of America Club. Representing a wide array of districts from large urban to suburban, with varied levels of Black student enrollment and socioeconomic status, this study, through survey of high school principals, will outline several practical solutions to improve Black student enrollment in AP courses.

Statement of the Problem

A disproportionate number of Black students have been excluded from participating in AP courses due to institutional and environmental barriers (Jaschik, 2019; Jeffries & Silvernail, 2017; Robinson, 2018). Data from the 2015-2016 school year revealed that Black students in Ohio represented only 4.8% of student enrollment in AP coursework and only 1% received a passing score (Chatterji et al., 2021). Nationally, there was a significant discrepancy between White and Black student performance on AP exams; 55% of White students compared to only 4.3% of Black students passed the AP exam (Atahuene, 2021; Kim, 2021). In an effort to maintain AP's reputation as a college-like experience for high achieving students, high schools across the country have restricted access to AP courses by requiring certain grade point averages, standardized test scores, or recommendations from specific teachers (Starr, 2017). This has led to unequal access to AP coursework for Black students. Rotenberg (2020) noted that many Black

students attended high schools with few to no AP courses offered and some chose to not enroll even when there was an opportunity to do so. Starr relayed,

> the College Board, which administers the AP program, has acknowledged that significant numbers of Black and Hispanic students who have the potential to succeed in AP never take those classes, either because their schools don't offer them or because they aren't placed into them. (2017, p. 72)

Current researchers felt further investigation into the expansion of school-based factors influencing AP course selection was warranted to highlight the resource and opportunity gap between Black and White students (Ricciardi & Winsler, 2021). Kolluri (2018) contended that research examining school practices at the root level was needed to better understand how the AP program impacted highschoolers today. Should Black students continue to under-enroll in AP coursework, far-ranging consequences will inevitably arise. Students who were not being provided the challenge of AP coursework had been shown to suffer from lower ACT scores, lower grades, and were less likely to enroll or be successful in college programs (Jeffries & Silvernail, 2017; Kolluri, 2018; Ricciardi & Winsler, 2021).

Purpose Statement

The purpose of this quantitative study was to understand the perceived roadblocks that Black students experienced when they chose to either enroll or forgo the opportunity to take AP courses from the perspective of high school principals. An examination of variables such as socioeconomics, caregiver educational levels, educator and school counselor relationships, peer influence, and access to teachers of the same race will facilitate further understanding of the educational choices made by Black students, with the end goal being shrinkage of the opportunity gap that currently exists in AP courses today. This study did not provide treatments

or remedies, but sought to identify the external and institutional barriers inhibiting Black student enrollment in AP. Once high school administrators possessed the evidence about which barriers were most impactful, they could then implement mitigation strategies to better serve their Black students in the AP environment.

Rationale and Significance of the Study

The purpose of this study was to clarify, by describing principals' perceptions, the barriers affecting Black students' enrollment in AP coursework. Understanding the beliefs and perceptions of the high school principals in the CAMERA consortium offered insight about which barriers were most impactful. While Black student enrollment in AP courses has shown improvement, they still matriculated into these courses at a disproportionately lower rate in comparison to their White peers (Darling-Aduana & Heinrich, 2020; Jeffries & Silvernail, 2017; Kolluri, 2018; Patrick et al., 2020; Ricciardi & Winsler, 2021). Existing literature has examined several prevalent barriers including poverty, caregiver education levels, lack of minority teachers, and educator expectations; however, this study was conducted with a specific emphasis on districts who focus their certificated recruitment efforts on hiring a diverse staff. This districtwide focus explicitly addressed one of the institutional barriers found within existing literature. This study was designed to discover exclusionary acts limiting Black student enrollment in AP courses and to determine more inclusive practices for future potential enrollees.

The goal of this research was to provide a benefit to society through the act of improving on educational practices that caused an opportunity gap between Black and White students. Breaking down the barriers which kept Black students from AP coursework will increase academic opportunity for this underrepresented population. Greater access to AP courses will provide a learning benefit that extends into post-secondary enrollment and will make it more

likely that a student graduates from college. This research will also allow high school administrators to better identify practices that limit Black student enrollment in AP courses and address those issues within their buildings or districts. The high school principals could then share what information they uncovered with high school guidance counselors and high school teachers. The study will benefit Black students and their families most directly but will also improve the nation by creating a higher educated workforce in the Technology Age.

The research study will benefit education by examining school districts who prioritize hiring minority candidates. While acknowledged as a contributing factor in the research, little has been done to address this area, even though the issue has been identified. The diverse district representation found within the study will help to build context for how practices are similar and different within the districts. Recognizing practices shared commonalities despite geographic and demographic differences will allow the study results to be generalized and replicated in other regions for future investigations.

Research Questions

There were four questions designed to learn about high school principals' perceptions of barriers limiting Black students from enrolling in AP coursework. The research questions were:

1. What is the percentage of Black students enrolled in AP courses in high schools within the CAMERA consortium as reported by principals?
2. According to CAMERA consortium principals, what are the school-related factors that limit Black students from enrolling in AP courses?
3. From the perspective of CAMERA consortium principals, what are the personal and familial factors that serve as barriers to Black students' enrollment in AP courses?

4. Is there a statistical difference between the enrollment of Black students in AP courses and the demographic characteristics of school administrators, such as race, years of experience, or gender?

Overview of Methodology

The research study used a quantitative, descriptive 25-question survey to examine the high school administrators' perceptions of barriers affecting Black students' enrollment in AP courses. The survey instrument collected information from a group of principals who were CAMERA consortium members. They were dedicated to cultural responsiveness by actively attempting to recruit more minorities into the education profession. The census survey instrument created by me was designed, completed, and disseminated using the SurveyMonkey platform. Each section of the census survey was tethered to specific research questions explored in the study. The study variables included high school principals' perceptions of Black student representation in AP, school and personal/family factors, and differences between administrative demographics and Black students enrolled in AP.

Approximately 109 high school administrators in the CAMERA consortium satisfied the criteria for participation. CAMERA consisted of 20 public school districts with typologies ranging between Typology Code 4- Small Town – High Student Poverty & Average Student Population Size to Typology Code 8- Urban – Very High Student Poverty & Very Large Student Population as identified by the Ohio Department of Education's 2013 School District Typology report. The study utilized non-probability sampling, meaning that it did not involve random selection of participants. The sample participants were intentionally selected to gain their perspective on the study questions (Trochim et al., 2016). Convenience sampling was also used

because I am employed in a participating CAMERA district, which increased the access to the sample population (Kothari, 2004).

The one-time survey was divided into four separate parts to collect the data necessary to explore the central question of the study: What are high school principals' perceptions of barriers affecting Black students' enrollment in AP courses? The correlational research conducted within the study was designed to be non-experimental because there was no control group or remedy applied to subjects (Field, 2018). The selected items assessed the high school principals' perception on school factors and personal/family factors that influence Black enrollment in AP. Additionally, the instrument gathered demographic information on the respondent and their school district to determine whether there were differences in the data. The survey instrument aligned to the themes emerging from the theoretical framework and previous literature regarding limiting factors for Black students in accessing AP coursework.

Upon approval from the Internal Review Board (IRB) at Youngstown State University to study school administrators, a previously developed candidate list was used to deliver the survey instrument. The data collection platform utilized by me was SurveyMonkey, where each potential respondent could have the survey delivered via email. The collected information was then downloaded and transferred to Microsoft Excel, version 16.71 to organize and review what was submitted by the respondents. Once the data was screened within Excel, the information was loaded into the IBM SPSS Statistics program. I used SPSS version 29.0.0.0 (241) provided by the Youngstown State University app store. Descriptive and inferential statistics were then used to organize the data in a way that would show common characteristics of the high school principals and the districts within the consortium.

Limitations of the Study

In this study, a quantitative tool was used to collect data from Northeastern Ohio school districts who participate in the CAMERA consortium. The study did not cover all barriers but sought to determine which were most prevalent. Several other barriers were omitted from the survey to make it more manageable. Examples of the omitted barriers included: gifted identification of Black students, an examination of Black students in AP courses in rural school districts, and Black student enrollment in honors or advanced level courses. While each of these issues merit further investigation, they were beyond the scope of what this research study examined.

My personal bias presented a limitation of the study. I have personally observed the limited enrollment of Black students in AP courses that had created a belief system that this practice was pervasive in most educational environments. The study did not introduce a remedy, treatment, or program to increase enrollment, rather it prioritized which school and personal/family factors were barriers that warranted focus. While one could argue that the barriers in this study could be examined from the teaching staff, student, and parent perspective, this study focused on administrators. This was due to their ability to make decisions which impacted curriculum development and class enrollment within a consortium high school. By identifying the most prevalent barriers, administrators could strategically plan to help their Black students overcome the issue and shrink the opportunity gap currently existing between White and Black students in AP. Future research could overcome the limitations by increasing sample size to include other administrators, guidance counselors, and AP teachers or by interviewing students and/or their parents to determine what they felt were barriers to AP coursework.

Definition of Terms

The following section provides the operational definitions of verbiage found and contextually used throughout the study.

Access/Accessibility: Being able to receive the same opportunity for resources in the same manner as non-minoritized peers (Ricciardi & Winsler, 2021).

Acting White: A label placed on high achieving Black students by other Black students that is perceived to be negative within the Black community. Within the White community high achieving students are called nerds but the acting white label is associated with race (Cook & Ludwig, 1998; Peterson-Lewis & Bratton, 2004; Tatum, 2017).

Advanced Placement (AP): A program developed in the 1950s where college-level courses are offered at the high school level. With the passage of an end-of-course exam, students may earn college credit. As of 2020, 2.6 million students were involved in 38 different AP courses (Kim, 2021; Kolluri, 2018; Rothschild, 1999).

Affirmative Action: Executive Orders signed by both President Kennedy and President Johnson, which established laws prohibiting discrimination in employment practices based on race, color, creed, or national origin. President Johnson later amended the Order to include sex (Ladson-Billings, 2021; Morris, 2001).

Cleveland Area Minority Educator Recruitment Association (CAMERA): A consortium of 20 school districts in Northeast Ohio who share a common goal of developing more minority educators to better serve the needs of a diverse student population.

Certificated: These are positions within a school district that require a person to have a professional certificate or license as a method to prove their qualifications for the position. Examples of certificated staff are teachers, administrators, guidance counselors,

and those operating in related services (Speech Language Pathologists, Occupational Therapists, Physical Therapists).

Critical Race Theory (CRT): A framework used to examine race in schools and in society. Originally developed to examine racism within the legal system, CRT in education is based on five tenets: 1) Racism is normal; 2) Interest Convergence (see Interest Convergence; 3) Race as a social construction; 4) Intersectionality and Anti-Essentialism; and 5) Voice or Counter-Narrative. The leaders of CRT agree that racism is an established practice in the United States (Delgado & Stefancic, 2012; Hochschild, 1984; Ladson-Billings, 2021).

Essentialism: A belief that all people perceived to be in a single group think, act, and believe the same things (Ladson-Billings, 2021).

Interest Convergence Theory: The idea that the majority will only support the minority group if there is something of benefit for the majority group. Critical Race Theorists point to many of the Civil Rights laws of the 1960s as examples of interest convergence theory. While these laws benefitted Black citizens, they also benefitted White citizens, particularly White women in greater numbers (Ladson-Billings, 2021; Morris, 2001).

Opportunity Gap: The gap found between White students and minority students, particularly Black students, limiting access to higher level coursework (Kolluri, 2018).

Racial Opportunity Cost: High-performing Black students identify racial opportunity cost as something they must consider before enrolling in higher-level coursework. By enrolling in higher-level courses, they can be alienated by their Black peers because they are acting White (Chambers & Huggins, 2014).

Racism: Culturally sanctioned beliefs which, regardless of the intentions involved, defended the

advantages Whites have because of the subordinated positions of racial minorities (Wellman, 1977).

Social Identity Theory (SIT): The categorization of the world into ingroup and outgroup subcategories allowing people to construct a social identity of where they belong based on their shared thoughts and feelings (Tajfel, 1972; Worchel et al., 2000).

Tracking: The educational practice of placing students in cohorts based on achievement. Testing for these tracks can begin as early as second grade. Students who miss being placed on a higher academic track have their ability to access higher level courses limited, effectively creating an educational caste system (Anderson, 2020; Morgan, 2020; Ricciardi & Winsler, 2021; Roegman & Hatch, 2016).

Vouchers: A system where parents can take the educational dollars allocated for their student and utilize the money to pay tuition at a non-public school (Johnson & Larwin, 2020).

Summary

This study was designed to clarify, by describing principals' perceptions, the barriers affecting Black students' enrollment in Advanced Placement (AP) coursework. Examining the literature surrounding the topic of Black student access to AP coursework, themes of the impact of poverty, teacher and counselor expectations, and caregiver education levels emerged, which will be further elaborated in Chapter II. The study was further supported in examining the theoretical literature of how racism, Critical Race Theory and Social Identity theory have played roles in the educational experiences of Black students, which will be detailed in Chapter II. The deep-rooted institutional racism found within our society has impacted Black student access to educational opportunity and has led to many Black students to being underserved and less prepared for post-secondary success.

The purpose of this quantitative study was to understand the barriers Black students faced when attempting to gain access to AP coursework. The outcome of the study was to identify the roadblocks and consider ways to address those barriers to develop more equitable and proportionate learning environments within AP classrooms. By providing schools with relevant data, I intended to help high school principals identify exclusionary practices within their AP programs and to develop processes that will allow for shrinkage of the opportunity gap with Black students when compared with their White peers.

CHAPTER II: LITERATURE REVIEW

Education inequality in the United States in several different forms has existed for centuries. This inequality has been witnessed in school district funding allocation, in the quality of education, and in the access to student resources (Ayscue & Orfield, 2014; Wickham & Mullen, 2021). While overt practices of discrimination have been eliminated by case law, many minority students are still unable to access education in the same manner as their White peers. As reported from the Nowicki & U.S. Government Accountability Office (2018), there were 480 civil rights complaints regarding accessibility and resource issues for minority students between Fiscal Year 2011-2017 (p. 62). Minority students, when compared to their White peers, have experienced limited access to advanced level coursework. Jeffries & Silvernail (2017), Patrick et al. (2020), and Riccardi & Winsler (2021) shed light on this nationwide problem when they identified discrepancies between Black and Latinx students in school and in those who take Advanced Placement (AP) level coursework. While Black student participation in AP coursework expanded by over 200% from 1994-2013, Black students scored considerably lower than their peers (Darling-Aduana & Heinrich, 2020; Kolluri, 2018). According to Chatterji et al. (2021), for every 1,000 Black Ohio students during the 2015-2016 school year: 48 would take an AP course; 36 would take an AP test; and only 10 would receive a three or higher (p.21). Kolluri (2018) noted that Black students were under-enrolled in every available AP course when compared to other racial groups. The College Board in its Report to the Nation (2014) also noted that Black students were underrepresented in AP courses by 5.3% in comparison to the total number of Black student graduates (14.5%) and to those who took an AP test (9.2%) (p.30).

Rotenberg (2020) stated that segregation caused Black, Latinx, and low-income students to enter school behind their peers and that they were offered fewer resources. Additionally, when

data from the U.S. Department of Education Office for Civil Rights (2014) was evaluated, minorities such as Black and Latinx, were found to comprise only 27% of students taking AP classes, yet they made up 37% of students in high schools. According to Rotenberg (2020), many of these students attended high schools that did not offer AP classes, and even when offered, they did not matriculate in these courses. While exploration of Latinx under enrollment in AP warranted further consideration, the focus of this literature review pertained to the Black experience within AP coursework.

When the issues that caused the exclusion of minority students from AP level coursework were examined, it became apparent that multiple factors contributed to the problem. These included: poverty, counselor relationships, teacher expectations, and a lack of minority teachers. These issues culminated at high school but were formed at the earliest stages of a child's educational experience. It was evident that students who participated in AP coursework were more likely to go to college, earn higher overall grades, and perform better on high-stakes tests, like the ACT (Atahuene, 2021; College Board, n.d.; McKillip & Rawls, 2013; Ricciardi & Winsler, 2021). Contrarily, Vela et al. (2020) found that those students who were not in advanced level courses carried a perception that their schools cared less about them as students and people. These disparate experiences influenced the post-secondary opportunities of students.

AP coursework was developed to provide a robust, college-like experience for elite students in high school, most of whom were White. When the more recent test scores of students in AP were examined, Black students represented only 4.3% of AP exam takers scoring a three or higher. In comparison, 55% of White students received a score of three or higher. This disparity created a barrier to Black student success in college because Black students were then underprepared for the rigor of college work (Atahuene, 2021; Kim, 2021). Marsh & Noguera

(2017) and Rust (2019) indicated that while minority students had the same academic goals of other subgroups, they were negatively impacted by the perception of poor academic motivation, which may have been a product of an environment that prioritized the White, American, middle-class as the norm by which all other groups were judged.

Historical Context

The pervasive effects of segregation have persisted in schools today, with the access to AP coursework for Black students being one such corollary. Understanding the history of segregation, the landmark court cases, the government oversight into education, and the creation of advanced placement coursework contributes to one's comprehension of the scope of today's significant issues. Freire (1970) described how both the oppressor and the oppressed have distorted realities. The history of America showed White exploitation and oppression of Blacks throughout time. Profound changes manifested in the 20-year period between 1950-1970. While these changes made strides in closing the opportunity gap that existed between Blacks and Whites, the gap remained firmly in place. During the Civil Rights Era, the laws perceived to empower Black citizens were passed for the benefit of keeping Whites in power. Freire (1970) noted that the attitude of "having more" was viewed as an inalienable right by the ruling class (Whites) and if the oppressed (Blacks) did not have more, it was because they needed to be more industrious. This view, research showed, established barriers that negatively impacted Black students in schools with increased discipline rates and lower achievement for students of color.

Separate but Equal

In 1896, *Plessy v. Ferguson* "upheld the constitutionality of segregation based on race for public facilities, so long as 'separate but equal' facilities were in place" (Martin & Brooks, 2020). According to Crenshaw et al. (1995), the court's ruling ignored the historical stratification

of the White and Black races in America at that time. This 'color-blindness' of the Constitution resulted in harsh results for Blacks. In his dissent, Justice Harlan argued:

> Everyone knows that the statute in question had its origin in the purpose, not so much to exclude a White person from railroad cars occupied by Blacks, as to exclude colored people from coaches occupied by or assigned to White persons. The thing to accomplish was, under the guise of giving equal accommodation for Whites and Blacks, to compel the latter to keep to themselves while traveling in railroad passenger coaches. *(Plessy v. Ferguson*, 1896, 163 U.S. 557)

While Harlan was cited as a contemporary for his proclamation that Blacks deserved equality under the law, even in his dissent he affirmed that,

> The White race deems itself to be the dominant race in this country. And so it is in prestige, in achievements, in education, in wealth and in power. So, I doubt not, it will continue to be for all time if it remains true to its great heritage and holds fast to the principles of constitutional liberty. (*Plessy v. Ferguson*, 1896, 163 U.S. 559)

This acknowledgement that Whites were the dominant race further entrenched long-standing overt practices of racism that were present before the founding of the country. The most notable act was the Constitutional Convention, where the issue of slavery was hotly contested. Eventually, an agreement was reached whereby the enslaved person would be considered 3/5ths of a person for taxation and representation purposes (U.S. Const. Art. I, § 2). Legislation developed by White men, who determined how much of a person a Black slave comprised, was only the beginning of the legislated racism that would define life for Black Americans.

These practices were not limited to south of the Mason-Dixon line. While history painted a picture of the South being the oppressor and the North being a bastion of freedom for Blacks, a more discerning analysis of case law showed that Blacks faced just as much oppression and overt acts of racism in the abolitionist North. According to Brooks et al. (2021), while White northerners banned slavery, they were fervent in their beliefs that Blacks were inferior and so they developed laws to ensure they would not live amongst them. Public school acts in the state of Ohio expressly forbade the taxation of Black and mulattos for the purpose of education stating:

> Provided, that nothing in this act shall be construed to permit Black or mulatto persons to attend schools hereby established, or compel them to pay any tax for support of such schools; but all taxes assessed on their property for school purposes, in the several counties of this State, shall be appropriated as the trustees of said township may direct, for the education of said persons. (Tappan, 1876, p. 75)

It would not be until 1848 that Ohio permitted the establishment of schools for Black students. Segregated schooling remained persistent in Ohio even after the landmark *Brown v. Board of Education* (1954) decision.

Brown v. Board of Education

In 1954, *Brown v. Board of Education* reversed the doctrine and found "separate but equal" to be unconstitutional in educational facilities (Martin & Brooks, 2020). As shown in Table 1, many additional court cases challenging segregationist practices were presented prior to *Brown v. Board*. What made *Brown v. Board* different was that it sought to solve the problem of racial segregation within public schools (Martin & Brooks, 2020).

The legal strategy behind *Brown* began in the 1930s when the NAACP began to strategize that attacking segregation in the South may be a way to bring down the structure. Charles Hamilton Houston, as leader of Howard Law School, devised plans to attack segregation at the federal level and mobilized a force of younger attorneys, including future Supreme Court Justice and *Brown* litigant, Thurgood Marshall. As described by Edds (2018), as the NAACP was winning more cases, they were solidifying what actions were considered a violation of the 14th Amendment. This brought out the enmity of Whites who were losing cases to "able and sophisticated Negro lawyers…violating the traditional racial fitness of things" (Muse, 1964, p. 39). The irony of America trying German war criminals for their actions against Jews in World War II was not lost on Black America. According to Ifill (2021), this was "At the same time state officials across the American South were enforcing segregationist policies, practices, and laws that advanced a theory of white supremacy and the racial inferiority of African Americans, undisturbed by the federal government" (p. 351). According to Edds (2018), after securing Supreme Court victories in *Sweatt v. Painter* and *McLaurin v. Oklahoma Board of Regents of Higher Education* the die had been cast to stop seeking equalization. The goal was now ending segregation.

Table 1

Court Cases Challenging Segregation

Case	Year	Description
Missouri ex rel Gaines v. Canada	1938	A Black student applied to the University of Missouri law school and was not admitted based on race. The student was offered the opportunity to attend a law school in an adjoining state with tuition paid. The Supreme Court ruled this a violation of the 14th Amendment under the equal protection clause. This ruling established that when a state has only one institution, both Whites and Black shall be admitted. This decision serves as a forerunner to the *Brown v. Board* decision (305 U.S. 337).

Case	Year	Description
Sweatt v. Painter	1950	Sweatt filed suit after being rejected from the University of Texas Law School on the basis of race. He felt this was a violation of the 14th Amendment's equal protection clause. The school attempted to develop a law school for Blacks, but the Court held that even with the creation of the new school, the lack of equality between the programs-access to materials, esteemed faculty, and peers, the standard of "separate, but equal" was not satisfied (339 U.S. 629).
McLaurin v. Oklahoma Board of Regents of Higher Education	1950	The lower court sided with McLaurin's initial suit that he could not be kept from attending school at the University. This case addressed the differential treatment he was given while on campus. The case signaled a change in what the court would tolerate regarding racial discrimination (339 U.S. 637).

The timing of the *Brown v. Board* decision occurred during a particularly challenging time in our country's history. Briker & Driver (2022) contended that *Brown v. Board* should be evaluated as a result of the Cold War. After the defeat of the Japanese and the end of World War II, the United States emerged as the dominant superpower in the world. The Soviet Union presented a challenge on the world stage when they exploited American racism to highlight the virtues of Communism. Many nations around the world struggled to reconcile how America could claim the moral high ground with democracy yet embrace racial segregation. Dudziak (2004) cited briefs from then Secretary of State, Dean Acheson, who lamented that racial discrimination was an embarrassment for the country, especially in the nation's attempt to be considered a world leader. Ashford-Hanserd et al. (2020) explained that the United States was concerned about how they appeared on a global scale and that the country wanted to paint its democratic status by not spreading Communism to other countries. As soldiers returned from World War II, many of whom were Black, they were saddened to see that racism at home was still alive even after they had experienced better treatment overseas from other countries (Cole, 2009; Martin & Brooks, 2020). The dilemma our nation faced was our inability to solve civil rights issues and the United States was discredited by the rest of the world. Therefore,

acknowledgement of civil rights for Black Americans became a priority in our attempt to squelch communism (Briker & Driver, 2022; Dudziak, 2004; Finn & Scanlan, 2019; Rothschild, 1999).

Bell (1980) argued "the interests of Blacks in achieving racial equality will be accommodated only when it converged with the interests of Whites" and that the Cold War played an indispensable role in motivating White Americans to seek the end of segregation (p. 523). Eliminating separate but equal was not just a moral edict but was necessary for American foreign relations as it provided the United States more credibility once we were able to eliminate this moral liability (Briker & Driver, 2022: Dudziak, 2004). The deft geopolitical maneuvering by the United States during this period solidified the country's position as the world's preeminent superpower, but desegregation, while celebrated by our allies, was met with fierce resistance by segregationists, who felt the decision was anathema to racial harmony and a Communist ploy to destabilize the nation (Briker & Driver, 2022). Martin & Brooks (2020) cited The Southern Manifesto as the most overt action by legislators to communicate their displeasure with the Court's ruling. Over 100 Congressmen signed the document that stated,

> The Supreme Court of the United States, with no legal basis for such action, undertook to exercise their naked judicial power and substituted their personal political and social ideas for the established law of the land and promised to use all lawful means to bring about a reversal of this decision which is contrary to the Constitution. (p. 6)

As detailed in Corrigan (2018), when *Brown* overturned *Plessy*, the directive to integrate White and Black children in the same schools encountered much resistance and school leaders took advantage of the vague language to postpone any action. The outcry against *Brown v. Board* led many communities and states to subvert the ruling to delay integration. While the reasons

may have differed between states, the goal was to delay, or avoid altogether, school integration. North Carolina argued that integration should be delayed because it would disrupt the social harmony that existed between White and Black North Carolinians (Briker & Driver, 2022). Georgia, in an attempt to block desegregation, passed legislation to revoke the teaching license of anyone who taught a mixed class (Fultz, 2004). These delays resulted in the NAACP returning to the Supreme Court to ensure desegregation would not be stalled. Fultz (2004) noted that many states passed legislation targeting desegregated districts including funding reductions and repealing compulsory education laws so White students could refuse to attend mixed class settings. The refusal to integrate "with all deliberate speed" (349 U.S. 294) was not unique to Southern states. According to Brooks et al. (2021), some Ohio districts created segregated zones by developing gerrymandered district boundaries reflecting racially segregated neighborhoods. While an argument can be made that *Brown v. Board* may be the most transformative piece of legislation in our history, the ambiguity of the remedy in *Brown II* allowed segregated systems to stay in place until more direct legislation was passed during the Civil Rights Acts. While the impact of *Brown* on Black students was profound, what went unnoticed was the negative impact *Brown* had on educators.

The Impact of *Brown v. Board* on Black Educators

According to Will (2022), before *Brown*, Black educators in 17 segregated states constituted 35%-50% of the workforce. According to Fultz (2004), concern over the impact of desegregation for Black educators was stated well before the *Brown* decision. Thompson (1951) stated, "Last summer I was in Alton, Illinois…the fact that the Negro community has been warned that if they insisted upon elimination of segregation in the new Negro junior high school, all Negro teachers then teaching in those grades would be replaced by White teachers" (p. 136).

Further supporting the worry of Black educators across the nation, prior to *Brown*, were letters like the one received by Darla Buchanan, by Topeka school superintendent Wendell Godwin, which stated:

> Dear Miss Buchanan:
>
> Due to the present uncertainty about enrollment in schools next year for negro children, it is not possible at this time to offer you employment for next year. If the Supreme Court should rule that segregation in elementary grades is unconstitutional, our Board will proceed on the assumption that the majority of people in Topeka will not want to employ negro teachers next year for white children…If it turns out that segregation is not terminated there will be nothing to prevent us from negotiating a contract with you at some later date in the spring. (Godwin, 1947)

Gay (2004) articulated that the process of desegregation was arduous for both Black teachers and students and no one was ready for the conversion. According to Martin & Brooks (2021), once schools became integrated, Black teachers were no longer a presence in their schools, causing students to be taught by inexperienced White teachers. Prior to *Brown v. Board*, Black students were educated by teachers who were highly qualified, who understood their students' culture, and who were able to share their tribulations with racism (Gay, 2004; Martin & Brooks, 2020). What Gay (2004) reported as even more important than the academic knowledge these teachers taught was "survival skills, cultural heritage, and ethnic affirmation" (p.14). These teachers were role models and were highly respected in their communities. Martin & Brooks (2020) uncovered that approximately 38,000 Black teachers and administrators in southern states were uprooted after *Brown*. According to Oakley et al. (2009), "in North Carolina in 1963 there were 227 Black

high-school principals, but in 1970 there were only eight. Despite overwhelming evidence, no legislation was enacted to protect Black educators from further displacement" (p. 1579). Black educators were forced out by non-renewal of contracts, they were reassigned to White schools without being given a choice, and they were harassed to the point that they left on their own accord. There were many long-term repercussions to the displacement of so many teachers of color and the aftermath can still be observed today, with over 80% of the teacher workforce being White and only 2% of the workforce being Black males nationally (U.S. Bureau of Labor Statistics, 2021; Davis et al., 2019). In Ohio, the numbers were as equally alarming with only 4.3% of the educator workforce being comprised of Black teachers (Ohio Department of Education, 2022). As access to Black teachers decreased, the bond and shared experience between Black teachers and students was lost, leaving Black students to be taught by predominately White teachers (Gay, 2004). The lack of cultural connection resulted in White teachers not knowing how to best engage their Black students in the classroom.

Ultimately, *Brown vs. Board* did not end segregation in schools. According to Gay (2004) the *Brown* ruling contained false assumptions that White schools were superior to Black schools and required the physical relocation of Black students while White students continued in their studies relatively undisturbed. Because there was a directive to begin desegregation immediately, there were no concrete plans of action. As a result, as described by Johnson & Larwin (2020), a new system of vouchers, school selection, and worsening of segregation occurred. School systems became more hostile and unable to respond to how Black students learned. Lutz (2017) noted that Black teachers were adversely impacted by *Brown v. Board*, meanwhile, the ruling enabled students of all races to have better access to education. The removal of Black role models negatively impacted those students who needed them the most. The resulting impact of

Brown was the unintentional barrier of Black students progressing through their education without ever having a teacher who looked like them (Ford & King, 2014). Black children no longer had the people who understood them, their communities, and their shared culture.

The Fight for Integration

Corrigan (2018) illustrated that not long after *Brown v. Board*, in 1957, Central High School in Little Rock, Arkansas, became famous for its role in the battle of racial integration. As relayed by Noguera (2016), Arkansas Governor Orval Faubus resisted federal desegregation orders by not allowing a group of nine Black students to enter the school. The battle was intense, and President Dwight D. Eisenhower was forced to deploy U.S. troops to enforce his integration order. As Martin & Brooks (2020) accounted, the nine students were yelled at, spit on, and threatened as they attempted to enter the school as the National Guard stood by. While this event was considered as a seminal moment for desegregation, Faubus was not done challenging federal law. In anticipation that the Supreme Court would reject a proposal to delay integration, Faubus drafted legislation that would close integrated schools (Cope, 2019). Shuttering the integrated public high schools and creating private, segregated schools allowed some students to continue their education. In Little Rock, Thomas Raney High School opened with a segregated student body. Cope (2019) noted that a series of court rulings and lack of access to public money denied the school a chance to operate beyond one year. This experiment at avoiding desegregation sent a clear message to the segregationist South that public schools would need to integrate. The result of this conflict was that many White families relocated or decided to matriculate in private schools to avoid forced segregation (Griffen, 2019; Howard & Noguera, 2020; Martin & Brooks, 2020). A review of private school enrollment in the South showed a higher rate of growth than in

the North, due to more Southern families fighting integration (Baum-Snow & Lutz, 2011; Motyka, 2017).

The momentum built through the *Brown* decision and Eisenhower's use of federal troops to force integration launched the United States into the Civil Rights Era. The next few decades would find laws passed and social justice movements intended to shrink the opportunity gap between the races. America's fight against the spread of communism created equity opportunities. Bell (1980) argued that these opportunities, viewed through the interest convergence theory, existed because they benefited the White population as well. The interest convergence theory posited that the majority will only support the minority group if there is something of benefit for the majority group. Critical Race Theorists pointed to many of the Civil Rights laws of the 1960s as examples of interest convergence theory. Ladson-Billings (2021) cited the Executive Orders signed by both President Kennedy and President Johnson, which established affirmative action laws prohibiting discrimination in employment practices based on race, color, creed, or national origin. Developed as a policy that would address race inequity, Johnson amended the Order to add sex. This interest-convergence allowed affirmative action to benefit both Black and White citizens, with White women benefitting in greater numbers (Ladson-Billings, 2021; Morris, 2001).

The civil rights movement gathered support in the 1960s as segregationists worked to undermine integration. Briker & Driver (2022) explained that communism was intrinsically tied to segregation and that there was a pervasive belief that Southerners were manipulated by a Soviet scheme. The notion that communists were responsible for upheaval was a commonplace assertion by student protesters, politicians, and journalists. Unah & Blalock (2019) revealed that if an individual sued a school district, a federal court order would be issued to desegregate. The

passage of the 1964 Civil Rights Act then provided a means of realization because if a school district acquiesced, they relinquished federal funding. The anti-Communism angle was used frequently over the course of the 1960s by segregationists as they continued to attack civil rights until the scheme lost effectiveness (Briker & Driver, 2022).

Tatum (2017) contended that White resistance was evoked when the Civil Rights Act of 1964 and the Voting Rights Act of 1965 were passed. Passage of these acts provoked people of the South in what was labeled the "southern strategy" effort by politicians to win over Whites in the North and South (p. 14). This effort targeted White voters who were unwilling to allow Black people to make strides and utilized key terms such as "law and order" and "school choice" to garner votes (Tatum, 2017). The civil rights movement made additional progress in the 1960s and 1970s, however, no further court cases on desegregation occurred since 1973 and no federal funding for desegregation research was provided since 1981 (Noguera, 2016).

Education continued to be a civil rights issue as witnessed by examples in racial inequalities in our schools today, including suspensions of Black children and lack of access to AP courses (Noguera, 2016). A critical example of the disciplinary issue was detailed in the Dear Colleague Letter of 2014, in which students missed instructional time due to excessive exclusionary discipline. The letter expounded that,

> The increasing use of disciplinary sanctions such as in-school and out-of-school suspensions, expulsions, or referrals to law enforcement authorities creates the potential for significant, negative educational and long-term outcomes, and can contribute to what has been termed the 'school to prison pipeline.' (U.S. Department of Education, 2014)

A Nation at Risk

In 1981, then Secretary of Education, T. H. Bell, was concerned about the quality of education in the United States and assembled the National Commission on Excellence in Education. His directive to the Commission was to "examine the quality of education in the United States and to make a report to the Nation and to him within 18 months of its first meeting" (United States Department of Education National Commission on Excellence in Education, 1983). According to A Nation Accountable: Twenty-Five Years after a Nation at Risk (U.S. Department of Education, 2008), "of 20 children born in 1983, six did not graduate from high school on time in 2001. Of the 14 who did, 10 started college that fall, but only five earned a bachelor's degree by spring 2007" (p. 1). The report provided recommendations for educational improvement in several key areas which included curriculum content, standards and expectations, time spent in school, teacher quality, teacher pay, and leadership qualities. The Commission wanted the American people to understand the state of education in the United States at the time, and shared this perspective in the 1983 United States Department of Education National Commission on Excellence in Education:

> All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competently guided, can hope to attain the mature and informed judgment needed to secure gainful employment, and to manage their own lives, thereby serving not only their own interests but also the progress of society itself.

The curriculum content consequences of *A Nation at Risk* created the minimum state and local high school graduation requirements and emphasized English, math, science, and social

studies coursework for all students (U.S. Department of Education, 2008). The standards and expectations of schools have become more rigorous since *A Nation at Risk*. The 1980s and 1990s introduced the era of state and local academic standards and standards-based testing, where federal legislation required that states receiving federal aid for education have such academic standards and tests in certain grades (U.S. Department of Education, 2008). In 1983, the Commission recommended "that schools, colleges, and universities adopt more rigorous and measurable standards, and higher expectations, for academic performance ... and that 4-year colleges and universities raise their requirements for admission" (U.S. Department of Education, 2008, p.5). The Commission reported that American children spent less time in school than children in other countries and encouraged that more time be dedicated to learning either in the form of "more effective use of the existing school day, a longer school day, or a lengthened school year" (U.S. Department of Education, 2008, p. 6).

A Nation at Risk also pointed out that many teachers lacked the knowledge, skills, and training that was necessary and pushed for better teacher preparation by emphasizing classroom-teaching philosophy rather than just learning content. Additionally, *A Nation at Risk* addressed how teachers were compensated and recommended, "Salaries for the teaching profession should be increased and should be professionally competitive, market-sensitive, and performance-based" (U.S. Department of Education, 2008, p.6). It also suggested that teacher pay should be linked to an effective evaluation system. Finally, the Commission recommended that principals and superintendents acquire the leadership skills of persuasion, goal setting, and developing community consensus to be more effective.

After *A Nation at Risk* was published, the 1990s ushered in the era of high stakes testing and accountability. Large-scale tests were used in the 1970s to provide teachers with information

about their students and these tests were not linked to performance. According to "The Unintended Consequences of High-Stakes Testing" (2004), policymakers began utilizing "test results to make decisions about individual students during the minimum competency testing movement of the 1970s" (p.2). The 1990s saw the development of formal accountability systems, which lead to testing programs that would incentivize or sanction schools based on test performance. When the No Child Left Behind Act of 2001 was passed, states started to place even higher stakes on testing results (The Unintended Consequences of High-Stakes Testing, 2004). Sadly, the message that the Commission relayed in 1983 that "we must dedicate ourselves to the reform of our educational system for the benefit of all--old and young alike, affluent and poor, majority and minority" (United States Department of Education National Commission on Excellence in Education, 1983) continues to be relevant twenty years later. A greater commitment to equity in education, particularly in access to advanced level coursework is needed.

No Child Left Behind

The federal government typically was not involved in public education. Unah & Blalock (2019) explained that state and local governments traditionally oversaw the process of educating children in the United States. As Wilson (2011) noted, this changed when President Lyndon B. Johnson attempted to end poverty and meet the educational needs of poor children by passing the Elementary and Secondary Education Act (ESEA) of 1965. Later in 1994, Congress reissued ESEA and renamed it the Improving America's Schools Act (IASA). Instead of funding for poor children, the focus became standards in education. IASA forced school districts to identify schools that were not making Adequate Yearly Progress or AYP (Wilson, 2011).

In 2001, ESEA was reauthorized as the No Child Left Behind Act (NCLB). The act's stated goal was "ensuring that all children have fair, equal and significant opportunities to obtain a high-quality education" (Elementary and Secondary Education Act, 2006). Dee & Jacob (2011) reported that federal influence over 90,000 public schools occurred when President Bush signed the act in January of 2002. They further relayed that states administered annual assessments to students to determine AYP, with the end goal of all students reaching efficiency in math and reading by the year 2013-2014. Schools were either rewarded or sanctioned based on their performance in the assessments and were potentially at risk for the loss of federal funding.

Nash (2002) pointed out that NCLB heightened awareness of some of the issues with standardized testing in this country. The act developed an unfair system of incentives for states to develop less challenging content and tests. Nash explained that there were unrealistic expectations for individual students and students overall to succeed, so many states were subjected to sanctions for failure to reach AYP. Additionally, he explained that NCLB worsened achievement gaps because it caused teachers and educators to limit the curriculum, teach lower-level content, and impose an inferior education on many minority and disadvantaged students.

No Child Left Behind was difficult for urban teachers to implement. Harris (2012) reported that "the pressure from high stakes testing impelled many to narrow the curriculum by focusing on basic skills or caused the fragmentation of curriculum to meet the demands of the standardized assessments" (p. 205). She further alluded that teacher perceptions impacted whether lower performing students could be successful with standardized tests. Deep-rooted negative beliefs about academically diverse students and their abilities caused some teachers to lower their expectations, to differentiate their instruction, and to limit the material covered. There were two parallels that NCLB and lack of access to AP had in common. Both

created disparities in the achievement gap which lead to further gaps and both experienced displeasure from teachers due to the need to potentially dilute content or curtail speed (Roegman & Hatch, 2016).

Theoretical Framework

Black students in America's classrooms were and continue to be negatively impacted by the legally entrenched separation of Black and White students in Advanced Placement (AP) courses. While minority participation in advanced level coursework has shown improvement, Black students enrolled in these courses scored considerably lower than their peers (Darling-Aduana & Henrich, 2020). Three salient educational theories supported the divide found in American schools: Racism, Critical Race Theory (CRT), and Social Identity Theory (SIT).

Racism

Gay (2004) eloquently contended, "Racism is so deeply woven into the entire fabric of society that no single policy or strategy, however powerful, is sufficient to eradicate it" (p. 13). From our nation's founding to the present, the growth and might of the United States has occurred as the result of subjugation of people who looked different from White European travelers. This began with the native population and continued with the slave trade and subjugation of Blacks in the United States. Racism was considered full blown when Africans were enslaved in the triangle trade in the 18th and 19th centuries. Slaves were not treated as humans and were subject to enslavement, trade, ownership, and death (Graves & Goodman, 2022). Graves & Goodman (2022) defined racism as, "systematic discrimination by a powerful individual or institution against individuals based on their perceived members in a social defined racial group" (p. 18). Placed in the context of Black and White, Wellman (1977) defined racism

as, "culturally sanctioned beliefs which, regardless of the intentions involved, defended the advantages Whites have because of the subordinated positions of racial minorities" (p. 42).

Prager (1972) argued that the racist foundation of our country created colonial racism, a system where the colonizer and colonized developed a relationship that lived in perpetuity until the colonized overthrew the colonizer. Hochschild (1984) supported the notion of the historical foundation of American society being developed through slave labor and the reliance on this racial dichotomy for the country to thrive.

Noguera (2016) reasoned that race and racism will persist in American schools because the number of children of color continues to increase, and this rise will cause inequality in opportunities and results. Christopher (2016) relayed that,

> Young activists, college students, and higher education institutions have played prominent roles in the struggle for racial equity. Students and colleges and universities were the backbone of the civil rights movement, as Whites joined with Blacks to protest the remnants of the Jim Crow era and pave the way to the end of legalized public discrimination. (p. 8)

The plight to eradicate racism will require solemn undertaking as the path will be long and painful.

Critical Race Theory

Within the field of education, CRT became one of the most eminent frameworks when examining race in schools and in society. Irby & Drame (2016) reported that Derrick Bell synthesized the tenets of CRT as a means of explaining racism within the legal system. Bell realized that new theories and methods would be required to defy racism and he did not support the liberal interpretation of the Civil Rights Movement (Delgado & Stefancic, 2012). Irby &

Drame (2016) additionally communicated that, "scholars have applied the theory and its tenets to understand historical events and to conceive of ways to improve a wide range of policy-related disciplines, including education" (p. 10). Applied to the education field, Ladson-Billings (2021) described the keys to CRT as:

- Racism is normal
- Interest-convergence
- Race as a social construction
- Intersectionality and anti-essentialism
- Voice or counter-narrative (p.42)

Within the context of the tenet that racism was normal, researchers of CRT agreed that racism in the United States was the established practice, and that people of color experienced this system daily (Delgado & Stefancic, 2012; Hochschild, 1984; Ladson-Billings, 2021). Racism was "so enmeshed in the fabric of our social order, it appeared normal" (Ladson-Billings, 1998, p.11). Another tenet, known as the interest-convergence theory, was introduced in an earlier section. The theory, which attempted to explain the historical background of racism, was hypothesized by Derrick Bell in 1980 and delved into the push for racial equality. The concept was that legal setbacks for Black Americans tended to serve the interests of dominant Whites. The idea of race as a social construct alluded to the tenet that race was not biological. According to Graves & Goodman (2022), the Human Genome project, after 13 years of mapping the genetic code, announced in 2003 that race, in biological terms, was a myth. Smedley & Smedley (1993), within the construct of CRT, posited that there was a deep paradox between the scientific notion of "no-race" and the "social parameters of race by which we conducted our lives and structured our institutions" (p. 19). Ladson-Billings (2021) opined that CRT scholars understood that there

were multiple factors that factored in how people are treated. Gender, socioeconomics, sexual identity and other classifications contributed to the treatment of individuals. Ladson-Billings (2021) wrote, "Critical race theory scholarship decries essentialism. Essentialism is a belief that all people perceived to be in a single group think, act, and believe the same things" (p.47). The final tenant explored was the development of a voice or counter-narrative. Calmore (1995) discussed the development of counter-narrative through jazz music. He proposed that the majority class will rely on stereotypical biases to continue to oppress. This was when the subordinate group needed to make their voice heard.

Social Identity Theory

Social Identity Theory (SIT) relayed that people constructed their social identities to create a frame of reference to show belonging in certain groups according to their shared thoughts or feelings (Tajfel, 1972). Worchel et al. (2000) defined social identity as "the categorization of the world into ingroup and outgroup and the labeling of oneself as a member of the ingroup. This spawned identification, which elicited comparison and intergroup discrimination" (p. 17). When considering the basis of American society, the majority ingroup was Caucasian (White). This relegated all other groups-Hispanics, Blacks, Asians, etc. to the outgroup. Each ingroup possessed their own identities, which should have created empathy within the subgroups. Tension between the smaller ingroups allowed the majority to divide and conquer to maintain the societal norm (Worchel et al., 2000). Freire (1970) expanded on this concept by describing the importance of dividing the marginalized groups and isolating them from each other. To maintain control, the power group needed to avoid having the subgroups unify on a common cause.

Theory Applied to Education

CRT and SIT can be applied to our educational system to meet the mandate of providing equal opportunities to all students and to address the access gap for Black students accessing AP courses. Given that most educators in the workforce were White, many Black students interacted with an adult who, based on the color of their skin, was part of their outgroup. As Whitaker (2019) noted, many of these teachers presented to the classroom ill-prepared to effectively teach Black students, and they relied on inaccurate constructs of Black students and how they learned. Further connecting SIT and CRT together was the thought of race and property. Ladson-Billings (2021) stated that social justice mistakenly appealed to human and civil rights when capitalist America had always slanted toward property rights. Harris (1993) described whiteness as property and provided the White teachers of Black students rights including the right to control and the right to exclude. This explained the underrepresentation of Black students in AP courses (Blake et. al., 2016; Whitaker, 2019).

Another limiting factor for Black students within SIT was the "acting White" hypothesis. Black students placed this label on high achieving Black students and this label was perceived as negative within the Black community. Within the white community, high achieving students are called "nerds," but the "acting White" label is associated with race (Cook & Ludwig, 1998; Peterson-Lewis & Bratton, 2004; Tatum, 2017). Peterson-Lewis & Bratton (2004) examined how Black youths who displayed high academic achievement experienced an achievement dissonance, where they felt disconnected to their ingroup norms. This also accounted for those who underachieved as feeling they were being loyal to their race or ingroup. Collins-Eaglin & Karabenick (1993) affirmed the "acting White" hypothesis by identifying that some Black youths were compelled to avoid asking for help in academic areas where they were challenged. This was

done for the fear of the "acting White" label being placed on them. While academically able, these students increased their chances of academic failure to satisfy ingroup pressures. Further bolstering ingroup dynamics Peterson-Lewis & Bratton (2004) explored the idea of what "acting Black" meant. They theorized this ingroup was often portrayed as being aligned to problematic to respectable achievement. This idea was promulgated by examining popular culture where high achieving (i.e., wealthy) Blacks were often found in entertainment where they profited by promoting an exploitative version of Black culture. Challenging this narrative connected CRT and SIT so a counternarrative could be constructed, one not confined to negative stereotyping of Black youths in academia.

The "acting White" hypothesis has been questioned by other researchers like Cook & Ludwig (1998) who stated both Black and White students face inappropriate labeling when they were high achieving. Spencer et al. (2001) challenged the "acting White" hypothesis based on the idea that opposition to or compliance of achievement was not tied to race. Cook & Ludwig (1998) furthered their challenge of the "acting White" hypothesis by stating that White high achievers were saddled with negative labels - "nerds" just as high achieving Blacks. Peterson-Lewis & Bratton (2004) countered this by exposing the White label of "nerd" is placed in a social context. The Black label of "acting White" connected to race. This connection caused a racial identity issue for high achieving Blacks. Did they continue their academic pursuits at the risk of severing their ties to the Black community? The development of race-consciousness was critical to combat the Eurocentric norms in American society. By inculcating Black youth with positive cultural images, Black youth could lessen the impact of what "acting White" and "acting Black" meant (Tatum, 2017).

Our nation was developed with the empowerment of one racial group (Whites) subjugating another racial group (Blacks). While acknowledging the racial gap, would hindsight show attempts at racial equality further entrenched racism found in education? Hochschild (1984) stated that racism- which has been in existence beyond slavery, World Wars, and *Brown v. Board*- was what shaped American society. CRT would support the idea that racism was present in the fabric of daily American life. Within this construct, Ladson-Billings stated, "the idea of race was a way to categorize based on arbitrary genetic differences like skin color, hair texture, eye shape, and lip size" (Ladson-Billings, 2021, p. 45). While CRT required scholars to look at intersectionality considering all facets of the social dynamic (race, gender, class), Black students were under-enrolled in AP by as much as 50 percentage points, even when the school they attended had the courses (Kim, 2021). While equity was the goal in our democracy, Ladson-Billings (2021) argued that our nation's democracy was created through a capitalistic system of property ownership becoming power. Our economic system and philosophical belief systems did not align because American power resided from capitalism.

Roegman & Hatch (2016) revealed how certain groups of students, particularly students of color, were more likely to be underprepared and how placing them on a track created a structural barrier toward academic opportunity. These students, as members of this group, supported how SIT and the subset of social categorization impacted learning for Black students. "In 2019, Black students made up 15 percent of all public-school students, but took just 6.3% of all AP exams" (Kim, 2021, p. 33). Black students faced several issues to gain access to AP level coursework. Among these were low teacher expectations, caregiver educational levels, poverty, and lack of Black teachers. The social identities of urban teachers created a narrative of what an urban student looked like. This influenced the teacher's perception of the student and the

expectations that they had of the child as a learner. This social categorization can lead to urban students being marginalized in their classrooms (Whitaker, 2019).

In Woodson's (1933) *The Miseducation of the Negro*, he discussed how the Black school, as constructed at the time, demotivated African American students by crushing their spark of genius. The system required black conformity of learning through an educational lens that propagated White success and stimulation which devalued Black identity. Without acknowledging that racism existed as a daily occurrence in our country, we cannot begin to address the barrier that existed for Black students attempting to access AP coursework. Flowers & Banda (2019) advocated for AP programs to be expanded by intentionally recruiting minority students. The expansion of AP programs provided encouragement to minority students and served as a confidence builder, which altered minority students' mindset when taking additional advanced coursework. This was tied to the counter-narrative construction found within CRT and to the development of new parameters within your social categorization group. Connecting these two theories, Ladson-Billings & Tate (1995) discussed how schools operated to further America's social dynamic, where Black students were not provided the necessary opportunities to catch up with their White peers. Acknowledging that race as a social construct existed supported the notion that CRT and SIT as educational theories could be tested and could be used to bolster improved outcomes for Black students in AP courses.

Development of Advanced Placement Programming

In the 1800s, college students learned at their own pace and there was no stratification of placement. Eventually, one's coursework was designated based upon one's age. According to Finn & Scanlon (2019), individual states also mandated that children attend schools and the idea of "compulsory attendance laws" was enacted. As Rothschild (1999) reported, in June of 1950,

due to the Cold War and eventual Korean War, educators in the United States decided that changes in the American education system were necessary. There was a need and a drive for more engineers, scientists, and talented scholars, and there was also a desire to speed up the rate at which materials were presented in school. One of the very first initiatives was called the Fund for the Advancement of Education (FAE) by the Ford Foundation, which started in 1951. They created scholarships for high school sophomores and sent them to either the University of Chicago, Columbia, Wisconsin, or Yale. They received two years of college education prior to becoming eligible for the draft. The idea of taking the best students away upset some school administrators. The initiative then decided to shift its focus (Rothschild, 1999).

The next approach to accelerate learning was by allowing certain students to move ahead once they were in college. A prominent school headmaster wrote to the FAE explaining,

> Boys from the best independent schools often reported that their early courses in college were repetitious and dull. We are much concerned that some of our best boys seem to lose interest during their first and second years of college. (Rothschild, 1999, p.178)

In 1952, a final committee report became a vital document in the advent of AP, and it was the first time the terminology "advanced placement" was used. They also suggested the concept of an achievement exam, where credit for the prerequisite could be given.

In May of 1954, just as *Brown v. Board* was being ruled on, the first common AP exams were administered to students in 27 participating schools (Finn & Scanlan, 2019; Rothschild, 1999). The results proved the high schoolers grasped the material and the program could continue. Ten subject matters were initially chosen: Biology, Chemistry, English Composition, French, German, Latin, Literature, Mathematics, Physics, and Spanish. The College Board was

eventually given the responsibility of AP. The exams were to last three hours and cost $10. The scores of "five" as "high honors" to "one" as "fail" were assigned. This scoring system continues to be used to date. When the performance of the students from the fall of 1954 were evaluated after their first year of college, 32% were in the top 1/6 of their class, which was touted as a tremendous success (Rothschild, 1999).

The late 1960s was a time of political and social turmoil and education was affected as evidenced by decreased SAT scores in the nation. The era brought with it challenges to traditional grading and students demanded individualized instruction. According to Kolluri (2018), during the middle to later 1960s, the AP program finally began to move away from its perception of elitism to being more accessible to all students. This was ushered in due to President Lyndon Johnson's *Great Society* beliefs, where he "enacted massive education reforms by fusing education with the larger antipoverty effort" (Steudman, 2014, p. 480). As Rothschild (1999) expounded, the number of students taking AP classes began to sharply increase due to the misunderstanding that AP courses were just for high school seniors. Once undergraduates were made aware that they were eligible for AP classes, the enrollment numbers rose. In 1970, it was noted, "because there have not been as many Black students in AP courses, some people regard the program as touched with 'institutional racism'" (Rothschild, 1999, p. 186). Documented cheating on AP exams occurred for the first time in 1973. Reduced fees for students who could not afford the AP test began in 1975. The College Board faced constant financial struggles for funding.

Growth in AP participation continued from 1975-1985 due to it becoming a national program and even though education in the United States was falling short as rivals on the global scale were taking over industries such as science and technology (Rothschild, 1999). As detailed

in his comprehensive history of AP, Rothschild (1999) explained, "In 1976, 3,937 schools participated in AP; by 1985, there were 6,720. In 1976, 75,651 students took 98,898 examinations; in 1985, a total of 205,650 students took 280,972 examinations" (p. 185). The 1980s brought expansion of course offerings including Drawing and Computer Science. AP courses began to be offered to more students from all backgrounds, including in rural and urban settings. The stigma of AP only being for the elite had disappeared. Students of the 1980s appreciated the merit of what AP offered and felt that they needed the edge that AP courses offered because of fears of paying for college educations (Rothschild, 1999).

According to Rothschild (1999), the next decade continued to show national interest in standards and testing. In the 1990s, the AP program was deemed a success, with ever increasing volumes of students taking the tests and of schools offering them. In 2002, No Child Left Behind reform provided funding for AP programs to expand. This expansion included other countries around the world such as Canada and Germany. There was also college scholarship money tied to test performance on AP exams. The number of minority students taking AP coursework continued to increase in the 1990s and 2000s.

Kim (2021) reported that state and federal policy makers have supported the expansion of the AP program over the past twenty years. The data revealed that approximately 70% of all United States public high schools offered AP. In 2020, 2.6 million students were involved in AP. Black students comprised 15% of all public-school students, yet only took 6.3% of all AP exams (Kim, 2021). Many institutions considered AP data scores in their admissions selection process and this data could potentially be a factor in future college success. Kolluri (2018) reported 38 different course offerings for AP classes. Grant money and pandemic relief money

from the CARES act allowed the AP program to pay exam fees for lower income students (Kim, 2021).

Black students were consistently determined to be under-enrolled in AP even when the availability was present (Jeffries & Silvernail, 2017; Patrick et al., 2020; Riccardi & Winsler, 2021). Kolluri (2018) explained that tracking patterns contributed to why Black students shied away from White classes and that it caused them to be uncomfortable. In 2019, 3.9% of Black students examined in AP scored a "five" as compared to 14.4% of White students, 23.8% of Asian students, and 8.3% of Latinx students. Part of the reason that Black students were not succeeding in AP courses was due to lack of resources and support (Kim, 2021). According to Kolluri (2018), schools that served low-income students tended to be deficient in quality teachers. Teachers in low-income schools generally were not experienced in the subject matter, did not possess higher degrees, and encountered elevated levels of teacher turnover (Ayscue & Orfield, 2014). Minority students admitted that social isolation caused them to avoid taking AP courses. As described in Jefferies & Silvernail (2017), some Black students believed they would be doubly rejected by classmates. They did not wish to be considered "cultural traitors" by their Black peers, and they recognized the potential for rejection by their White peers, who tended to make up most of the class (p.74).

The Multifaceted Causes of Decreased Minority Representation

Several salient causes for decreased minority enrollment in AP courses were identified when the literature was reviewed. While the following causes were not all inclusive, the five barriers presented were highly influential and required further investigation.

Poverty

The negative effects of poverty on student learning were well documented in an abundance of literature. Poverty began in early childhood and continued throughout the child's academic career. In recent years, the population of American students who grew up in poverty has increased and over five million students attended schools where at least half of the student population experienced poverty (Nowicki & U.S. Government Accountability Office, 2018). The embedded challenge of poverty reared itself as the nation's student population trended toward more children being eligible for free and reduced lunches. According to Jensen (2009), students raised in poverty faced issues in brain development due to the constant state of stress the extreme poverty environments created. This generated a negative impact on school performance due to diminished attention span, lower test scores, and a drastic increase in absenteeism. In addition, students in schools with high poverty exhibited higher rates of suspension/expulsion, more acts of school violence, and higher truancy rates (Rust, 2019). These forenamed challenges jeopardized learning for those living in poverty and their non-poverty peers, who may have had the educational environment adapted to meet the needs present in the classroom. This potentially created an environment where students were less likely to engage in advanced level coursework.

Urban districts were often characterized as high poverty, racially diverse schools, with low achieving students. The lack of funding from within the district developed an environment where college-preparatory opportunities were limited because few students pursued that pathway (Duncheon, 2021; Rust, 2019). Grissom et al. (2020) reported that Black and Hispanic students were underrepresented in upper-level math courses. This lack of representation exacerbated the learning gap already found between minority students and White students. Furthermore, minority

students of poverty were deeply aware of the inequity that existed between them and their White peers. Rust (2019) believed this created a system where these students began to perceive themselves as "less than" their more affluent peers; that they should have lower academic expectations and lower IQ scores. In addition to the self-perception of being "less than" their affluent peers, minority students in poverty often had fewer educational opportunities afforded to them in their schools. This established a system which precontrived against minority students in poverty because their course options were unavailable or limited compared to their peers.

The Nowicki & U.S. Government Accountability Office (2018) report highlighted this issue when revealing that as poverty levels grew, advanced course offerings became limited. Fundamental courses, such as algebra I and geometry were offered to nearly all students in poverty, however, more advanced courses, such as calculus and physics were not. The office noted that 85% of low-poverty schools offered calculus and 90% offered physics. These numbers were drastically reduced to 50% in calculus and 62% in physics in high-poverty schools (pp. 13-14). If education of children was theoretically the great equalizer for students of all races, ethnicities, and backgrounds, this glaring lack of opportunity ran contrary to the mission. Minority students in schools of poverty had less educational opportunities than their White, non-poverty peers. Regardless of their ability to complete courses or their talent, if a school did not offer the coursework to challenge students, they could not maximize their potential. Morgan (2020) stated that high-ability students of color were less likely to be enrolled in rigorous courses and placed in gifted education programs, which was often a gateway to more advanced coursework. This coursework was needed because it became a predictor of future success for students. These students also tended to score better on standardized tests like the ACT and earned higher grades (Ricciardi & Winsler, 2021). The students who had access to

these courses were more likely to apply, be accepted, and attend college. Unfortunately, for those minority students of poverty who overcame the lack of access barrier and persisted in attending college or universities, still faced numerous challenges. Attending college was one thing, but graduating was much more difficult. The lack of access to a rigorous high school curriculum impacted college graduation rates. Duncheon (2021) found that Black males who attended high poverty schools faced 82% lower odds of obtaining a bachelor's degree.

Caregiver Educational Levels

Another facet impacting students enrolling in advanced courses related to the education level of their parents. Jensen (2009) espoused that in many low-income households the parental education level was substandard. Prior studies by Houston & Xu (2016) found that when the parent was involved and took an active role in the child's education, there was higher student success. Being that poverty trended along generational lines, one could surmise that the educational experience of the parent may not have been a positive experience. This could factor into parental disengagement from the course selection process. Without a well-developed sense of intrinsic motivation, these students were left with little guidance as to which classes would most benefit them while in high school. Houston & Xu (2016) stated, "students from lower educated households do not necessarily have the experience of parental guidance in the college experience as parents have no experience themselves" (p. 22). Further supporting this concept, Kolluri (2020) stated, "29.1% of students whose parents did not finish high school took at least one AP class by graduation, compared with 54.4% of those whose parents earned a college degree" (p. 31).

Parents from poverty reinforced low expectations because they often did not pursue advanced educational opportunities or dropped out themselves. If the student was a first-

generation high school graduate, there typically was a sense of accomplishment in that feat, so there was no expectation to attend college or to take more rigorous coursework while in high school (Nowicki & U.S. Government Accountability Office, 2018). While parents of low socioeconomic status were often stereotyped as being uninterested or uninvolved in their child's education, Parrett & Budge (2020) argued that these parents valued education as a means to social mobility but lacked the knowledge of how to access the system. When evaluating what makes minority students more successful in advanced placement courses, the theme of parental support was frequently mentioned. Shaunessy-Dedrick et al. (2014) summarized it well by stating, "parents' understanding of the program expectations and the ways their child's life was affected-from the time commitment for course preparation to intensity of the program experience on the child's academic and social-emotional world-were possibly conditions that affected student success" (p. 12).

Teacher Expectations

Teacher expectations played one of the largest roles in Black student access to advanced level coursework. Throughout their educational careers, minority students were guided by many teachers who prepared, and in some cases, recommended eligible students to enter the advanced academic pathway. Ricciardi & Winsler (2021) discussed this impact when citing tracking and the effect it had on students of color. Placing students on pathways too early possibly had a negative impact and delayed opportunity or denied access to upper-level coursework. Schools initiated testing for superior cognitive giftedness by the second grade. Once identified, these students were placed in a cohort that allowed them access to advanced level coursework earlier, including the ability to take high school credit courses in middle school. If a student "missed" this track, there was limited ability to escape the educational caste. Roegman & Hatch (2016)

revealed how certain groups of students, particularly students of color, were more likely to be underprepared and how placing them on a track created a structural barrier toward academic opportunity. Morgan (2020) cited how low teacher expectations were linked to the underrepresentation of minority students in gifted programming. Anderson (2020) supported this viewpoint citing teacher bias in the nomination of gifted Black girls for advanced coursework. Teachers with low expectations of the academic aptitude of these Black girls often described them as oppositional and bossy.

Vela et al. (2020) examined teacher support in AP and non-AP courses and found that differences were noted by the students, namely that teachers had low expectations, less mentoring, and less college opportunities for non-AP students. The investment a teacher made in providing aid and support to students impacted the student's perception of themselves as a learner and in their enrollment in advanced classes. This potentially could become problematic, as Jeffries & Silvernail (2017) cited 58.8% of AP enrollments were based on teacher referrals. These referrals became tainted by bias present when most classroom teachers were White and not trained on the cultural differences in minority students. Minority students who attempted to access advanced level coursework required the support of their teachers. Witenko et al. (2017) noted that teacher support helped to reduce student absenteeism. Students who were present in the classroom had better outcomes and dropout rates were reduced. Teacher support also played a pivotal role in students' enjoyment while at school.

The Role of School Counselors

The next certificated group that impacted minority student access to advanced level coursework were school counselors. School counselors were unique in that their role bridged the gap between teacher and administrator. This allowed them to be principally involved in the

development of procedures to better serve minority students who were attempting to access advanced level coursework. The school counselor often constructed course schedules for all students. Rust (2019) stated that school counselors served in the role of an advocate for minority students by educating their teacher colleagues how to build culturally responsive relationships with the students, not just teach the content. Witenko et al. (2017) addressed how the school counselor was usually responsible for post-secondary planning and worked with students to determine whether they would enroll in honors or AP courses. These decisions had post-high school ramifications regarding college acceptance.

Many districts were met with the challenge of how best to allocate the school counselor's time. This proved to be an arduous task, as on a given day, the counselor attended to multiple duties. In addition to time spent with students who may have needed de-escalation services, counselors were diverted to several "other" duties, which prevented direct counseling. Monaghan et al. (2020) discussed barriers that caused ineffectiveness while counseling students. The caseloads in these environments were large, which created difficulty for the counselor to interact with students individually. Group counseling and support were then offered but did not allow for a personal connection when walking through the scheduling process. The lack of familiarity with a student often caused hasty decisions about access to more rigorous courses. Roegman & Hatch (2016) communicated this institutional issue when they stated, "guidance counselors often expressed concerns that Black, Latino, and poor students were unprepared and that enrolling them in advanced courses would lead to failure" (p. 25). This well-intended but misguided process denied students the opportunity to enroll in more advanced courses. Flowers & Banda (2019) advocated for AP programs to be expanded by intentionally recruiting minority students. The expansion of AP programs provided encouragement to minority students and served as a

confidence builder that altered minority students' mindset when taking additional advanced coursework.

Lack of Minority Teachers

Much research was dedicated to the concept that minority students responded better academically when taught by educators who had similar backgrounds. This concept was expanded further to determine whether students pursued advanced level coursework based on the teacher's background. Grissom et al. (2020) found that having a demographically similar teacher was also associated with movement into honors and AP courses. Morgan (2020) elaborated on the shortage of African American teachers and explained that teachers of the same race tended to believe their students were gifted more often than teachers of a different race. Expanding this further, Morgan (2020) reported that in schools with higher minority teachers, more minority students were recommended for gifted and advanced coursework. Teachers who had similar backgrounds as their students were better equipped to understand cultural influences than teachers of a different race. El-Mekki (2021) noted how Black students are 32 percent more likely to attend college if they have had a Black teacher. Rotenburg (2021) highlighted how Black-immersion schools have seen growth in New York City because they employ predominately Black staffs, specifically Black males, who fostered high expectations and emphasized racial pride more than their traditional school counterparts. The cultural component cannot be downplayed. Kolluri (2020) explained that in most AP classes, the stories and cultural knowledge of Black and Latin/x students were largely invisible, and for many, this was one reason for not pursuing the coursework.

Harbatkin (2021) cited that teacher perception was even stronger for Black students than for White students. There were long-term ramifications of teacher perception that influenced

student GPAs, college recommendations, behavioral incidents, and college matriculation in the future. If teachers assessed different-race students less favorably, the negative consequences disproportionately affected minority students because most public-school teachers were Caucasian (Harbatkin, 2021, p. 1). Finally, Kolluri (2020) reported that students who opted to take advanced level coursework often reported a connection with the teacher as a reason for doing so.

Review of Barriers to AP

The barriers for Black students needed to be lifted to improve access, enrollment rates, and outcomes for marginalized populations in Ohio. There were many systemic barriers identified that caused Black students to miss crucial educational opportunities. The following sections highlighted several of the most salient causes.

Early Childhood Education Inequities and Access to Gifted Programming

The precursors for long-term academic success must be addressed early in a student's educational experience. If the education system repaired early childhood hurdles, students would arrive in high school better prepared for advanced coursework. "Disparities in learning opportunities that occurred throughout childhood influence lifelong outcomes" (Robinson, 2018, p. 961). Kotok (2017) explained that social, environmental, and psychological factors contributed to gaps amongst students at different achievement levels. Minority students received their education in inferior quality schools with fewer instructional materials and less access to technology (Robinson, 2018). The inequities in early childhood education among Black children continued throughout their elementary and secondary education (Robinson, 2018).

Gifted and talented programs were one of the first indicators of future student success. Black students who encountered high-quality early education could be identified for giftedness

earlier, putting them on track for advanced level coursework in the future (Patrick et al., 2020). According to Patrick et al. (2020), while Black children made up 16% of the elementary school population, they only made up 9% of gifted and talented programming (p. 8). This sent an early message to young Black students that they were not smart enough to be successful in advanced work. Patrick et al. (2020) noted that if Black students were given proportionate representation within gifted and talented programs there would have been more than 75,000 additional Black students in the program (p. 62). According to Johnson & Larwin (2020) while grossly underrepresented in gifted and talented programming, Black students, particularly males, were overrepresented in special education programming. "When Black students were enrolled in gifted and talented programs, educators were more likely to view them as capable or advanced. This perception subsequently opened the door for advanced course opportunities, like Advanced Placement, in the future" (Patrick et al., 2020, p. 8).

Environmental Influences

Early out-of-school factors were shown to have a powerful impact on a child's development. Morgan (2020) relayed:

> that a child's harsh living conditions contribute to their environment, which is less stimulating. How some parents fail to read to their children results in weaker literacy skills. Having inadequate nutrition does not give their minds enough energy to learn properly. The limited access to learning materials at a young age and to word exposure causes these students to be behind their peers upon entering school. They continue to be behind as they continue on through school because the schools they attend are of lower quality. (p. 210)

Riccardi & Winsler (2021) surmised that having reduced access to books, computers, and educational toys as well as fewer chances to experience diverse educational settings were other facets that diminished early learning. Many other adverse conditions were reviewed by Nowicki & U.S. Government Accountability Office (2018) as sources of school challenges, including hunger, homelessness, living in foster care, or experiencing violence or abuse. Adverse home conditions that negatively impacted school performance and caused stress for students included family fighting, noisy or distracting environments, lack of childcare for younger siblings, and overall low parent support for learning (Shaunessy-Dedrick et al., 2014).

Kolluri (2020) mentioned that teachers in his study acknowledged that the minority students, especially the male students, struggled to move past the social ramifications of taking advanced courses and doing well. Jeffries & Silvernail (2017) refuted the idea that "acting White" was a barrier for minority student participation in advanced courses. They claimed that discrepancies between the socioeconomics of Whites and Blacks was the leading cause for underrepresentation for minority students. While the myth of the American meritocracy is disheartening, appropriate educational opportunities can help to mitigate the entrenched racism found in our society.

The influence of having a reliable and comprehensive support system and the influence of peers during the adolescent years was found to have a profound effect on school performance (Shaunessy-Dedrick et al., 2014). Kotok (2017) explained that peer attitudes were when school life and home life coalesced, and that these attitudes shaped a student's academic and social life. Prior to *Brown,* there existed a Black middle-class of educators and principals to support the children in their community. According to Fenwick (2022) the purging of the Black educator after *Brown* has "left Black students without teachers who could or would teach self-esteem tied

to an appropriate pride in racial history and cultural accomplishments" (p.140). Peer support in the form of study groups and peer tutoring were found to be beneficial, as was surrounding oneself with friends who were equally educationally motivated (Shaunessy-Dedrick et al., 2014). Studies identified the "racial opportunity cost" that high performing Black high school students considered when enrolling in AP classes, which caused feelings of alienation by other Black students because they pursued AP classes (Chambers & Huggins, 2014).

Educator Bias

One of the most important roles that schools played in success was surrounding all students, especially minority students, with the best possible teaching and administrative staff. While not always deliberate, educator bias, in the form of teacher and guidance counselor recommendations, denied many Black students entrance into AP coursework. The reliance on recommendations from teachers whose decisions may be influenced by implicit or explicit racial bias routinely blocked access for Black students (Johnson & Larwin, 2020; Patrick et al., 2020). Teachers evaluated minority students more negatively and expected less from them due to their lack of exposure to cultural diversity, often considering them to be more disruptive and of lower academic performance (Glock et al., 2019). Johnson & Larwin (2020) posited that Black students, especially males, were placed in a deficit position due to being subjected to ill equipped staff who failed to identify and nurture their higher-level thinking skills. While The College Board (2019) had promoted increased efforts to promote equity within AP coursework, Ohio schools were still eight times more likely to place a White student in AP than a Black one.

Lack of Diverse Educators

The lack of access to diverse educators caused Black students to be unable to take advantage of the benefits of having a same race teacher (Patrick et al., 2020). Fenwick (2022)

noted that quantitative data supported the idea that same race educators had higher expectations both academically and socially. As shown in Table 2, there was a large discrepancy identified in the diversity of Ohio's student body and its teaching staff (Ohio Department of Education, 2022).

Table 2

Diversity of Ohio Student's Body Compared to Teaching Staff

Race and Ethnicity	% of Student Enrollment*	% of Teaching Staff**
American Indian or Alaskan Native	1.0	<1.0
Asian/Pacific Islander	2.9	<1.0
Black, Non-Hispanic	17.1	4.3
Hispanic	7.1	<1.0
White, Non-Hispanic	66.9	91.0
Multiracial	6.0	<1.0

Note: * Source Ohio Department of Education, Advanced Reports (SY 2021-22).

** Source: DataOhio, Education Employee Positions and Demographics—Public (SY 2021-22).

Black teachers had higher turnover rates and were underrepresented in the profession for a multitude of reasons, several of which were discriminatory hiring practices, insufficient resources, and poor leadership and support in the schools (Grissom et al., 2020). As Martin & Brooks (2020) noted, "once Black students were assimilated into schools that did not have same

race teachers who cared for them on a community level, it should not be surprising that Black students would not have an interest in entering the profession" (p. 11). Consideration of the teacher's race and upbringing, breaking the stereotypes of non-minority teachers and staff, and examining the data within the school to find deficiencies all showed positive influences on minority students. Fenwick (2022) noted that Black students, who were enrolled in schools with a more diverse staff, face numerous positive outcomes. McCall (2018) believed there was no more significant resource than a caring and passionate educator up-to-date on current best practices. Students in these rooms flourished and experienced better educational outcomes. As the data from Table 2 illustrated, even if caring minority teachers were available, there were not enough to meet the demand for our increasingly diverse student population.

Elimination of Barriers to AP

Across the nation and in Ohio, Blacks students in schools that served mostly White students were not matriculating in AP courses. Several solutions detailed below may erase barriers for students and increase representation.

Expand Access and Eligibility

While access to advanced level coursework has increased, minority students still take these courses at lower rates than their White peers (Darling-Aduana & Heinrich, 2020; Flowers & Banda, 2019). For first generation students, success in AP could be defined as being able to pass the course, not necessarily the exam. The view of earning college credit and being able to process what that means was theoretical for the students. Duncheon (2021) reported in her study how minority students were supported in AP courses. Students were encouraged to get good grades in the advanced classes though more than half of them did not pass the actual AP tests. This resulted in the students lamenting that they were not properly prepared, but they were

happy to have access. Duncheon (2021) later noted that the school in her study celebrated the course grade over the outcome on the AP exam.

Kolluri (2018) explained that taking an AP course had the benefit of exhibiting to colleges that a student was willing to take courses of rigor and this would be viewed favorably in the college application process. These points were supported by what has been observed at the local level high school. Students were more concerned about their classroom grade than their performance on the AP exams. In some cases, students either refused to sit for the exam or put in minimal effort. Celebrating course grade over exam performance caused a false narrative to be constructed. These students felt they were more academically accomplished than they truly were. This could have serious ramifications once the students entered their post-secondary learning environment. Monaghan et al. (2020) labeled this thought as "misaligned ambitions". As described by Horowitz et al. (2023), an amalgamation of overbearing parents, students willing to push back and expect good grades for taking a course, and faculty who are averse to receiving negative feedback created an environment that values grades over deep understanding of material. The authors noted that while it was great to expose the students to opportunity, the counselors in the study then had to embark on "dream adjusting" for their students, so they did not indulge non-realistic options the student may want to pursue.

If access to AP level coursework was the primary barrier many students faced, efforts were made to remove that challenge. Many schools adopted "available to all" type practices to increase their enrollment. In theory, this type of programmatic change was a positive one because it made all courses accessible for any student who chose to enroll. The unintended consequence of this action was that many minority students, particularly those from prevalent poverty districts, were ill prepared for the academic challenge that advanced coursework brought

(Kolluri, 2018). A better process for how students were placed into AP courses and the role of minority students having more same-race peers in the courses could improve enrollment rates (Kotok, 2017).

According to the College Board, in 2023, the cost for AP exams will be $97 and $35 for fee reduction status students. Patrick et al., (2020) recommended that states utilize government subsidies to assist schools in diversifying their advanced placement course offerings and to assist low-income students financially. Funding would pay for fees, curricular materials and books, exams, and transportation to tests.

Chatterji et al. (2021) stated that school districts employed three strategies to improve access to AP courses: they developed statewide partnerships focused on equity; they optimized school-wide master schedules to reduce conflicts and create more slots for students; and they leveraged technology to expand offerings, such as virtual coursework. Several schools adopted automatic enrollment policies, where students that were eligible for AP courses were directly placed in the classes, unless the families opted them out (Patrick et al., 2020). Students could then be given the option of transferring out of the class if it did not work for them. The importance of communication with family members included knowing about course offerings, fees, benefits of enrollment, and testing all in the family's preferred language (Patrick et al., 2020).

Teacher Training

For students to experience success, they needed to be placed in front of educators who embraced teaching minority students. Preservice teachers should be introduced to "positive contact experiences during their practice phases which may support them in developing more positive implicit and explicit attitudes towards cultural diversity, which could contribute to

establishing more equitable educational systems" (Glock et al., 2019, p. 628). Success in advanced courses stemmed from the teacher's level of experience. For improvements in AP testing achievement, the caliber of teachers hired was instrumental. As explained by Houston & Xu (2016), more experienced teachers tended to teach in districts with less poverty, while schools with lower socioeconomic status employed a higher number of new and less experienced teachers and this affected performance. Patrick et al. (2020) believed that states and school districts could support Black students by having teachers become experts in the subject matter when they teach AP courses.

Several school districts found success in AP enrollment once they helped their educators via educational or professional development strategies to increase the quality of teaching and advising (Roegman & Hatch, 2016). In addition, teachers attended College Board workshops to better understand AP while other teachers were sent to other workshops geared toward equity and access. Financial support for AP teachers' professional development could be garnered with federal support to the states and districts through Title II-A of the Every Student Succeeds Act (ESSA). Districts could also use their Title III ESSA dollars to provide professional development in advanced coursework for teachers who served English-learner (EL) student populations (Chatterji et al., 2021).

Conclusion

The goal of this literature review on the examination of Black student access to Advanced Placement in Ohio was to provide a historical background, a theoretical framework, and a platform for ways to improve entry to advanced coursework. Examination of the literature conveyed that legal discrimination started to be eradicated with the passage of *Brown v. Board* and was further dismantled throughout the Civil Rights Era. As the effects of the Cold War

waned, our nation no longer had a "common enemy" as the Communist system began to falter. This slowed the momentum that the Black community benefited from while establishing legal precedents to end segregation and racist practices.

Scrutinizing the operation of our public schools through a CRT and SIT lens highlighted that school practices continued to suppress Black students from accessing all of what was available in schools; particularly in AP coursework. Discriminatory discipline practices and disproportionate suspensions and expulsions for Black students created an opportunity gap between White students and Black students in AP courses. As the minority student population grows in the future, high-quality educational options must be made available and accessible to students. Unfortunately, deep inequities in educational attainment by race and social class remain, and much work in AP and beyond has focused on these gaps in academic opportunity (Kolluri, 2018).

Chapter III will explain the quantitative research study that clarified, by describing high school principals' perceptions, the barriers affecting Black students' enrollment in Advanced Placement (AP) coursework. The chapter will outline the methodology, research questions, variables, and research design.

CHAPTER III: METHODOLOGY

The purpose of this study was to clarify, by describing principals' perceptions, the barriers affecting Black students' enrollment in Advanced Placement (AP) coursework. Understanding the beliefs and perceptions of the high school principals in the CAMERA consortium offered insight about which barriers were most impactful. The study employed a quantitative survey designed to assess high school principals' impressions of what Black student representation looked like in AP courses. The study also explored how high school principals recognized school and personal factors that influenced Black student enrollment in AP courses. Lastly, the study explored if there were differences in Black student enrollment in AP courses depending on the demographics (age, experience, and race) of the school administration. This study will add to the literature surrounding Black student enrollment in AP by examining the perceptions of high school principals in the CAMERA consortium in Northeast Ohio.

The methodology of the study contained the research questions, variables, research design, participants, sampling frame, sampling method, instrumentation and procedures, data collection process, data analysis, delimitations/limitations and assumptions of the study, and a summary. The research collected for the study was performed to describe the data set, not to describe the relationship between the variables, therefore, the study did not require a hypothesis. The study was guided by the research questions listed below.

Research Questions

There were four questions designed to learn about high school principals' perceptions of barriers limiting Black students from enrolling in AP coursework. The research questions were:

1. What is the percentage of Black students enrolled in advanced placement courses in high schools within the CAMERA consortium as reported by principals?

2. According to CAMERA consortium principals, what are the school-related factors that limit Black students from enrolling in AP courses?
3. From the perspective of CAMERA consortium principals, what are the personal and familial factors that serve as barriers to Black students' enrollment in AP courses?
4. Is there a statistical difference between the enrollment of Black students in AP courses and the demographic characteristics of school administrators, such as race, years of experience, or gender?

Variables

The study variables included high school principals' perceptions of Black student representation in AP, school and personal/family factors, and differences between administrative demographics and Black students enrolled in AP. Developed in 1954, AP course programming was constructed as a response to the Cold War and the call for changes to the American educational system. Initially developed for those who attended elite private schools, the program was believed to be touched with institutional racism because of the lack of Black students in the courses and this perception remains in place today (Rothschild, 1999). Black students comprised 15% of all public-school students, yet only took 6.3% of all AP exams (Kim, 2021).

Teacher and school counselor expectations, the lack of same race teachers, and not having the pre-requisite requirements are all school factors which could potentially limit Black student enrollment in AP coursework. Morgan (2020) cited how low expectations were linked to the underrepresentation of minority students in gifted programming. The identification of those in gifted programs usually began in elementary school. The discrepancy found between White and Black students in these programs could lead to Black children being ill-prepared for the rigors of AP coursework. Jeffries & Silvernail (2017) cited 58.8% of AP enrollments were based

on teacher referrals. These referrals became tainted by bias that was present when most classroom teachers were White, and they had not been trained on the cultural differences in minority students. Grissom et al. (2020) found that having a demographically similar teacher was also associated with movement into honors and AP courses.

The personal/family factors to be considered when examining Black student enrollment in AP included poverty, caregiver education levels, and environmental influences. Students from poverty demonstrated issues with brain development and lower school performance (Jensen, 2009; Rust, 2019). Aside from the physiological impact of poverty, students from this type of environment had fewer educational opportunities offered to them. Kolluri (2020) stated, "29.1% of students whose parents did not finish high school took at least one AP class by graduation, compared with 54.4% of those whose parents earned a college degree" (p. 31). While parents with low educational levels may have valued education, they may not have been versed in how to access the system, perhaps because they were not participants when they attended school. Studies identified the "racial opportunity cost" that high performing Black high school students considered when enrolling in AP classes, which caused feelings of alienation by other Black students because they pursued AP classes (Chambers & Huggins, 2014).

Table 3

Summary of Research Questions, Type of Variable, and Instrument Items

Research Question	Type of Variable	Instrument Items
1. What is the percentage of Black students enrolled in advanced placement courses in high schools within the CAMERA consortium as reported by principals?	Representation	Black students in AP courses- Items 1-6 (6 items)
2. According to CAMERA consortium principals, what are the school-related factors that limit Black students from enrolling in AP courses?	School	Administrative perceptions of school factors as barriers- Items 7-10 (4 items)
3. From the perspective of CAMERA consortium principals, what are the personal and familial factors that serve as barriers to Black students' enrollment in AP courses?	Personal	Administrative perceptions of personal/family factors as barriers- Items 11-15 (5 items)
4. Is there a statistical difference between the enrollment of Black students in AP courses and the demographic characteristics of school administrators, such as race, years of experience, or gender?	Differences	Demographic information and differences- Items16-25 (10 items)

Research Design

The sample population consisted of high school administrators from the CAMERA consortium, who were committed to promoting diversity and inclusivity in the education system. The survey consisted of four sections, each addressing different research questions related to the study. The first section focused on the representation of Black students in AP courses within the consortium. The second section explored school factors that may inhibit Black students' enrollment in AP courses, such as teacher expectations and lack of encouragement. The third section addressed personal and family factors, such as poverty and peer influences. The fourth

section dealt with demographic information about the respondents and their schools, as well as differences between administrators and Black students enrolled in AP courses.

The survey incorporated a Likert scale rating response system ranging from 1-5 to gather data on each variable. The responses were then analyzed considering theoretical frameworks such as Critical Race Theory, Social Identity Theory, and racism. The data was secured through password-protected electronic files and destroyed after the completion of the study. Participants were informed of their rights and could request their data at any time.

While the online survey method made data collection more accessible, the response rate remained a concern due to the relatively small sample size of 109 high school administrators. Overall, the survey provided valuable insights into the perceptions of high school administrators regarding the challenges Black students face when enrolling in AP courses.

Sample

The study used a specific group of school administrators from the CAMERA consortium in Northeast Ohio. I had to consider multiple factors when designing the data collection tool due to the unique sample group. Previous research suggested that school and personal family factors negatively impact Black students from pursuing AP coursework, but existing tools did not specifically address how poverty influenced AP enrollment. Therefore, I created a tailored survey with 25 questions divided into four parts to collect necessary data. The survey focused on limiting factors for Black students in accessing AP coursework based on previous literature. The instrument was reviewed by experts in the field to ensure validity. The sample population for the study was sourced from the high school administrators who were part of the CAMERA consortium, which consisted of 20 districts in Northeast Ohio with district classifications or typologies of suburban or urban. The typology referred to the consistent way that school districts

were classified for research purposes by stratifying similar districts together and is detailed in Table 4. The study was non-experimental in nature as there was no control group or remedy applied to the subjects.

Participants

The objective of this study was to investigate the perceived barriers faced by Black students in enrolling in Advanced Placement (AP) coursework according to high school principals in a Northeast Ohio consortium of school districts called CAMERA. The CAMERA consortium aims to increase the number of minority educators through networking opportunities, hiring and supporting minority educators, promoting multicultural and multiracial relations, and supporting Future Educators of America Clubs. The study examined a diverse sample of districts ranging from predominantly white institutions to those with a majority BIPOC student population to better understand the issue. Primary research was conducted to collect data from high school principals of member schools, focusing on factors such as poverty, caregiver education, teacher expectations, school counselors, exposure to Black teachers, and peer influence.

To be included, respondents had to be high school principals or assistant principals from a CAMERA consortium member district. Approximately 109 high school administrators met the criteria for participation. Participants were invited to complete a 20-minute survey via SurveyMonkey and were assured of anonymity. Demographic questions were included to understand differences between Black students and district administrators. Fowler's Sample Table was used to establish a confidence level of 95% with a ±5% margin of error, and a total of 46 respondents completed the survey by the deadline. The small population size was taken into account when considering the generalizability of the finding to other settings.

Sampling Frame

Northeastern Ohio high school principals within the CAMERA consortium were the target population of this study. CAMERA consists of 20 public school districts with typologies ranging between Typology Code 4- Small Town – High Student Poverty & Average Student Population Size to Typology Code 8- Urban – Very High Student Poverty & Very Large Student Population as identified by the Ohio Department of Education's 2013 School District Typology report (Table 4).

Table 4

2013 School Districts Typology

2013 Typology Code	Major Grouping	Full Descriptor
1	Rural	Rural - High Student Poverty & Small Student Population
2	Rural	Rural - Average Student Poverty & Very Small Student Population
3	Small Town	Small Town - Low Student Poverty & Small Student Population
4	Small Town	Small Town - High Student Poverty & Average Student Population Size
5	Suburban	Suburban - Low Student Poverty & Average Student Population Size
6	Suburban	Suburban - Very Low Student Poverty & Large Student Population
7	Urban	Urban - High Student Poverty & Average Student Population
8	Urban	Urban - High Student Poverty & Average Student Population

Note. Ohio Department of Education, 2019

Of the 20 districts within the consortium, 5% of the districts were considered Small Town, 50% were Suburban grouping, and 45% were designated as Urban. The districts were in the

Northeastern Ohio counties of Ashtabula, Cuyahoga, Lake, Portage, Stark, and Summit Counties. Cuyahoga County represented 55% of the consortium districts while Summit County contained 25% of the districts. Given their proximity to the large population centers found in the Cleveland and Akron areas, this was noteworthy. Table 5 summarizes the CAMERA counties relevant population, percent Black, and persons in poverty data.

Table 5

Population Characteristics of CAMERA counties

County	Population Estimates from July 1, 2022*	% Black	Persons in Poverty
Ashtabula	97,014	4.1%	15.7%
Cuyahoga	1,236,041	30.5%	16.2%
Lake	231,842	5.6%	7.0%
Portage	161,745	5.3%	12.4%
Stark	372,657	8.1%	12.8%
Summit	532,882	15.3%	12.5%

Note. *statistics found on census.gov, 2022

The consortium districts also possessed varied enrollments, median incomes, student poverty rates and minority student populations according to the Ohio Department of Education Typology report from 2019. Student enrollment ranged from 2,500 – 22,500 students in the districts, with an average of 5,792 students. The consortium districts served a total of 115,831 students in Northeast Ohio, which equated to 7% of the total student population in the state of Ohio. It was critical to understand the socioeconomics of the consortium districts due to the study's exploration of poverty as a personal/family factor which may have impacted student

enrollment in AP courses. As a consortium, the student poverty rate was 47% with a median income of $34,362. These statistics were construed as potentially misleading due to the wide range of poverty rates within the districts. The lowest poverty rate was 9% and the highest amount was 85%. While the median student poverty was 47%, it was worth mentioning that nine districts had a poverty rate of 61% or higher. These districts accounted for 62,000 of the 115,831 students, or 53.5% of the consortium student body. The percentage of minority students contained a median of 42% within the consortium. Like the wide ranges found in the poverty statistic, districts' minority student populations ranged from a 6% low to a 96% high. While these statistics were inclusive of all minority student populations and not just Black students, these numbers were included to better describe the population used to derive the study data.

Sampling Method

This quantitative, descriptive study contained a 25-question census survey instrument constructed to collect quantitative information from high school principals within the CAMERA consortium. Gathering data on the research questions from this sample of districts provided varied insight into the barriers faced by Black students in accessing AP courses. The study utilized non-probability sampling, meaning that it did not involve random selection of participants. The sample participants were intentionally selected to gain their perspective on the study questions (Trochim et al., 2016). Convenience sampling was also used because I am employed in a participating CAMERA district, which increased the access to the sample population (Kothari, 2004). While this sampling method may have exposed the study to bias, the differences found in the consortium districts provided breadth in the sample and was representative of what would be found in metropolitan areas throughout Ohio. This increased the generalization of the study's findings in Ohio districts who had a Typology coding range of 5-8.

The census sample was derived from the approximately 109 secondary school administrators in the CAMERA consortium. According to Taherdoost (2017), larger sample sizes were preferred to prevent bias and errors, yet there were times when a smaller sample was acceptable. These administrators were targeted due to their positions within the school districts and how their professional roles impacted scheduling and staffing within the school system; proportionality was not a concern for me (Trochim et al., 2016). I, as a member of the CAMERA consortium, consulted my professional colleagues to ensure the contact list of names and emails was accurate and to ensure the survey reached the intended population. I selected individuals and sites for study because of their commitment to cultural responsiveness and they could inform an understanding of the research problem in the study (Creswell, 2012). The sample size for this study was intentionally selected to understand the beliefs and perceptions of school principals; limiting the ability for the results to be generalized due to lower levels of external validity. Which participants chose to respond from the sample was beyond the control of me. Based on the statistical model developed by Fowler for determining the appropriate number of respondents needed, with 109 people available to respond, the study required 88 respondents to maintain a 95% confidence level with a margin of error of 5% (Fowler, 2014).

Instrumentation and Procedures

The study employed a researcher-developed self-survey instrument (Appendix B) which contained 25 questions. The one-time survey was divided into four separate parts to collect the data necessary to explore the central question of the study: What are high school principals' perceptions of barriers affecting Black students' enrollment in AP courses? The correlational research conducted within the study was designed to be non-experimental because there was no control group or remedy applied to subjects (Field, 2018). The selected items assessed the high

school principals' perception on school factors and personal/family factors that influenced Black enrollment in AP. Additionally, the instrument gathered demographic information on the respondent and their school district to determine whether there were differences in the data. The survey instrument aligned to the themes emerging from the theoretical framework and previous literature regarding limiting factors for Black students in accessing AP coursework. All items were reviewed by content experts and field professionals to improve the validity of the instrument.

Section I of the survey included 6 structured questions which gleaned the unique perceptions of secondary school administrators regarding AP enrollment that Black students faced within school. This section addressed the first research question explored in the study- What is the representation of Black students in high school advanced placement classes? The questions within this section of the instrument collected information in three ways. One question contained a binary (yes/no) response system. Another question required the administrator to provide a specific number regarding student participation in AP courses. Three questions required the respondent to answer with an approximate percentage regarding Black student participation in AP and their performance on the end of course exam. The last item assessed the principals' perception as to whether Black students were equally represented in AP classes in their school with a Likert scale, 1-5 rating system (Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, Strongly Disagree). As described by Trochim et al. (2016), the usage of this system allowed for respondents to show their agreement of an idea. This section of the instrument aligned to the themes detailed within the literature review. While access to advanced level coursework has increased, minority students still take these courses at lower rates than their White peers (Darling-Aduana & Heinrich, 2020; Flowers & Banda, 2019). For first generation

students, success in AP could be defined as being able to pass the course, not necessarily the exam. If access to AP level coursework was the primary barrier many students faced, efforts were made to remove that challenge. Many schools adopted "available to all" type practices to increase their enrollment. The unintended consequence of this action was that many minority students, particularly those from prevalent poverty districts, were ill prepared for the academic challenge that advanced coursework brought (Kolluri, 2018).

Section II of the survey included four structured questions which addressed research question 2 in the study- From the perspective of a secondary building administrator, what school factors act as barriers to Black student enrollment in AP courses? The questions within this section of the instrument were constructed with a Likert scale, 1-5 rating system (Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, Strongly Disagree) to assess the variables within the study. These items also connected the theories discussed in the literature. "Racism is so deeply woven into the entire fabric of society that no single policy or strategy, however powerful, is sufficient to eradicate it" (Gay, 2004, p. 13). Wellman (1977) defined racism as, "culturally sanctioned beliefs which, regardless of the intentions involved, defended the advantages Whites have because of the subordinated positions of racial minorities" (p. 42). Racism was explored within the section by scrutinizing how the relationships between Black students and their teachers and guidance counselors potentially affected course selection. Social Identity Theory and racism were analyzed through question items relating to teachers being of the same race as students. Critical Race Theory was examined by linking items to the tenets of the theory, specifically that racism exists within our country.

Section III of the survey instrument delved into the third research question- From the perspective of a secondary building administrator, what personal/family factors act as barriers to

Black student enrollment in AP courses? The five Likert response items in this section probed the intersectionality tenets of CRT when considering the relationship between Black students and the potential for living in poverty within the CAMERA consortium. SIT was explored through the examination of negative peer influences and participation in the "outgroup" in pursuit of increased educational opportunities. This was where the "acting White" hypothesis was investigated and whether it was a barrier for Black students enrolling in AP coursework. Caregiver educational levels applied to the theories of CRT and racism and warranted further exploration. Ladson-Billings (2021) opined that CRT scholars understood that there were multiple determinants that factored in how people are treated. Gender, socioeconomics, sexual identity, and other classifications contributed to the treatment of individuals.

Section IV gathered personal and school demographic information from the respondent. The ten questions within this section asked the respondents their age, race, and years of experience in their role, which helped the response of the study's fourth research question- Are there differences between Black enrollment in AP courses and school administrator demographics? The demographic questions aligned to the three theories discussed in the study- racism, CRT, and SIT by contemplating the differences found between the respondents' answers and the accumulated information. The collection of this sensitive data may have caused apprehension amongst the respondents. Participants were notified that identifying information would not be collected, but that it was conceivable that identifying data could be deduced based on respondent responses.

Table 6

Survey Instrument and Research Question Alignment

Part I- Advanced Placement Courses	
Research Question 1 - *What is the percentage of Black students enrolled in advanced placement courses in high schools within the CAMERA consortium as reported by principals?*	
Survey Question	**Alignment with Theory/Literature**
▪ The high school(s) in my district have Advanced Placement courses available. YES or NO	CRT, Racism
▪ How many students participate in AP coursework in your school?	SIT
▪ Black students make up approximately _____% of our AP course enrollment.	SIT/CRT
▪ Approximately _____% of our Black students who take AP courses participate in the End of Course exam.	SIT
▪ Approximately _____% of our Black students who take the End of Course exam score 3 or higher.	SIT
▪ Black students are equally represented in AP classes in my high school? • Strongly Agree • Agree • Neither agree, nor Disagree • Disagree • Strongly Disagree	Racism, CRT
Part II- School Factors as Barriers	
Research Question 2 - *According to CAMERA consortium principals, what are the school-related factors that limit Black students from enrolling in AP courses?*	
Survey Question	**Alignment with Theory/Literature**
▪ When compared to White students, teachers have lower expectations for Black students? • Strongly Agree • Agree • Neither agree, nor Disagree • Disagree • Strongly Disagree	CRT, Racism, SIT

Survey Question	Alignment with Theory/Literature
▪ The lack of teachers from the same racial background negatively impacts Black students from enrolling in AP courses. • Strongly Agree • Agree • Neither agree, nor Disagree • Disagree • Strongly Disagree	SIT, Racism
▪ Black students are more likely to not meet course requirements (Expectations, Counseling, Fees) for enrollment in AP courses than their white peers. • Strongly Agree • Agree • Neither agree, nor Disagree • Disagree • Strongly Disagree	Racism, CRT
▪ As a whole, Black students are less likely to be encouraged to enroll in AP courses by school counselors than their white peers. • Strongly Agree • Agree • Neither agree, nor Disagree • Disagree • Strongly Disagree	Racism, SIT

Part III- School Factors as Barriers	
Research Question 3 - *From the perspective of CAMERA consortium principals, what are the personal and familial factors that serve as barriers to Black students' enrollment in AP courses?*	
Survey Question	Alignment with Theory/Literature
▪ Black students living in poverty are less likely to enroll in AP coursework in my district. • Strongly Agree • Agree • Neither agree, nor Disagree • Disagree • Strongly Disagree	CRT
▪ Black students living in poverty have fewer educational options, including AP courses, available to them. • Strongly Agree • Agree • Neither agree, nor Disagree • Disagree • Strongly Disagree	CRT, Racism
▪ Parents with low formal education levels reinforce lower expectations of their children. • Strongly Agree • Agree • Neither agree, nor Disagree • Disagree • Strongly Disagree	CRT, Racism
▪ Negative peer influences are more likely to keep Black students from enrolling in AP courses than White students. • Strongly Agree • Agree • Neither agree, nor Disagree • Disagree • Strongly Disagree	SIT

Survey Question	Alignment with Theory/Literature
▪ Fearing being labeled as "acting White", some high achieving Black students refrain from taking AP coursework to remain tied to the Black community. • Strongly Agree • Agree • Neither agree, nor Disagree • Disagree • Strongly Disagree	SIT

Part IV(a)- Participant Demographics	
Research Question 4 – *Is there a statistical difference between the enrollment of Black students in AP courses and the demographic characteristics of school administrators, such as race, years of experience, or gender?*	
Survey Question	**Alignment with Theory/Literature**
▪ Gender: How do you identify? • Female • Male • Non-Binary • Prefer to not respond ▪ What is your age range? • 25-34 • 35-44 • 45-54 • 55-64 • 65+ ▪ How long have you worked in education? • <10 years • 10-19 years • 20-29 years • 30+ years ▪ How long have you worked as a high school administrator? • Less than 5 years • 5-10 years • 11-15 years • 16-20 years • 21+ years	

Survey Question	Alignment with Theory/Literature
▪ Which race/ethnicity best describes you? • American Indian or Alaskan Native • Asian/Pacific Islander • Black or African • Hispanic • White/Caucasian • Multiple ethnicity/Other (please specify)	
Part IV(b)- School Demographics	
Research Question 4 – *Is there a statistical difference between the enrollment of Black students in AP courses and the demographic characteristics of school administrators, such as race, years of experience, or gender?*	
Survey Question	Alignment with Theory/Literature
▪ My district would be best described as a _____district. • Urban • Suburban	Racism, SIT, CRT
▪ Approximately _____% of our students identify as White.	SIT
▪ Approximately _____% of our students identify as Black/African American.	SIT
▪ Approximately _____% of our students are economically disadvantaged.	SIT, Racism
▪ Approximately _____% of our staff identify as Black.	SIT, Racism

Expert Review of Instrument

The instrument used in this descriptive study was created by me. This necessitated review of the instrument to improve the items' validity and reliability. I utilized four experts to evaluate the instrument design to insure the items measured the variables within the study. The experts included university professors with expertise in cultural responsiveness, methodology, and perspectives of urban schools. The professors provided feedback on the items and how they aligned to the literature and theories explored within the study.

I also employed pilot testing from school administrators in the field. Three districts were chosen due to their relevant typologies to pilot the instrument and provide feedback. Of the three districts pilot tested, there was one each with a typology of:

4	Small Town	Small Town - High Student Poverty & Average Student Population Size
5	Suburban	Suburban - Low Student Poverty & Average Student Population Size
6	Suburban	Suburban - Very Low Student Poverty & Large Student Population

Within the invitation to pilot test the instrument, the administrators completing the survey were asked to provide feedback regarding the instrument and how the items could be improved for the population. Additionally, the pilot districts were asked for feedback for survey clarity and whether the survey completion time was accurate as described in the instructions. After this review, one district provided feedback regarding open ended questions that were in a previous iteration of the survey and if they should be placed at the beginning (Appendix B). These items were eventually removed from the data collection after being determined they were beyond the study's scope. I reflected on requiring forced choices within the Likert items after a discussion with one pilot district. It appeared through the pilot testing that many items were falling in the "Neither Agree nor Disagree" category. The discussion centered on whether this was a "safe" choice because the administrator may have not wanted to provide data that would appear disparaging to their district of employment. By eliminating the neutral option, the respondent would be forced to choose an item with a more definitive position. It was decided to keep the neutral option because the study was examining principals' perceptions of barriers and that they may have a neutral response to the survey items.

Instrument Validity

In this study, the non-purposive sampling of secondary school principals impacted the external validity. The limitation of gathering data from Northeast Ohio consortium districts also impacted the external validity of the study. According to Trochim et al. (2016), "external validity is the degree to which the conclusions in the study would hold for other persons in other places and at other times" (p. 83). The study's limited scope (20 school districts and 109 respondents) resulted in a low generalizability. The breadth of demographic differences between the districts and the varied typology of the district may have allowed for generalizability to occur with other urban and inner and outer ring suburban districts in metropolitan areas. Trochim et al. (2016) noted threats to the external validity of a study came from the people, places, and time (p. 103). These threats were present in the study, but the study could easily be replicated to determine barriers Black students may face in enrolling in AP courses in other regions of the country.

My personal bias presented another limitation of the study. Being a member of the consortium allowed me to share their views with a limited number of people who were selected as respondents. These views, or the perceptions of the members regarding me could influence respondent attitudes and beliefs. I had personally observed the limited enrollment of Black students in AP courses, which created a belief system that this practice was pervasive in most educational environments. Despite the limitations present, this study will contribute to the gap in research regarding Black students and the barriers they face in enrolling in AP courses.

To establish stronger internal validity with the instrument, pilot testing of the instrument was conducted. This was to ensure that the instrument constructed was clear to all respondents before the study was launched. Administrators from three Northern Ohio school districts were contacted to complete the survey and provide feedback on the instrument design/questions. One

of the three districts responded (Appendix C). These districts, like those in the study, were selected because they mirrored the socioeconomic and racial composition of the consortium districts. Feedback from the pilot testing was used to address any questions that caused ambiguity with the instrument. This strengthened the internal validity found within the study.

The instrumentation of this study was created by me. While pilot testing helped to strengthen the internal validity, it was also important to ensure the content validity of the instrument was appropriate. To ascertain whether the construct measured what it was intended to, the items created were reviewed by content area experts (Field, 2018). Feedback regarding the survey items was considered and questions were altered to improve upon the content validity of the items. The survey explored the independent variables surrounding the school and personal/family factors that impact Black students' enrollment in AP courses. To strengthen content validity, item revisions were made to remove or reword question stems that explored variables beyond the scope of the study.

The purpose of this study was to identify high school principals' perceptions of barriers affecting Black students' enrollment in AP by examining school and personal/family factors that had the greatest impact. The study did not introduce a remedy, treatment, or program to increase enrollment, rather it prioritized which factors warranted focus to mitigate the potential opportunity gap between Black and White students.

Data Collection

Upon approval from the Internal Review Board (IRB) at Youngstown State University to study school administrators and CITI Certification (Appendices D and E), a previously developed candidate list was used to deliver the survey instrument using the following criteria:

- The candidate must come from a CAMERA consortium district.

- The candidate must be employed as a secondary school administrator.

Each CAMERA consortium district leader was contacted (Appendix E) and provided a Google sheet containing the names and roles of each person in the targeted population. Once the member districts confirmed the names and email addresses of the targeted participants, and after Youngstown State University IRB Approval, an email invitation to complete the survey (Appendix F) was sent to each candidate within the sample. The data collection platform utilized by me was SurveyMonkey, where each potential respondent could have the survey delivered via email. While this method allowed for timely responses, members of the sample could be less likely to respond to the survey than in a more personal setting (Merriam & Tisdale, 2016). The introduction of the survey instrument contained an embedded consent form (Appendix G) detailing the following information: a statement that the instrument will be used in educational research, a purpose statement of the study, the participants expected duration of participation in the study, a statement of confidentiality, the right to withdraw from the study at any time without penalty, my contact information and Youngstown State University's contact information for questions regarding the study, and a statement that no remuneration for involvement in the study was provided and that respondent participation is entirely voluntary.

The survey's completion indicated the respondent's willingness to participate in the study's data gathering. Included in the invitation for participation was the time frame for which the study instrument would be available and the final date to complete the survey. An email reminder to complete the survey was sent to the population weekly and two days prior to the survey closing to encourage responses to it.

Data Analysis

The data collection period for the study concluded on July 5, 2023. Upon completion of the survey, the instrument gathered the administrative perceptions of their district regarding the representation of Black students within their AP courses within the SurveyMonkey secure platform. The collected information was then downloaded and transferred to Microsoft Excel, version 16.71, to organize and review what was submitted by the respondents. The data were screened to look for missing information or empty cells within the spreadsheet. If data were missing, I had to consider possible reasons as to why the respondent may have left the survey blank. One possibility was that a "no" response was entered on item #2 of the survey. This question asked whether the respondent's school had AP courses. If the answer entered was a "no," the respondent was taken to the end of the survey because they would not need to answer the remaining questions in the survey.

Once the data was screened within Excel, the information was loaded into the IBM SPSS Statistics program. I used SPSS version 29.0.0.0 (241) provided by the Youngstown State University app store. Descriptive and inferential statistics were then used to organize the data in a way that would show common characteristics of the high school principals and the districts within the consortium. According to Trochim et al. (2016), descriptive statistics can be used to allow sample summaries to be done on the collected data. These statistics can be used to extrapolate the differences between administrator perceptions based on school typology, respondent race, or gender. The descriptive statistics allowed for the central tendency of various distributions to be explored. The use of the inferential statistics within the study permitted me to generalize based on the collected respondent data (Trochim et al., 2016). Inferential statistics

enabled me to examine the differences between high school principals' perceptions of school and personal/family factors acting as barriers to AP enrollment.

Factor analysis of the data was completed to compare the effects of multiple independent variables on the dependent variable. According to Field (2018), factor analysis has three main uses: "1) to understand the structure of a set of variables; 2) to construct a questionnaire to measure an underlying variable; and 3) to reduce a data set to a more manageable size while retaining as much of the original information as possible" (p. 571). The study wanted to measure how the independent variables- School Factors (SCHL), Personal/Family Factors (PER), and Differences between Black students and the principal/school (DIFF)- impacted the dependent variable of Black student AP representation (APREP). The factor analysis allowed the relationships between the variables to be explored and correlated with the representation of Black students in AP courses.

An OLS regression statistical model was applied to the data set with the goal of determining the goodness of fit for the model (Field, 2018). The use of this model permitted me to determine the differences between the observed values within the data set and the predicted values (Field, 2018). This statistical method was the one most used when attempting to gather estimations within the model. Applied to the study, I utilized the OLS regression to determine how AP enrollment with Black students increased or decreased based on the independent variables. The heteroskedasticity of the model was reviewed to ensure the model estimates were accurate and error limited. By using an OLS regression, I was able to make accurate predictions as to which barriers were most impactful on Black students. The data were processed with the statistical models described in the section and were presented in summary tables found in Chapter IV of the study.

Variable List

The sample included 109 secondary school administrators from the CAMERA consortium with 46 completing the survey. Descriptive statistics were gathered on the respondent and school demographic sections of the survey. This allowed for commonalities to be explored to better understand the perceptions of the administrators. The independent variables examined were School Factors (SCHL), Personal/Family Factors (PER), and Differences between Black students and the principal/school (DIFF). These variables were examined to improve awareness of the perceptions of high school principals and the barriers believed to inhibit Black students from enrolling in AP courses. These variables were evaluated using the 1-5 Likert scale system for most survey items.

The items were rated as:

1 = Strongly Agree
2 = Agree
3= Neither Agree nor Disagree
4 = Disagree
5 = Strongly Disagree

As Trochim et al. (2016) noted, the use of this ranking system was built with the construct of understanding the respondents' beliefs, not the researcher's. The dependent variable in the study was Black student enrollment in AP courses.

The coding system used for the independent variables allowed for analysis to be done detailing which barriers, as perceived by Northeast Ohio administrators, had the greatest impact on impacting Black student enrollment in AP courses.

The coding for Part I of the survey was as follows:

AP courses available (1 = Yes, 2 = No)

Items discussing the number of students enrolled in AP, Black student participation in AP, those taking the EOC exam, and scoring 3 or higher required a specific number value from the respondent. The last item in Part I was a Likert question regarding equal representation in AP for Black students. Parts II and III were all Likert scale items.

The coding for Part IV(a) and IV(b), the demographic information, was as follows:

Gender (Man = 1, Non-Binary = 2, Woman = 3, Prefer to not respond = 4, Self-Describe= 5)

Age (25-34 = 1, 35-44 = 2, 45-54 = 3, 55-64 = 4. 65+ = 5)

Career Length (>35 yrs.=1, 30-35 yrs.=2, 20-29 yrs.=3, 10-19 yrs. =4, <10yrs.=5)

Current Position (>5 yrs.=1, 5-10 yrs.=2, 11-15 yrs.=3, 16-20 yrs.=4, 21+ yrs.=5)

Ethnicity (American Indian or Alaskan Native = 1, Asian/ Pacific Islander = 2, Black or African American = 3, Hispanic = 4, White/Caucasian = 5, Multiracial/Other = 6)

Education level (Bachelors = 1, Some Graduate = 2, Masters = 3, Some Doctoral = 4 Doctorate = 5)

School typology (Urban = 1, Suburban = 2)

The remaining demographic questions centered on the racial profile of the school for White and Black students and staff, as well as the percentage of economically disadvantaged students. These items required a specific numerical value from the respondents. This allowed the study to examine the differences between Black students in AP and the principals' demographic information.

Assumptions and Limitations

This study aimed to determine which barriers were perceived by secondary school administrators as the reason Black students decided not to enroll in AP coursework. The barriers

that were chosen for the study, school factors and personal/family factors, contained subfactors within those two main foci areas. Prior research studies have identified the subfactors as reasons the opportunity gap between Black and White students remains in place. Examining the school factors of teacher/counselor expectations, lack of exposure to Black teachers, and not meeting course requirements provided key information as to how the presence of these influences could preclude Black students from enrolling in AP coursework. Outside of school Black students are also exposed to personal/family factors that could impact their AP enrollment. The subfactors explored within this variable were poverty, caregivers' education, and negative peer influences. While the list was not all inclusive, participants in the study identified which barriers were specific to their school or district. The data was aggregated from school districts in the CAMERA consortium in Northeast Ohio. The surveys were sent to 109 participants on June 7, 2023, and they had four weeks to return the survey responses. Once the surveys were returned, the data was evaluated to determine which barriers to AP coursework were most likely to have a significant effect on why Black students did not enroll in AP classes. The breadth of demographic differences between the districts and the varied typology of the district allowed for generalizability to occur with other urban and inner/outer ring suburban districts in metropolitan areas.

The study did not cover all possible barriers but sought to determine which were most prevalent. Several other barriers were omitted from the survey due to making the survey more manageable. Examples of the omitted barriers included: gifted identification of Black students, an examination of Black students in AP courses in rural school districts, and Black student enrollment in honors or advanced level courses. While each of these issues merited further investigation, they were beyond the scope of what this research study examined.

My personal bias presented a limitation of the study. I had personally observed the limited enrollment of Black students in AP courses which had created a belief system that this practice was pervasive in most educational environments. Additionally, this study was limited to secondary school administrators. The study did not introduce a remedy, treatment, or program to increase enrollment, rather it prioritized which school and personal/family factors were barriers that warranted focus. While one could argue that the barriers in this study could be examined from the teaching staff, student, and parent perspective, this study focused on administrators. This was due to their ability to make decisions which impacted curriculum development and class enrollment within a consortium high school. By identifying the most prevalent barriers, administrators could strategically plan to help their Black students overcome the issue and shrink the opportunity gap currently existing between White and Black students in AP. Further investigation of the barriers for Black students in education from the aforementioned staff, student, and parent perspective would provide further insight to existing research regarding Black students and access to higher level courses.

When designing a research study, there were things that the researcher took for granted or assumed to be true and these were known as assumptions. The first assumption was the ontological assumption, which stated "There is one defined reality, fixed, measurable, and observable" (Research Philosophy and Assumptions – SOE, n.d.). This study's ontological assumption was that Black students facing barriers to enrolling in AP was a real entity. The epistemological assumption was that "genuine knowledge was objective and quantifiable" (Research Philosophy and Assumptions – SOE, n.d.). In this case, it referred to the survey showing the most impactful barriers to Black student enrollment. The axiological assumption addressed the notion that it was taken for granted that learning about the barriers that Blacks

students encountered would be beneficial and that by addressing these issues, the opportunity gap could be narrowed. Lastly, the research strategies or methodological assumptions were when one "assumes that there are some methods of inquiry that are workable and others that will not be" (Research Philosophy and Assumptions – SOE, n.d.). In this study, the methodological assumption was that the survey would generate increased knowledge and that the findings about the barriers that Black students faced would be determined based on the survey results.

Research Ethics

The quantitative, descriptive study conducted by me examined the high school administrators' perceptions of barriers affecting Black students' enrollment in AP and was completed in an ethical manner, meeting the standards set forth by the Youngstown State University Independent Review Board. I was aware of my own potential bias as a member of the consortium in which the study data was derived. This potential for a conflict of interest was lessened by several factors. I did not complete the survey instrument to be included in the data set. Additionally, I was forthcoming with all stakeholders within the study. I self-identified that I am a member of CAMERA and my interest in this topic began prior to my current district employment.

Trochim et al. (2016) opined that research ethics centers on doing the right thing with all subjects within a study. The purpose of this study was to help determine what barriers were keeping Black students from enrolling in AP courses. Identifying these barriers and working toward addressing the issue will open pathways for Black students that may not have previously been there. I also considered the ethics of my instrumentation by conducting pilot sampling to improve the internal validity of the instrument. I utilized content experts to provide feedback and to improve on the content validity, ensuring the items intended to be measured were being

measured. Grounded in the ideas of the *Belmont Report* I took care to provide respect for people, the principles of justice and the idea of beneficence (Trochim et al., 2016).

Human Subjects

The respondents in this study, as human subjects, deserved and were subjected to the "respect for persons" principle contained within the *Belmont Report.* I provided all individuals within the study an informed consent form, where they were apprised of their ability to withdraw from the study at any time. Respondents were also informed that their participation was voluntary and that they were to receive no remuneration or compensation for their participation. These items met the elements for a "well informed consent: Information, Comprehension, and Voluntariness" (Trochim et al., 2016).

The principle of beneficence was considered within the research study as well. Trochim et al. (2016) defined this as "the expected impact on a person's well-being that may result from participation in the research" (p. 41). The risk associated with this quantitative research study was low. No remedy or treatment was being provided for the issue, rather the study was based on identifying the barriers that had the greatest impact on Black student enrollment. The one piece of the study that could cause an impact was confronting the inequity perpetrated on the Black student community since the concurrent *Brown v. Board* decision and the creation of the AP program. While this could cause discomfort for some within the study, the risk level associated with the study was minimal.

The sample was sourced from the CAMERA consortium, who have a goal of improving the diversity of the educator workforce. Representing various districts in the Northeast Ohio region, the research study did not take advantage of vulnerable populations. The respondents did so of their own volition. This satisfied the principle of justice. A criticism of the study could be

that I am a current member of the consortium where the study data was derived. As a new employee in the district and a new member of the consortium, the sample source was selected because of their mission and the varied districts contained within. Being able to source districts from a variety of socioeconomic and racial demographic views provided depth to the study.

Steps were taken to insure the anonymity of the respondents in the study. After consulting content experts, it was determined that the study could name the CAMERA consortium where the data would be gathered. All respondents were informed that their anonymity was of the greatest importance when developing the study. They were also informed that while their anonymity was protected, it was conceivable that one could deduce which districts responded based on some of the demographic information collected. Minimal risk was involved in the participation of the respondent for this quantitative study.

Secure Data Management

Data gathered by me was kept in a secure location. If the files utilized were digital, those files were encrypted to provide additional protection. Upon completion of the study, the data was destroyed to protect the respondent's privacy. I followed all established data management protocols established by Youngstown State University Beeghly College of Education.

Summary

This chapter reviewed the study's research questions centered on high school principals' perceptions of barriers affecting Black students' enrollment in AP coursework. Conducting a quantitative, descriptive research study of Northeast Ohio high school principals within the CAMERA consortium delivered insight as to which barriers caused the greatest impact in AP enrollment and would help districts strategically plan to mitigate their negative effect. The chapter described the study variables and discussed the research design applied to the study

topic. I also detailed the participants, sampling frame and sampling method. The instrumentation of the researcher created survey was examined and expert review of the instrument was detailed. I then discussed the data collection and data analysis procedures used in the study while detailing the variable coding applied to the data set. The chapter ended with a review of the study limitations, delimitations, assumptions, and the research ethics used while working with human subjects. Chapter IV will present the study's results and include a discussion of them.

CHAPTER IV: FINDINGS

Introduction

This quantitative study was designed to illuminate the barriers faced by Black students when enrolling in AP coursework by examining variable data as reported by principals who were members of the Cleveland Area Minority Educators Recruitment Association (CAMERA) consortium. There are 20 school districts in Northeast Ohio who affiliate with the CAMERA consortium. CAMERA's main objective is to focus on the recruitment and retention of minority educator candidates, and they aim to increase the number of minority educators through networking opportunities, hiring, and supporting minority educators, promoting multicultural and multiracial relations, and supporting the Future Educators of America Club. Through a quantitative survey methodology, the study explored the relationships between factors such as poverty, caregiver education, teacher and school counselor expectations, Black teacher exposure, and peer influence. Additional influences were explored by analyzing the descriptive data of the participants to determine if a correlation could be drawn between the demographic information of building administration and AP enrollment. The examination of the data and subsequent findings were analyzed in relation to the research questions:

1. What is the percentage of Black students enrolled in advanced placement (AP) courses in high schools within the CAMERA consortium as reported by principals?
2. According to CAMERA consortium principals, what are the school-related factors that limit Black students from enrolling in AP courses?
3. From the perspective of CAMERA consortium principals, what are the personal and familial factors that serve as barriers to Black students' enrollment in AP courses?

4. Is there a statistical difference between the enrollment of Black students in AP courses and the demographic characteristics of school administrators, such as race, years of experience, or gender?

I, after receiving approval from the Youngstown State University Internal Review Board, collected data through a researcher developed survey tool and delivered it through the SurveyMonkey platform. The study's aim was to solicit information from the secondary school administrators of the 20 school districts within the CAMERA consortium. A review of responses indicated that at least one secondary school administrator from each of the 20 districts responded to the survey.

This chapter includes analysis of the gathered data and is divided into four sections. The first section describes the demographic information of the respondent and the district they represent. This data does not include specific district names to protect the anonymity of the respondent. The remaining sections summarize the study's findings in relation to the four research questions. Data analysis of the survey findings will be used to highlight those barriers which CAMERA principals perceived to have the greatest impact on their students.

Demographic Characteristics

The study population consisted of 109 secondary school administrators (principals and assistant principals) from the CAMERA consortium. To reach a confidence level of 95% with a ±5% margin of error as outlined in the statistical model developed by Fowler, this study would have required 88 of the 109 administrators to respond to the survey (Fowler, 2014). There were 46 respondents to the study, which equated to a 42.2% response rate to the survey. The data set was reviewed and scanned for accuracy, and it was identified that there was missing data contained within the results. Of the 46 respondents, three (6.52%) did not have AP courses in

their school. This ended the data collection for those three respondents. Nine respondents (19.56%) consented to participate in the survey and then did not respond to any questions, which resulted in missing data. Three respondents (6.52%) did not provide an answer to the question asking how many students participate in AP in their school. These respondents then answered the remaining questions in the survey. The lack of a response to this question made it difficult to determine the number of Black students participating in AP courses in their respective schools, however, their data was included in the overall analysis of the study because the goal was to evaluate the perceptions of principals.

Several questions were posed to respondents regarding the demographic information of the administrator and the district they represent. Males made up 62.5% of the survey responses, while female respondents comprised 31.25% of the survey. Some respondents preferred not to identify their gender, which accounted for 6.25% of the responses within the gender section of the survey. Respondents identified their age on a scale of age ranges. Almost half of the respondents (48.48%) identified as being between the ages of 35-44. As part of the demographic collection, study participants were also asked about their years in education and how long they had worked as a high school administrator. These distributions displayed a wider spread, with a high of 36.36% participants being in education for 10-19 years and 33.33% of respondents serving 5-10 years as a high school administrator. One of the factors explored within the study was the impact of teachers of the same race. The final participant demographic question asked participants to identify the race/ethnicity that best described them. Most of the respondents identified as White/Caucasian (68.75%), with 28.13% of respondents identifying as Black or African American. One respondent (3.13%) identified as multi-racial/ multi-ethnic. Table 7 details the demographic information gathered for the study.

Table 7

Demographic Characteristics of CAMERA Secondary School Administrators

Characteristic	Frequency	Percent
Gender		
Female	10	31.25
Male	20	62.50
Prefer Not to Identify	2	6.25
Age Range		
25-34	1	3.03
35-44	16	48.48
45-54	9	27.27
55-64	6	18.18
65+	1	3.03
Years Worked in Education		
<10	4	12.12
10-19	12	36.36
20-29	10	30.30
30+	7	21.21
Years as a HS Administrator		
<5	7	21.21
5-10	11	33.33
11-15	7	21.21
16-20	5	15.15
21+	3	9.09
Racial/Ethnic Identity		
Black or African American	9	28.13
White/Caucasian	22	68.75
Multiracial/Multiethnic	1	3.13

When asked how their district was best described, 48.48% of principals noted that they were from an urban district and 51.52% reported being a part of a suburban district. CAMERA districts reported on average that 52% of their student body was White, while 40% was Black. The respondents had an average disadvantaged rate of 51%. Consortium schools were asked what percentage of their teaching staff identified as Black/African American and 8% was the average. Table 8 describes the school demographic characteristics as reported by CAMERA

administrators. The CAMERA districts employed nearly double the percentage of Black teaching staff compared to all of Ohio. Compared to the national average, CAMERA districts surpassed their mean at 8.33% compared to 6% nationally. The higher percentage of Black teaching staff in CAMERA districts compared to Ohio and the national average was possibly attributed to the higher percentage of minoritized populations found within the Cleveland metropolitan area.

Table 8

Demographics of CAMERA Secondary School Buildings compared to Ohio and the Nation

Characteristic	CAMERA Mean (%)	Ohio Mean (%)*	National Mean (%)**
Black Student Enrollment	39.61	17.10	15
White Student Enrollment	51.52	66.90	46
Economically Disadvantaged	50.70	44.94	43
Black Teaching Staff	8.33	4.30	6

Note: * Source: Ohio Department of Education, Advanced Reports (SY 2021-22).

** Source: National Center for Education Statistics (2023).

Research Question 1

What is the percentage of Black students enrolled in advanced placement courses in high schools within the CAMERA consortium as reported by principals?

Research pointed to a discrepancy between the number of Black students who made up the student population and those who took End of Course (EOC) exams in AP courses (Kolluri, 2018). Gathering data on research question 1 allowed me to understand the representation of Black students in AP courses within the CAMERA consortium. The study results indicated that on average, CAMERA districts had 208.97 students participating in AP coursework. Of these students, 34.12% or 71.30, were Black. Given the demographic variance between the districts

within the consortium, examination of the minimum and maximum participation numbers between AP participants and Black students participating in AP was needed to better understand the data. Prior research noted that Black students comprised 15% of all public-school students, yet only took 6.3% of all AP exams (Kim, 2021). Table 9 details Black student enrollment and AP course enrollment in CAMERA districts.

Table 9

Black Student Enrollment & Representation in AP Courses - CAMERA Consortium Schools

	CAMERA Enrollment (%)		AP Participation		
	White (%) Enrollment (n=33)	Black (%) Enrollment (n=33)	Total AP Students (n=30)	Black AP Enrollment (n=30)	Black AP Enrollment (%) (n=33)
Mean	51.52	39.61	208.97	71.30	34.12
Median	52.00	21.00	141.00	22.41	19.00
Minimum	5.00	2.00	10.00	0.00	2.00
Maximum	96.00	94.00	800.00	100.00	100.00

The next analysis of Black student representation in AP courses evaluated Black students in AP courses who sat for the End of Course exams and those who scored a 3 or higher on the assessment. Data reported from Jaschik (2019) showed that Black students represented 8.8% of exam takers and 4.3% of exam takers who earned a three or higher on at least one exam, whereas White students represented 49.5% of exam takers and 54% of exam takers who earned a three or higher on at least one exam. The data revealed that Black student participation and scoring a three or higher on AP end of course exams in the CAMERA consortium outpaced the national data with an average of 67.28% of the students enrolled sitting for the exam. Whereas the national average was 4.3% for Black students getting a 3 or higher on the exam, CAMERA

students met this score with an average of 41.88% passing. Table 10 displays the percentage of Black students enrolled in AP courses in CAMERA districts who sat for the end of course exam and the percentage of those students who scored a 3 or higher.

Table 10

CAMERA Consortium Black Student AP EOC Participation and Scores of 3 or Higher

	Percentage of Black Students Who Take the EOC (n=32)	Percentage of Black students Who Score 3 or Higher (n=32)
Mean	67.28	41.88
Median	82.50	27.50
Mode	100.00	10.00
Minimum	0.00	0.00
Maximum	100.00	100.00

Further analysis of the Black student participation and score attainment on AP EOC exams showed that of the respondents, four stated that the percentage of Black students sitting for the EOC exam was below the national average of 8.8%. The four respondents accounted for 12.5% of the cumulative percent for the consortium responses. One respondent reported their students were below the national average of Black students scoring 3 or higher on the AP EOC exam. This accounted for 3.1% of the cumulative percent.

The next analysis surrounded the question of whether CAMERA principals felt their students were equally represented in AP courses in their school. The item was presented as a 5-point Likert Scale rating system question where 1= Strongly Agree, 2=Agree, 3=Neither Agree nor Disagree, 4=Disagree, and 5=Strongly Disagree. As described by Trochim et al. (2016), the usage of this system allowed for respondents to show their agreement of an idea. Respondents

(n=33) reported a mean of 3.45 or Neither Agree nor Disagree in response to the question. Both the median and mode for the item scored a 4.00 and 4 or Disagree. When disaggregated between the responses of urban versus suburban CAMERA administrators, urban administrators (n=16) registered a mean of 2.44 or Agree and suburban administrators (n=17) reported a mean of 4.18 or Disagree. Table 11 displays how CAMERA principals responded to the question of whether Black students are equally represented in AP courses in their high schools.

Table 11

CAMERA Principal Responses to- Black Students are Equally Represented in their High School

	Overall Responses (n=33)	Urban Administrators (n=16)	Suburban Administrators (n=17)
Mean	3.45	2.44	4.18
Likert Rating	Neither Agree nor Disagree	Agree	Disagree

Correlational data was gathered from the relationships between the variables within the representation category. Using Pearson's r allowed me to notice the strength of the relationship between administrative perceptions and actual student enrollment. Within this data set there was a relationship between the percentage of Black students enrolled in AP courses (dependent variable) and their participation in End of Course (EOC) exams. I also examined the relationship between the dependent variable and Black students scoring above a 3 on the EOC and whether Black students were represented equally. The results of the regression showed a weak, positive correlation (.262) between enrollment and taking the EOC. A moderate, negative correlation (-.382) was found between enrollment and scoring a 3 or higher on the EOC. The correlation between enrollment and Black students being equally represented in AP showed a strong,

negative correlation (-.728). Table 12 details how the variables correlated with the dependent variable and with each other. Utilizing Pearson's r, the relationships between the variables were shown to be between moderate-positive, moderate-negative, and weak-positive with statistical significance found in two of the measures. The small sample size of the study contributed to the lack of statistical significance reported in the additional measures.

Table 12

Correlations of Representation Variables

		Black Students' Enrollment in AP	Black Students Who Take AP, EOC	Black Students Who Take AP, EOC w/ 3+	Black Students are Equally Represented in AP
Pearson Correlation	Black Students' Enrollment in AP	1.000	.262	-.382*	-.728**
	Black Students Who Take AP, EOC	.262	1.000	.313	-.313
	Black Students Who Take AP, EOC w/ 3+	-.382*	.313	1.000	.177
	Black Students are Equally Represented in AP	-.728**	-.313	.177	1.000

Note. *= Correlation is significant at the 0.05 level; **= Correlation is significant at the 0.01 level

After performing an OLS regression, the model summary was reviewed to evaluate the correlation coefficient or R score for the representation variables. Three models were created within the regression. Each model was selected to show the dependent variable when analyzed versus the representation independent variables. The first model measured a single independent

variable. The second model progressed to two independent variables from the representation category. The third model accounted for the performance of the three independent variables against the dependent variable. These models were chosen to determine the impact of multiple variables being measured against the dependent variable. Based on this premise, Model 2 performed the best because this model demonstrated that the coefficient standard error decreased from 11.564 in Model 1 to 10.717 in Model 2. Model 3 saw an increase in standard error to 14.717. This model included the equal representation variable, which differed from the other two variables that explored EOC participation and performance. The coefficients found in Table 13 describe the models and their slope by showing the increase in unstandardized ß. The standardized ß continued to support that the strongest relationship found in the representation variable was with enrollment and Black students getting a 3 or higher on the EOC. The data showed that this was a strong, negative relationship with a -.515 in model 2 and -.330 in model 3.

Table 13

Coefficients for Representation Variables

Model		Unstandardized B	Coefficient Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	19.896	11.564		1.720	.096
	Participating in the AP EOC*	.224	.151	.262	1.488	.147
2	(Constant)	30.860	10.717		2.879	.007
	Participating in the AP EOC*	.361	.139	.423	2.601	.014
	EOC w/ 3 or higher*	-.483	.153	-.515	-3.164	.004
3	(Constant)	87.730	14.717		5.961	<.001
	Participating in the AP EOC*	.150	.116	.175	1.294	.206
	EOC w/ 3 or higher*	-.309	.122	-.330	-2.526	.017
	Equally represented in AP*	-14.916	3.207	-.607	-4.652	<.001

Note: * = The variable data was evaluated using the mean collected from the consortium.

Table 14 details the relationship between the dependent and independent variables in the regression by evaluating the R, R Square, F Change and Sig. F Change. Ranging from .262 (moderate, positive) to .781 (strong, positive), I noted how the variables correlated with one another. This supposition was supported by the findings with the R Square of .609 for model three of the regression, which accounted for all three representation independent variables. This meant that 61% of the variance was accounted for within the model. This overall measure of the strength of association did not show how the variables reacted individually. Models 2 (p=.004) and 3 (p=<.001) were determined to be statistically significant. I noted the large variance found in the F Change. While all the variables had an impact, the equal representation variable had the greatest impact on influencing behavior within the representation variable.

Table 14

SPSS Model Summary of Representation Variables

Model	R	R Square	F Change	Sig. F Change
1	.262[a]	.069	2.214	.147
2	.555[b]	.308	10.008	.004
3	.781[c]	.609	21.637	<.001

Note. a. Predictors: (Constant), Mean of Black students participate in AP EOC.

b. Predictors: (Constant), Mean of Black students participate in AP EOC, Mean of Black students taking EOC scoring >/=3.

c. Predictors: (Constant), Mean of Black students participate in AP EOC, Mean of Black students taking EOC scoring >/=3, Mean of Black students are equally represented.

d. Dependent Variable: Mean of Black students enrolled in AP.

The data reinforced that Black students in the CAMERA consortium participated in AP courses at a higher percentage than the national average. Black CAMERA students also performed better than the national average on the AP EOC exams. Given the similarity in the response sizes between urban and suburban administrators, the data supported that administrators had different perceptions as to whether Black students were equally represented in their high schools with urban administrators expressing agreement with the statement and suburban principals disagreeing. The regression analysis also showed that there was a statistically significant relationship between the representation variables and Black student enrollment in AP within the CAMERA consortium. A Breusch-Pagan test was run on the data to determine if heteroskedasticity was found within the variables. The Chi-Square result of 13.849 with a p-value=<.001 indicated there was a significant amount of heteroskedasticity found within the model. This indicated that an OLS analysis was potentially not optimal because of the large variance found and this may have distorted the meaning found within the variables. The regression test did highlight the correlation between Black students enrolled in AP and Black students being equally represented in their respective schools. This, coupled with the data supporting that CAMERA Black students enroll in AP at higher rates and perform better on the EOC exams, further supported the relationship discovered in the study.

Scatterplot data for the three factors explored within the representation variable are displayed in Figures 1-3. The first two figures display outlier influences on the data set, while Figure 3 shows a tighter cluster of results making it easier to reinforce the strong, negative relationship found with this survey item.

Figure 1

Partial Regression Plot

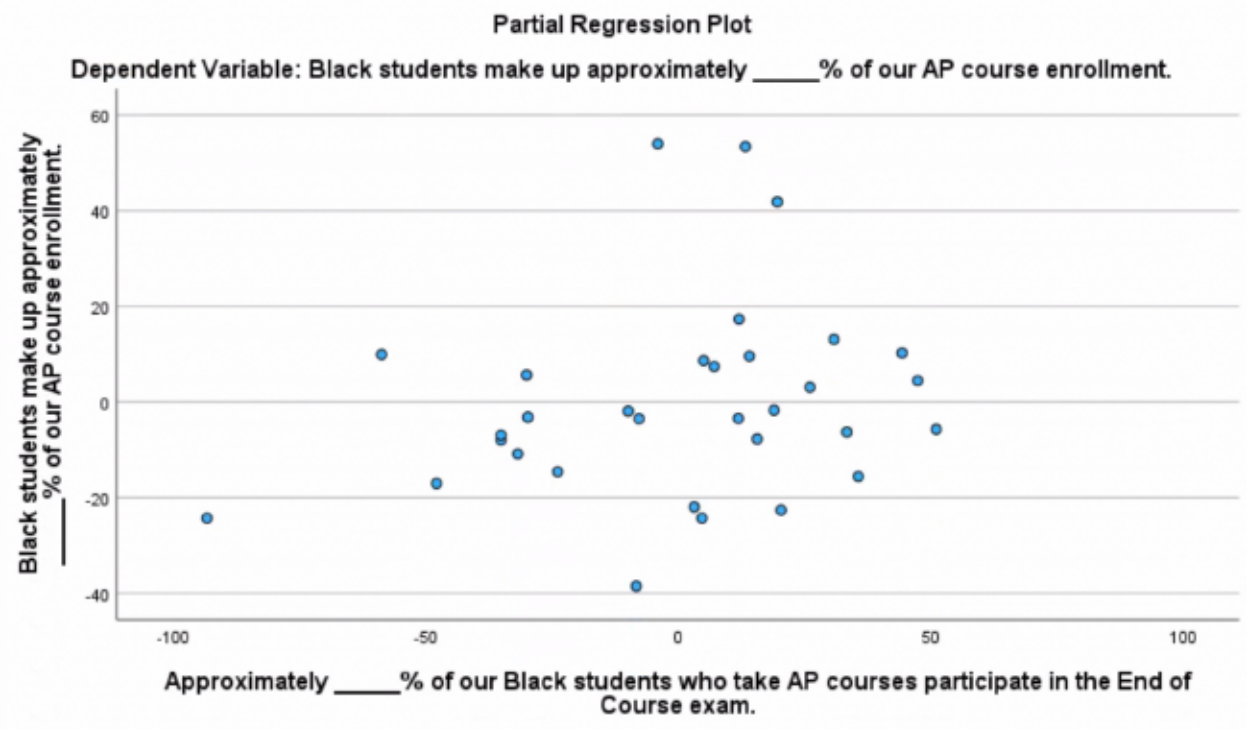


Figure 2

Partial Regression Plot

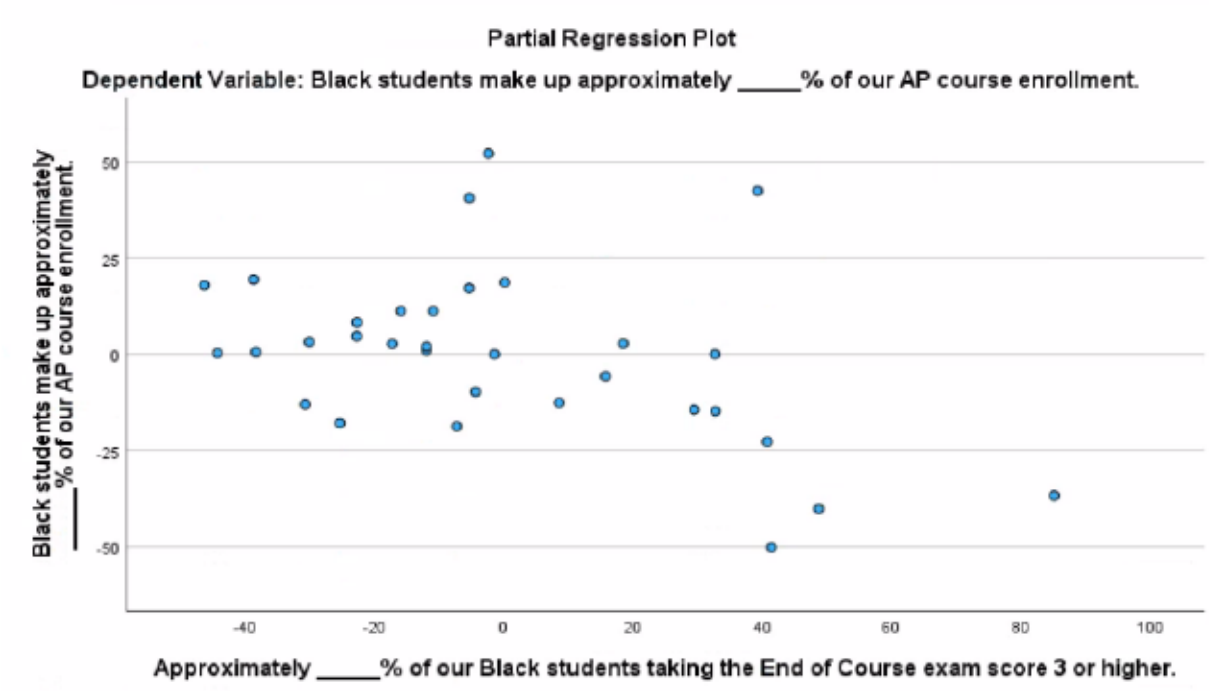
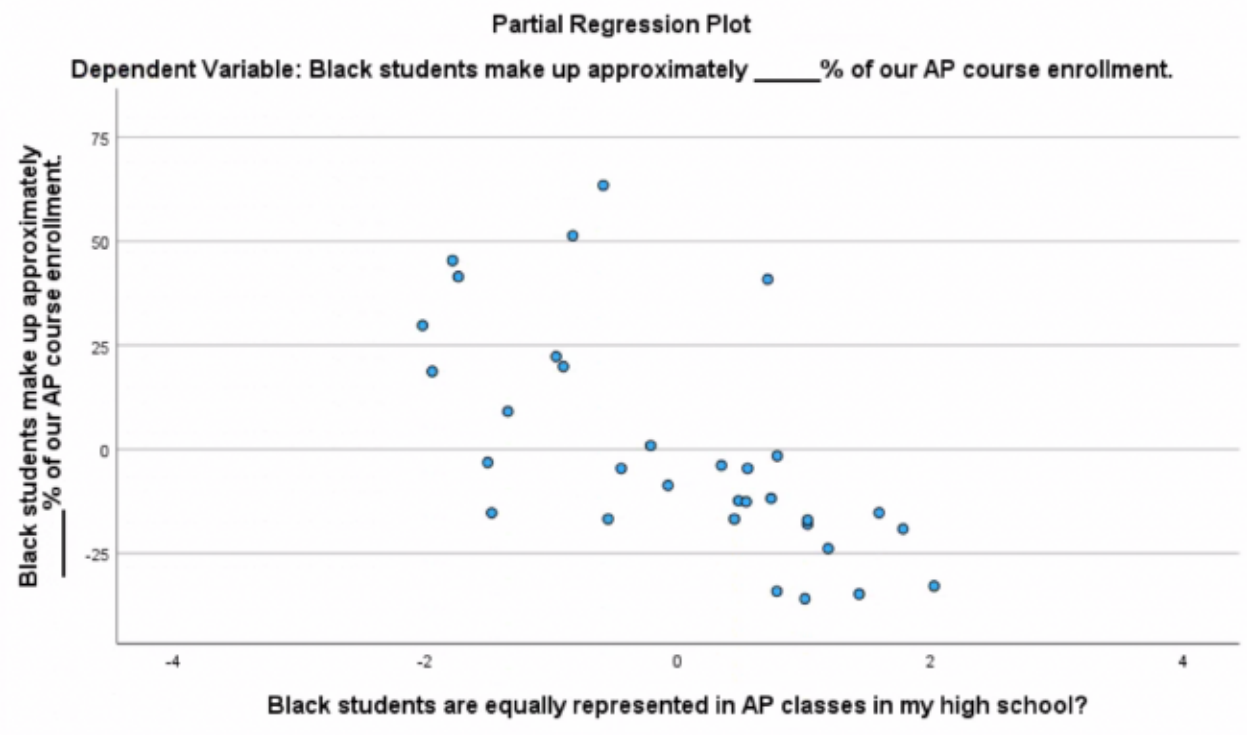


Figure 3

Partial Regression Plot



Research Question 2

According to CAMERA consortium principals, what are the school-related factors that limit Black students from enrolling in AP Courses?

The findings revealed that CAMERA principals believed their certificated staff, teachers, and counselors had the largest impact in limiting Black students from enrolling in AP courses. Morgan (2020) cited how low teacher expectations were linked to the underrepresentation of minority students in gifted programming. Anderson (2020) supported this viewpoint citing teacher bias in the nomination of gifted Black girls for advanced coursework. Vela et al. (2020) examined teacher support in AP and non-AP courses and found that differences were noted by the students, namely that teachers had low expectations, less mentoring, and less college opportunities for non-AP students. Through factor analysis, I corroborated the established

research by discovering strong loading factors with all items related to teachers and school counselors. Among the factors explored were teacher expectations for Blacks students, the lack of teachers from the same racial background, whether Black students are more likely to not have met the course requirements to take AP, and school counselors being less likely to encourage Black students to take AP. In addition to the factor analysis, an OLS regression was also conducted.

The results of the factor analysis indicated large positive loadings on component 1 for the following variables: When compared to White students, teachers have lower expectations for Black students (.839); The lack of teachers from the same racial background negatively impacts Black students from enrolling in AP courses (.603); and Black students are less likely to be encouraged to enroll in AP courses by school counselor than their White peers (.871). This indicated that Component 1, with an eigenvalue of 1.854, created a latent variable surrounding certified staff and their impact on Black student enrollment in AP. Component 2 had an eigenvalue of 1.025, creating a curriculum-based latent variable. This displayed a positive loading with Black students more likely to not meet course requirements for enrollment in AP courses than their White peers (.951). The results indicated that the group disagreed with the thought as presented. Evaluating the factor loads indicated that variables involving certificated staff within the building had a high correlation with one another. The results upheld the findings that there was a racial gap found in CAMERA schools. Hochschild (1984) believed that racism was woven in the fabric of American society. Kim (2021) noted that Black students were under-enrolled in AP by as much as 50 percentage points. Whitaker (2019) believed that the teacher's perception of the student created a narrative of what an urban student looked like and how they could perform in class. This categorization may lead to students being marginalized in their

classrooms. The factor loading in Table 15 shows how strong the correlation between school related variables involving staff is.

Table 15

Factor Analysis of School Variables

	Component 1- Certified Staff	Component 2- Curriculum-Based
When compared to White students, teachers have lower expectations for Black students.	.839	.216
The lack of teachers from the same racial background negatively impacts Black students from enrolling in AP courses.	.603	-.388
Black students are more likely to not meet course requirements for enrollment in AP courses than their White peers.	.109	.915
As a whole, Black students are less likely to be encouraged to enroll in AP courses than their White peers.	.871	.080

After the factor analysis was completed, the data was reduced to the two latent variables- certified staff and curriculum-based, and subsequently an OLS regression was performed to determine the goodness of fit of the data. This was used to determine if enrollment would increase or decrease depending on the two variables. The regression was performed with both variables grouped together. Utilizing Pearson's r, I was able to observe that neither variable relationship had a meaningful correlational relationship. Neither variable achieved a score high enough to display even a weak correlational relationship as shown in Table 16. The variables also lacked statistical significance with certified staff demonstrating the lowest statistical significance score of .398.

Table 16

Correlations of School Variables with Statistical Significance

Pearson Correlation		Black Students' Enrollment in AP (n=33)	Certified Staff (n=33)_	Curriculum-Based (n=33)
	Black Students' Enrollment in AP	1.000	.047	.013
	Certified Staff	.047	1.000	-.022
	Curriculum-Based	.013	-.022	1.000
Sig. (1-tailed)	Black Students' Enrollment in AP	.	.398	.472
	Certified Staff	.398	.	.453
	Curriculum-Based	.472	.453	.

The lack of correlational strength was unexpected by me, who anticipated a stronger correlation of the variables based on the results of the factor analysis, which displayed strong results with those variables involving certificated staff. A review of the model summary and ANOVA, as shown in Table 17, further supported the lack of strong relationships within the school variable. The findings of the regression resulted in an R score of .049 and an R Square score of .002. Additionally, the model summary showed an adjusted R-Square of -.064. The negative R-Square indicated that the model was not a good fit. The model summary also revealed a large standard error of the estimate at 33.058. The ANOVA was then reviewed with specific evaluation of the F statistic, which was .036 and had a significance score of .965. The low F statistic indicated that the certified staff and curriculum-based variables do not have a significant effect on the dependent variable. This, combined with a p-value of .965, indicated the lack of statistical significance found in the model.

Table 17

Model Summary and ANOVA of School Variables

Model Summary	Statistic	Value
	R	.049
	R Square	.002
	Adjusted R Square	-.064
	Std. Error of the Estimate	33.058
ANOVA	F Statistic	.036
	Significance	.965

Next, the coefficients of the variables were explored. This revealed the certified staff variable had an unstandardized B of 1.506 and the curriculum-based variable had a .439. Both variables possessed low t-scores and lacked statistical significance as shown in Table 18. These results indicated that both the certified staff and curriculum-based variables were not statistically significant in predicting Black student enrollment in AP courses.

Table 18

Coefficients for the Certified Staff and Curriculum-Based Variables

	Unstandardized B	t	Sig.
(Constant)	34.168	5.934	<.001
Certified Staff	1.506	.259	.797
Curriculum-Based	.439	.075	.940

The findings of the study showed that within the school variable, items involving certificated staff had the strongest performance in the factor analysis even though this test lacked statistical significance. Given the small sample size, the lack of statistical significance found within the ANOVA and the coefficients was expected. This does not negate the importance of the teacher and school counselor as influences on student success. The research surrounding the impact of teachers is plentiful. The results of this study supported the impact educators can have on Black students enrolling in AP courses in the CAMERA consortium.

Research Question 3

From the perspective of CAMERA consortium principals, what are the personal and familial factors that serve as barriers to Black students' enrollment in AP courses?

The findings of this study revealed the perceptions CAMERA secondary principals held regarding the personal and familial factors impacting Black student enrollment in AP courses. In examining the personal and familial factors, I utilized 5-point Likert scale questions that evaluated student poverty, parent education levels, negative peer influences, and the "acting White" label as reasons why Black students do not enroll in AP courses.

Poverty

The study findings revealed that CAMERA principals perceived poverty to be a limiting factor in Black student enrollment. When asked if Black students living in poverty are less likely to enroll in AP in their district, the principals overwhelmingly agreed with 33.3% strongly agreeing and 39.4% agreeing with the statement. This accounted for 72.7% of respondent answers. Only 6.1% or two respondents disagreed with the statement. The mean for the question was 2.00 or Agree. This item had the lowest mean average of any Likert item within the survey.

As the minority student population grows in the future, high-quality educational options must be made available and accessible to students, regardless of socioeconomic circumstance. The research supported that poverty was a limiting factor for Black students and AP access such as when Jensen (2009) noted students raised in poverty faced issues with brain development due to the stress extreme poverty environments create. Students from these environments tend to exhibit diminished attention span, lower test scores, and a drastic increase in absenteeism. In addition, students in schools with prevalent poverty exhibited higher rates of suspension/expulsion, more acts of school violence, and higher truancy rates (Rust, 2019). These challenges jeopardized learning for those living in poverty and their non-poverty peers, who may have had the educational environment adapted to meet the needs present in the classroom.

The second survey item exploring poverty as an inhibitor of Black student enrollment in AP courses involved the educational options available to Black students living in poverty. Query of the CAMERA secondary principals revealed that administrators on average agreed that Black students living in poverty had fewer educational opportunities with a mean score of 2.79 or Agree. When evaluating the frequencies of the responses, the data showed that 14.7% of respondents strongly agreed and 41.2% agreed that Black students living in poverty had fewer educational options available to them. The research supported the idea that students living in poverty had fewer educational options. Kolluri (2018) noted that deep inequities in educational attainment by race and social class remain, and much work in AP and beyond has focused on these gaps in academic opportunity.

Table 19 details the descriptive statistics of the two study questions focused on poverty as a limiting factor for Black students enrolling in AP. The table demonstrates that CAMERA administrators agreed to the idea of poverty being a limiting factor for their Black students.

When responding to whether Black students living in poverty are less likely to enroll in AP, 24 of the 33 respondents selected that they strongly agree (n=11) or agree (n=13), which accounted for 72.7% percent of the responses. Only two respondents disagreed with this statement, indicating the administrator's perceptions of poverty had considerable influence in Black student enrollment. The next item explored whether Black students living in poverty had fewer educational options. This statement resulted in five administrators (14.7%) strongly agreeing and 14 agreeing (41.2%). This meant that over half of the respondents responded that their Black students from poverty had fewer educational options. This item had more respondents disagree or strongly disagree, with seven disagreeing (20.6%) and five strongly disagreeing (14.7%). Cumulatively the items acknowledged poverty as a limiting factor, but the CAMERA administrators held stronger feelings in relation to the educational options available to students with fewer people- three, selecting the Neither Agree, Nor Disagree option in the survey.

Table 19

Poverty as a Limiting Factor for Black Student AP Enrollment

	Black Students Living in Poverty are Less Likely to Enroll in AP Coursework in My District (n=33)	Black Students Living in Poverty Have Fewer Educational Options, Including AP Courses, Available to Them (n=34)
Mean	2.00	2.79
Median	2.00	2.00
Mode	2	2
Strongly Agree	11 (33.3%)	5 (14.7%)
Agree	13 (39.4%)	14 (41.2%)
Neither Agree, Nor Disagree	7 (21.2%)	3 (8.8%)
Disagree	2 (6.1%	7 (20.6%)
Strongly Agree	0 (0%)	5 (14.7%)

Parent Education Level

When CAMERA principals were questioned as to whether parents with low formal educational levels reinforced lower expectations of their children, creating an external barrier for AP enrollment, the administrators displayed a mean of 2.62, which fell in the Agree category of the statement. The median and mode were both 2.00 and 2 reinforcing the data found in the mean. The reported results from the CAMERA administrators supported the research that parents with low educational levels can create an external barrier keeping their students from enrolling in AP coursework.

Previous research indicated that students who had parents finish high school completed at least one AP course at almost half the rate of those who had parents with a college degree (Kolluri, 2020). Nowicki & the U.S. Government Accountability Office (2018) stated that first-generation high school graduates typically have a sense of accomplishment for completing high school when the parent did not. Because of this, there was little expectation in pursuing a more advanced course load including AP courses. Shaunessy-Dedrick et al. (2014) noted that many parents lacked the understanding of what the program expectations for AP were. This ranged from the time commitment required, the intensity of AP programming, and the impact this could have on their child's social-emotional well-being. A lack of clear understanding may lead to parental apathy when it comes to course scheduling for those who do not know how to access the system.

Negative Peer Influences

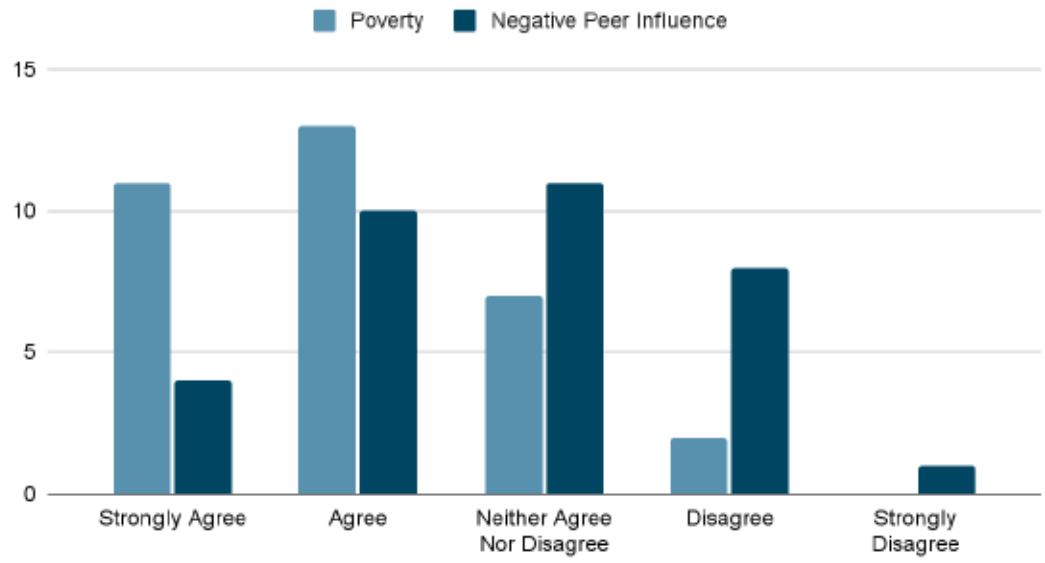
CAMERA secondary school administrators reported a mean of 2.76 or Agree to the question of whether negative peer influences are more likely to keep Black students from enrolling in AP courses than White students. Of note in these findings is that the median and mode for this question were 3.00 and 3 respectively, indicating that the largest percentage of respondents Neither Agree Nor Disagree with the idea that negative peer influences impacted Black student enrollment more than White students. Figure 4 shows the even distribution between Agree, Neither Agree Nor Disagree, and Disagree, indicating a measure of ambivalence toward this variable when compared to the administrators' stronger thoughts on poverty.

Studies identified the "racial opportunity cost" that high performing Black high school students considered when enrolling in AP classes, which caused feelings of alienation by other Black students because they pursued AP classes (Chambers & Huggins, 2014). Kolluri (2020)

shared in his study that minority students, especially males, struggled to move past the social ramifications of taking advanced courses and doing well. Peterson-Lewis & Bratton (2004) countered this by exposing that the White label "nerd" is placed in a social context. The Black label of "acting White" connected to race, which emphasized it more. This connection caused a racial identity issue for high achieving Blacks. Did they continue their academic pursuits at the risk of severing their ties to the Black community?

Figure 4

Frequency Comparison Between Poverty & Negative Peer Influence



"Acting White"

CAMERA principals were asked if fearing being labeled as "acting White" would cause Black students to refrain from taking AP coursework to remain tied to the Black community. The study revealed that CAMERA administrators agreed with the statement with a mean of 2.91. The median for this question was 3.00 and the mode was 2. This indicated that the perceptions of the principals toward this question varied more than they did with the negative peer influence question. Fourteen respondents selected that they agreed with being labeled as "acting White" as

a limiting factor for Black students enrolling in AP. This accounted for 41.2% of the responses. Seven respondents responded equally to Neither Agree Nor Disagree (20.6%) and Disagree (20.6%). Four respondents (11.8%) strongly disagreed with this statement, doubling those who strongly agreed (5.9%).

The implications of this question are linked directly to the theoretical framework and how Social Identity Theory impacted the actions of people. Tatum (2017) noted that by inculcating Black youth with positive cultural images, the impact of the labels "acting White" and "acting Black" can be mitigated. Black students without the worry of these race-based labels would no longer have to sacrifice their cultural identity within the Black community to pursue academic achievement.

After reviewing the data, a factor analysis of the personal factors was completed to see how well the independent variables correlated to each other. Like the factor analysis completed with school factors, a rotated component matrix was attempted. Upon completing the analysis, only one component had an eigenvalue above 1.00 with the component loading at 2.38, which resulted in the factor analysis being unable to be rotated and the creation of the "Personal" latent variable. The component matrix found in Table 20 shows that each of the variables relating to personal factors all had strong relationships with scores ranging from .594 to .808. The factor analysis indicated that CAMERA administrators believed the personal factors of poverty, caregiver low education levels, negative peer influences, and the fear of being labeled as "acting White" all had strong connections toward inhibiting Black students from enrolling in AP coursework.

Table 20

Component Matrix of Personal Variables

Variable	Comp. 1-Personal
Black students living in poverty are less likely to enroll in AP coursework in my district	.656
Black students living in poverty have fewer educational options, including AP courses, available to them	.650
Parents with low formal education levels reinforce lower expectations of their children, creating an external barrier for enrollment in AP courses	.594
Negative peer influences are more likely to keep Black students from enrolling AP courses than White students	.720
Fearing being labeled as "acting White", some high achieving Black students refrain from taking AP coursework to remain tied to the Black community	.808

A regression analysis was then completed on the "Personal" latent variable created from the factor analysis. This was done to determine the relationship that existed and to ascertain the goodness of fit for this model. The results of the regression displayed a correlational value that fell below the .1 threshold for a weak relationship at .086. To obtain statistical significance within this model, the p score would have needed to be equal to .05 or lower. The model had a significance of .319, which did not meet the threshold for this test. Table 21 details the correlational scores and p score for the personal variable.

Table 21

Correlation of Personal Variable with Statistical Significance

		Black Students' Enrollment in AP (n=32)	Personal (n=32)
Pearson Correlation	Black Students' Enrollment in AP	1.000	.086
	Personal	.086	1.000
Sig. (1-tailed)	Black Students' Enrollment in AP	.	.319
	Personal	.319	.

A review of the model summary and ANOVA statistics of the latent variable "Personal" was conducted to further explore the relationship between this factor and the dependent variable. The correlation coefficient in this regression was .086, indicating less than a weak-positive linear relationship between the latent variable predictor and the dependent variable. Continuing with model summary the R Square resulted in a .007, meaning that it accounted for .7% of the variance in the dependent variable when using the predictor in the model. With a standard error of estimate of 32.965, there was a large variance between what was observed in the model and what values were predicted in the model. The ANOVA statistic in this regression showed an F statistic value of .225. Used to test the overall significance of the model, this score, combined with a statistical significance of .638, indicated that the F-value was not significant at the typically accepted level of .05 as shown in Table 22. These findings revealed that the model's predictors are not providing a statistically significant explanation for the variation found in Black student enrollment in AP.

Table 22

Model Summary and ANOVA Results of the "Personal" Latent Variable

	Model Summary			ANOVA	
Model 1	R	R Square	Std. Error of the Estimate	F	Sig.
	.086	.007	32.965	.225	.638

I then explored the coefficients found with the personal variable by examining the unstandardized B, t score, and significance results as shown in Table 23. This revealed the personal variable had an unstandardized B of 2.885 and t score of .475. The variable had a significance score of .638 indicating the model was not statistically significant in how Black student enrollment in AP was impacted by this factor.

Table 23

Coefficients for the Personal Variable

	Unstandardized B	t	Sig.
(Constant)	34.392	5.894	<.001
Personal	2.885	.475	.638

The study shed light on the perceptions of CAMERA consortium principals. The factor analysis indicated that the items within this section bound together with a strong relationship. The principals recognized the impact poverty, caregiver education levels, negative peer influence and "acting White" can have on Black student enrollment in AP. These items are well

established within prior studies and the CAMERA administration continued to support that these personal factors have a detrimental impact on Black student enrollment in AP. The regression analysis indicated that these personal factors, when combined into one variable, did not produce a statistically significant model. The poor model fit found within the regression was an unexpected result by me given the strength of the responses from the respondents. The small sample size of the study resulted in a lack statistical significance. The model also did not explain how the personal variable impacted Black student enrollment in AP . While this will limit the generalizability of the findings within this variable, the fact that the factor analysis showed the strong relationships between the items to create a latent variable did support the research regarding the negative impact that these items can have on AP enrollment.

Research Question 4

Is there a statistical difference between the enrollment of Black students in AP courses and the demographic characteristics of school administrators, such as race, years of experience, or gender?

The last component of the data analysis explored whether there were statistical differences between the sample respondents based on their demographic characteristics. It was important to discern whether male and female administrators had different perceptions regarding which items served as inhibitors toward Black students enrolling in AP courses. In addition to gender, other factors explored were the race of the respondents, their district typology (suburban/urban), and their years of high school administrative experience. Each of these components were important to establish whether there were factors that transcended demographics as global inhibitors of AP enrollment for Black students. Table 24 details means gathered for each variable and demographic subgroup in the study. A review of the descriptive

statistics of these groups illuminated that when exploring whether Black students were equally represented in their schools, only urban administrators (2.80-Agree) and those with less than five years of experience (2.67-Agree) agreed with the question. Almost all other groups neither agreed, nor disagreed. Interestingly, suburban principals disagreed with the statement (4.0-Disagree), resulting in one of the largest variances within the entire demographic analysis. It may be possible that urban administrators answered that Black students were equally represented in their schools because they had a larger percentage of Black students in their school population than the suburban schools. Females disagreed (4.40) with the statement at the highest mean.

After evaluating the means regarding whether or not Black students were represented equally in CAMERA high schools, the effect sizes were evaluated between the different subgroups using Cohen's d. The effect size for this comparison between males and females was -.8846 indicating that on average females had a higher mean response than males and that the magnitude of the difference was considered large. The next subgroup evaluated was race to determine the magnitude between the responses of Black and White administrators. This measure showed an effect size of .3848 indicating a small effect size.

The differences between the latent variables certified, curriculum-based, and personal were then explored between the subgroups. The certified variable explored the impact of certified staff and their impact on Black student enrollment in AP. All groups within the certified variable either fell in the Agree or Neither Agree, Nor Disagree with their mean responses. Almost all groups within the experience subgroup agreed, with only those who had 16 or more years of experience responding in the Neither Agree, Nor Disagree group. One area of note found within the subgroup data was the difference between Black and White CAMERA administrators in reference to the certified staff variable. The administrators showed the biggest

discrepancy between subgroup data with Black administrators having a mean of 2.13 (Agree) and White administrators having a mean of 3.15 (Neither Agree, Nor Disagree). This was the only subgroup to have a 1.0+ difference in mean averages within the certified variable. Noticing this score, the effect size was evaluated using Cohen's d with a score of -1.12. This negative value indicated that Black administrators had a lower mean response when compared to White administrators, which was supported by Table 24. The magnitude of the difference between the two groups is considered large.

The curriculum-based latent variable found almost all subgroups in the Neither Agree, Nor Disagree category. Only Black administrators and those administrators with 10 or more years of experience fell in the Agree category with mean averages of 2.75 and 2.64. Three subgroups- Females, Urban, and those with less than five years of experience had a 3.0 mean average, just placing them in the Neither Agree, Nor Disagree category. A common theme identified in the mean averages was noted in those with 16+ years of experience as a high school administrator having the highest mean score. With a mean score of 3.50, these administrators had the highest average, just as they did with the certified staff variable and the equal representation variable. This variable explored whether students were meeting the curricular expectations to be able to take AP courses. This led me to explore the magnitude of the relationship between suburban schools and urban schools with the curriculum-based variable. Cohen's d for the comparison between administrators in suburban and urban schools with the curriculum variable was .0828. This indicated a magnitude that was very small, which surprised me given how some perceive suburban schools to provide more curricular opportunity than urban schools.

The last variable explored was the personal variable. This variable was derived from the strong factor loading conducted resulting in strong relationships amongst the survey items

exploring poverty, caregiver expectations and the "acting White" hypothesis. Unlike the curriculum-based variable, this variable found almost all groups within the Agree category with administrators with 11-15 years of experience having the lowest mean average at 2.35 (Agree). Maintaining the highest mean average was the administrative group with 16+ years of experience with a 3.25 (Neither Agree, Nor Disagree). The mean scores found within this variable indicated the strong beliefs the administrators had in agreeing that the personal variable had the greatest impact on Black student enrollment in AP. This data showed how the personal variable transcended the subgroups to achieve almost universal agreement in how this has an adverse impact on students.

I chose to explore the magnitude of the relationship between both Gender and Racial subgroups to better understand the magnitude of the relationships for these subgroups. Cohen's d revealed a negligible effect size of .0076 for Black males. The effect size for White males was then considered and this resulted in a negligible magnitude of -0.0991. The Black female effect size was then examined and resulted with a weak score of .476. Lastly the White female effect size was considered with Cohen's d being calculated at .387 or weak effect. These effect sizes were important to consider to better understand the perceptions of the administrators based on their race and gender. Given their daily interactions with the students in their schools, their responses shed light on what is inhibiting Black student enrollment with the personal variable having the greatest impact.

Table 24

Mean Responses by Demographic Subgroup

	Gender		Race		Type		Experience			
	M n=20	F n=9	B n=8	W n=22	S n=17	U n=15	<5 n=6	10 n=11	15 n=7	16+ n=8
Black Students-Equally Represented in AP Class in My High School	3.25	4.40	3.75	3.32	4.00	2.80	2.67	3.36	3.71	3.88
Certified Staff	2.88	3.18	2.13	3.15	2.70	3.27	2.78	2.91	2.72	3.42
Curriculum-Based	3.15	3.00	2.75	3.05	3.12	3.00	3.00	2.64	3.29	3.50
Personal	2.49	3.07	2.48	2.60	2.45	2.87	2.73	2.39	2.35	3.25

Conclusions

The analysis of the study findings demonstrated through factor analysis that those components contained within the certified staff and personal variable were the most powerful in exploring what inhibited Black students from enrolling in AP coursework. The regression data, while heteroskedastic, showed the correlations between enrollment and school correlations. The study findings also revealed the principals' perception on the impact of poverty on their students within the personal latent variable. The data points reinforced the strength of these relationships and how they correlated with other components of the study. The small sample of the study plagued the research because it often resulted in many of the tests being completed without statistical significance. The results of the study often supported research regarding the impact of the teacher on student learning and the negative impact of poverty. This was backed by the CAMERA principals and their responses to the personal variable, where many of the subgroups stated that they agreed that students from this background are less likely to take AP. The differences in Black and White administrators in both the certified staff and curriculum-based variable highlighted cultural differences that White educators struggled to recognize due to their

lack of a shared experience. While gender did not prove to be too influential, females, both Black and White, posted weak effect sizes that were approaching moderate on the personal variable. Males only had a very small effect on the variables explored. Further exploration may lead to better understanding about how gender and racial differences result in different experiences for Black students attempting to enroll in AP courses. Lastly, further exploration of principals with varying years of experience could be justified due to the differences found in the data between the administrators with 0-15 years and those with 16+ years.

CHAPTER V: CONCLUSIONS, DISCUSSION, AND SUGGESTIONS FOR FUTURE RESEARCH

"Why do you care?" said the high school student when I asked him the question that had been bothering me- "Why don't our Black students enroll in AP?" I was conducting rounds in my high school building, and I walked into Advanced Placement (AP) calculus. I looked around the room and made a glaring observation; none of the students represented any minorities, yet our school was highly diverse. Similar results were evident in visits to other AP courses and higher-level courses that were offered. I intentionally asked this student my question because I knew he would give me an honest response, but I was unprepared for the gut punch his response gave me. My response to his query was, "Fair question, let's talk about it." I wanted to tell him that I cared very much because I knew the students who were enrolled in AP coursework had more advantages post high school, but the reality was, it went deeper than that. These issues were long embedded and rooted in lack of trust, understanding, and perspective. Where was the breakdown that kept our Black students from enrolling in AP? I wanted to find out why this problem existed in my building (and likely many others) and I was on a mission to fix it.

Introduction

This study sought to understand the perceived roadblocks that Black students experienced when they chose to either enroll or forgo the opportunity to take AP courses. The insights into the problem were provided by principals from the Cleveland Area Minority Educator Recruitment Association (CAMERA), which is comprised of member school districts who share in the organization's mission to identify, recruit and support minority educational professionals so that districts can maintain diversity in their faculty. Additionally, CAMERA seeks to hire

teachers who are sensitive and responsive to student needs in a culturally diverse school environment (CAMERA, 2022). There were 109 secondary school administrators selected to participate in the study survey due to their commitment to cultural responsiveness and due to their positions within the school system affecting scheduling and staffing. The study employed a quantitative survey designed to assess high school principals' impressions of what Black student representation looked like in AP courses. The study also explored how high school principals recognized school and personal factors that influenced Black student enrollment in AP courses. Lastly, the study examined whether there were differences in Black student enrollment in AP courses depending on the demographics (age, experience, and race) of the school administration.

This chapter provides a review and discussion of the most prominent findings presented in the previous chapter. The demographics and variables are more fully explored, the research questions are restated, and the implications for practice in education are reviewed. The respondents to the study survey were all high school administrators from the CAMERA consortium. Given the respondent's district commitments to diversity, equity, and inclusion, these administrators were well positioned to share what they felt were inhibiting factors toward Black student enrollment in AP. Their insights will provide the necessary data to help formulate strategies to mitigate the impact of under enrolling Black students in AP.

The chapter has been organized to address the following: Summary of Findings, Conclusions, Discussion, Implications for the Future Research, and a Summary. The data presented in the summary of findings section are connected to the research contained within the literature review. Linking these findings with previous research will entrench the study's importance for the field of education particularly for administrators, school counselors, and teachers. The study supports previously established research surrounding disadvantages faced by

Black students attempting to enroll in AP which included poverty, caregiver educational levels, counselor relationships, teacher expectations, and a lack of minority teachers (Flanagan et. al, 2020; Grissom et. al, 2020; Houston & Xu, 2016; Jeffries & Silvernail, 2017; Monaghan et. al, 2020; Ricciardi & Winsler, 2021). Establishing an administrative perspective about what is keeping Black students out of AP courses will enable future research to explore methods to embolden this student group to embrace the challenge presented by the coursework. The chapter will conclude with a summary of the study.

Summary of Findings

The results of the study allowed a variety of findings to emerge from the collected data. This section is devoted to discussing the important findings and illuminating what CAMERA principals hold as the major inhibitors toward Black student enrollment in AP. As the findings emerge, their link to previous research and the theoretical framework will be explored and discussed.

The survey tool was issued to 109 potential respondents from a consortium of 20 schools located in Northeast Ohio. Of the 46 respondents, three (6.52%) did not have AP courses in their school. This ended the data collection for those three respondents. Nine respondents (19.56%) consented to participate in the survey and then did not respond to any questions, which resulted in missing data. Three respondents (6.52%) did not provide an answer to the question asking how many students participate in AP in their school. The demographic information showed that 62.5% of the surveys were completed by males and 31.25% of the respondents were female. Some respondents preferred to not identify their gender, accounting for 6.25% of respondents. While most of the respondents identified as White (68.75%), 28.13% of respondents identified as Black or African American. Consortium respondents identified that their teaching staff contained

8% Black teachers. The granular data showed that the minimum percentage of Black teachers in the consortium was 0% Black teachers and a maximum Black teaching staff of 25%. Comparatively, while White teachers in the consortium outnumbered Black educators, CAMERA had higher percentages of Black teachers than their state and national peers. This was quite pronounced when evaluating the consortium to Ohio because CAMERA had almost two times as many Black teachers (8.33%), on average, than found in the state (4.30%). Given the research supporting the importance of having a same race teacher one could surmise why Black student in the consortium outperformed their state and national peers on AP EOC exams. This thought is supported by Johnson & Larwin (2020), who noted that Black students, particularly males, benefited from environments containing positive reinforcement and support to excel when challenged academically. Martin & Brooks (2020) relayed that Black teachers are underrepresented throughout the nation. While this was true in CAMERA, the higher proportion of Black educators appeared to help provide better outcomes for Black students within AP courses.

Once the consortium teaching and administrative staff demographics were gathered, attention was given to the student population. This information showed that districts within the consortium averaged 51.52% White student bodies and 39.61% Black. There was a large variance within consortium districts as the minimum Black student population in a consortium school was 2% and the maximum was 94%. The districts reported that on average 50.70% of their students were economically disadvantaged. This demographic also had a wide variance where one district reported 8% (min.) of their student body was economically disadvantaged, while another reported 100% (max.) economic disadvantage. The variance found further illustrates the diverse district makeup of the consortium schools. As expected, the data showed

that urban schools experienced higher rates of poverty compared to the suburban ring of schools surrounding them.

The demographics of the districts and their respondents shed light on how the consortium schools addressed the research questions found within the study. Respondent data revealed a substantially larger percentage of Black administrators than Black teachers within the study. Given that the study respondent data disclosed having a teacher of the same race as being an important influence on AP enrollment the evidence points to the need to make the teaching staffs of consortium schools more proportional with the administrative ranks of the group.

The study survey consisted of four sections, each addressing different research questions related to the study. The first section focused on the representation of Black students in AP courses within the consortium. The second section explored school factors that may inhibit Black students' enrollment in AP courses, such as teacher expectations and lack of encouragement. The third section addressed personal and family factors, such as poverty and peer influences. The fourth section dealt with demographic information about the respondents and their schools, as well as differences between administrators and Black students enrolled in AP courses. Each research question and the relevant findings are detailed below.

Research Question 1: What is the percentage of Black students enrolled in advanced placement courses in high schools within the CAMERA consortium as reported by principals?

Upon completing the demographic questions on the survey, the respondents were asked to reply to questions surrounding the representation of Black students in AP courses within their schools. Research points to the disparity found between White student enrollment in AP and Black student enrollment in these courses (Jeffries & Silvernail, 2017; Patrick et. al, 2020; Riccardi & Winsler, 2021). The College Board, who oversees the AP program nationally, has

acknowledged the "equity gap" that currently exists in the program and has taken steps to address it by expanding access (Jaschik, 2019). The survey items explored school enrollment in AP and student participation and performance on the AP exam. Lastly, the administrators were asked whether their students were equally represented in AP in their schools.

Data reported from Jaschik (2019) showed that Black students represented 8.8% of exam takers and 4.3% of exam takers who earned a three or higher on at least one exam, whereas White students represented 49.5% of exam takers and 54% of exam takers who earned a three or higher on at least one exam. Data from the 2015-2016 school year revealed that Black students in Ohio represented only 4.8% of student enrollment in AP coursework and only 1% received a passing score (Chatterji et al., 2021). Nationally, there was a significant discrepancy between White and Black student performance on AP exams; 55% of White students compared to only 4.3% of Black students passed the AP exam (Atahuene, 2021; Kim, 2021).

The first significant finding of the study was that Black student participation in AP outpaced what has been observed nationally. The study results indicated that on average, CAMERA districts had 208.97 students participating in AP coursework. Of these students, 34.12% or 71.30, were Black. The data revealed that Black student participation and scoring a 3 or higher on AP end of course exams in the CAMERA consortium outpaced the national data with an average of 67.28% of the students enrolled sitting for the exam and 41.88% scoring a 3 or higher on the exam. Accounting for the variance in districts, reviewing the mode of the data collected surrounding Black students scoring a 3 or higher was 10%. While this number was closer to the national average as reported by Atahuene (2021) and Kim (2021), Black students within the consortium performed better on the AP exam than their peers. This performance is

even more notable when compared to the data presented by Chatterji et al. (2021) stating that only 1% of Black students in Ohio scored a 3 or higher on AP exams.

The success of Black students in the CAMERA consortium also contributed to the ideas espoused in the theoretical framework tied to Social Identity Theory. Social Identity Theory (SIT) relayed that people constructed their social identities to create a frame of reference to show belonging in certain groups according to their shared thoughts or feelings (Tajfel, 1972). Peterson-Lewis & Bratton (2004) examined how Black youths who displayed high academic achievement experienced an achievement dissonance, where they felt disconnected to their ingroup norms. The success of the Black students in AP within the CAMERA consortium refuted the idea that this group of students became disconnected; rather they connected with their peers, Black and White, to perform in a manner that was far superior to national and state averages. In this manner, the Black students who participated in AP were part of an ingroup that sought out the challenge of AP coursework.

Determining if Black students were equally represented in AP in CAMERA schools was an important perception of the administration to evaluate. Interestingly, there was a discrepancy between urban administrators and suburban administrators with this item. Urban administrators agreed that their students were equally represented while suburban administrators disagreed. It was plausible that urban administrators responded this way because their schools have higher percentages of both Black students and staff, however, these responses did not match the correlational data found in the study. The correlational data surrounding Black student enrollment in AP being equally represented showed a strong-negative correlation in this relationship. This finding indicated that as Black student enrollment increased there tended to be a decrease in the likelihood that they were equally represented in AP courses. The interpretation

of this statistic should be carefully considered because correlation did not imply causation. Given the disagreement between urban and suburban administrators and the correlational score between enrollment and equal representation, additional research would be needed to ascertain why Black representation in AP decreases as the Black student enrollment increases.

Research Question 2: According to CAMERA consortium principals, what are the school-related factors that limit Black students from enrolling in AP courses?

CAMERA administrators next addressed how school-related factors impacted Black student enrollment in AP. Areas that were explored consisted of teacher expectations, the lack of same-race teachers, the impact of school counselors recommending Black students for AP courses, and meeting the pre-requisite requirements to take the courses. Underlying all of these factors was the impact of racism in our schools. Gay (2004) eloquently contended, "Racism is so deeply woven into the entire fabric of society that no single policy or strategy, however powerful, is sufficient to eradicate it" (p. 13). Marsh & Noguera (2017) and Rust (2019) indicated that while minority students had the same academic goals of other subgroups, they were negatively impacted by the perception of poor academic motivation, which may have been a product of an environment that prioritized the White, American, middle-class as the norm by which all other groups were judged.

The study revealed that certified staff had the biggest impact on their students' enrollment in AP. Jeffries & Silvernail (2017) cited 58.8% of AP enrollments were based on teacher referrals. These referrals became tainted by bias present when most classroom teachers were White and not trained on the cultural differences in minority students. Initially viewed through individual items, a factor analysis was completed to see if any of the survey items would bind together to create a latent variable. Upon completing the factor analysis, two latent variables

were created-certified staff and curriculum-based. Evaluating the factor loads indicated that variables involving certificated staff within the building had a high correlation with one another. The results upheld the findings that there was a racial gap found in CAMERA schools. Utilizing Pearson's r, I was able to observe that neither variable relationship had a meaningful correlational relationship. Neither variable achieved a score high enough to display a weak correlational relationship. The variables also lacked statistical significance. These results were unexpected given the research that supported the ideas bound together to create the certified staff variable. The small sample size impacted the results of the study and the model summary indicated that the model, ultimately, was not a good fit. The finding results did not diminish the impact of certified personnel on Black student enrollment in AP, it just highlighted the lack of significance as an inhibiting factor within the consortium.

The second latent variable centered on curriculum-based variables inhibiting Black student enrollment in AP. Morgan (2020) stated that high-ability students of color were less likely to be enrolled in rigorous courses and placed in gifted education programs, which was often a gateway to more advanced coursework. This coursework was needed because it became a predictor of future success for students. While The College Board (2019) had promoted increased efforts to promote equity within AP coursework, Ohio schools were still eight times more likely to place a White student in AP than a Black one. Similar to the certified personnel variable, the curriculum-based variable did not meet the thresholds for statistical significance and did not have a significant impact on the dependent variable of Black student enrollment in AP. While the factor analysis created the two latent variables, the data supported the thought that certified personnel had a greater impact than the curriculum-based variable on Black students enrolling in AP. Given that many schools required teacher recommendations for AP enrollment,

the barrier for Black enrollment involving meeting course prerequisites may not be as much a high school issue as it is an elementary school issue when students are identified and placed on educational tracks that deny Black students access to coursework that would later prepare them for AP-level courses (Johnson & Larwin, 2020; Patrick et al., 2020).

Research Question 3: From the perspective of CAMERA consortium principals, what are the personal and familial factors that serve as barriers to Black students' enrollment in AP courses?

The findings of this study revealed the perceptions CAMERA secondary principals held regarding the personal and familial factors such as poverty, caregiver education levels, negative peer influence and "acting White" label impacting Black student enrollment in AP courses. The CAMERA administrators were explicit in believing that poverty was an inhibiting factor with 72.7% of the administrators either strongly agreeing or agreeing with the statement. Jensen (2009) opined that students raised in poverty faced issues in brain development due to the constant state of stress the extreme poverty environments created. Research further supporting the beliefs of the CAMERA administrators that poverty is an inhibiting factor of Black student enrollment proposes that these students are keenly aware of the inequity which exists between them and their more affluent White peers (Rust, 2019).

Previous research indicated that students whose parents finished high school completed at least one AP course at almost half the rate of those who had parents with a college degree (Kolluri, 2020). Parrett & Budge (2020) argued that parents from poverty valued education as a means to improve social mobility but lacked the knowledge of how to access the system. This ties to the SIT concepts of the "in and out group". While these parents believe education can help their child be more successful, they lack the ability to navigate the system. They do not know the

questions to ask to put their child in the best position. Shaunessy-Dedrick et al. (2014) summarized it well by stating, "parents' understanding of the program expectations and the ways their child's life was affected-from the time commitment for course preparation to intensity of the program experience on the child's academic and social-emotional world-were possibly conditions that affected student success" (p. 12). The reported results from the CAMERA administrators supported the research that parents with low educational levels can create an external barrier keeping their students from enrolling in AP coursework with the principals displaying a mean of 2.62 (Agree).

CAMERA principals were then asked how negative peer influences and the social construct of "acting White" could present as a barrier to AP enrollment. The administrators agreed with both statements. The implications of this question are linked directly to the theoretical framework and how Social Identity Theory impacted the actions of people. Tatum (2017) noted that by inculcating Black youth with positive cultural images, the impact of the labels "acting White" and "acting Black" can be mitigated. Black students without the worry of these race-based labels would no longer have to sacrifice their cultural identity within the Black community to pursue academic achievement.

A factor analysis of all personal factors resulted in strong factor loads for all items allowing a latent variable- personal, to be created and evaluated for the study. All variables contained strong loading scores to create the latent variable. A regression was completed to determine the goodness of fit and there was a negligible relationship between the personal variable and the dependent variable of Black student enrollment in AP. Additionally, the findings were not statistically significant with a p value of .638. The poor model fit found within the regression was an unexpected result by me given the strength of the responses from the

respondents. The small sample size of the study resulted in a lack of statistical significance. The model also did not explain how the personal variable impacted Black student enrollment in AP. While this will limit the generalizability of the findings within this variable, the fact that the factor analysis showed the strong relationships between the items to create a latent variable supports the research regarding the negative impact these items can have on AP enrollment.

Research Question 4: Is there a statistical difference between the enrollment of Black students in AP courses and the demographic characteristics of school administrators, such as race, years of experience, or gender?

Exploring how the administrator's demographic differences impacted their response was important to determine if characteristics like race, gender, district typology or professional experience impacted the respondent's answers. Ladson-Billings (2021) opined that CRT scholars understood that there were multiple factors that factored in how people are treated. Gender, socioeconomics, sexual identity, and other classifications contributed to the treatment of individuals. Ladson-Billings (2021) wrote, "Critical race theory scholarship decries essentialism. Essentialism is a belief that all people perceived to be in a single group think, act, and believe the same things" (p.47). While collectively the administrators held many similar views the study data showed divergent perspectives on several key items.

One of the largest discrepancies in the data was observed between urban and suburban administrators regarding the thought of whether or not their Black students were equally represented in AP courses. Urban administrators agreed with a mean of 2.80, while suburban administrators disagreed with a mean of 4.0. Urban schools tended to have larger proportions of a Black student body which was a plausible explanation for this result. Female administrators

also disagreed with the statement with the highest mean of 4.40 (disagree). When compared to their male counterparts, the magnitude of difference was large.

Another area of note found within the subgroup data was the difference between Black and White CAMERA administrators in reference to the certified staff variable. The administrators showed the biggest discrepancy between subgroup data with Black administrators having a mean of 2.13 (Agree) and White administrators having a mean of 3.15 (Neither Agree, Nor Disagree). This was the only subgroup to have a 1.0+ difference in mean averages within the certified variable. This data supported the research from Grissom et al. (2020), who found that having a demographically similar teacher was also associated with movement into honors and AP courses. Morgan (2020) elaborated on the shortage of African American teachers and explained that teachers of the same race tended to believe their students were gifted more often than teachers of a different race. This finding was important because Black administrators acknowledged the importance of having teachers of the same race for their students at a higher rate than their White counterparts. This may be because White administrators did not have the lived experience of being Black in America, where racism has been entrenched since the country's founding.

The last important finding within this section was within the personal variable. This variable addressed poverty and educational opportunity for those who live in depressed socioeconomic situations. The variable also addressed components like the "acting White" label and negative peer influences. Within this variable all subgroups, other than females (3.07-Neither Agree, Nor Disagree), agreed that this variable had the greatest impact on Black student enrollment in AP. Observing the near-universal agreement among the subgroups showed how this variable transcended race, typology, and experience in the minds of the consortium

respondents. This was aligned with the concept of intersectionality found within CRT, where all facets of the social dynamic must be considered (Kim, 2021).

Implications

This research aimed to identify potential barriers Black students face in enrolling in AP coursework. Based on the quantitative analysis of the perceptions of high school administrators within the CAMERA consortium, it can be concluded that personal and familial factors, as well as certified staff (teachers and school counselors) have the greatest impact on AP enrollment for Black students. The research also discovered that Black students within the CAMERA consortium participated in and succeeded at higher levels than their same race peers across Ohio and the nation. While the students' outcomes were positive, urban and suburban administrators disagreed with how their Black students were represented in AP courses. The research provided encouraging results regarding Black student participation and performance in AP, but the results should be approached with caution due to the lack of statistical significance found within the data. The small sample size potentially skewed the results of the data collection due to the possibility of multiple respondents from one district completing the survey causing that district's information to be overrepresented compared to single response districts.

The first research question explored the percentage of Black students enrolled in AP courses in high schools with the CAMERA consortium as reported by principals. To explore the overarching question of identifying barriers Black students faced in enrolling in AP, sub-questions needed to be explored to build a deeper understanding of this multifaceted issue. The study identified that 34.12% of AP enrollment consisted of Black students. Of these students, 67% sat for the AP end of course exam and almost 42% of the students passed with a three or higher. A review of recent AP test scores nationally were examined, and Black students

represented only 4.3% of AP exam takers scoring a 3 or higher. In comparison, 55% of White students received a score of 3 or higher. (Atahuene, 2021; Kim, 2021). According to Chatterji et al. (2021), for every 1,000 Black Ohio students during the 2015-2016 school year: 48 would take an AP course; 36 would take an AP test; and only 10 would receive a passing score of three or higher (p.21). This showed that from a representation standpoint, Black students in CAMERA out participated and outperformed Black students both in Ohio and nationally. Despite these positive student outcomes, suburban administrators disagreed that their Black students were represented equally, while their urban peers agreed. These administrative attitudes demonstrated conflicting beliefs, which called into question the utility of the mean results given the diverse district demographics among consortium districts.

Suburban administrators worked in schools with lower Black student populations than their urban counterparts. This decreased diversity could have heightened the administrators' sensitivity to the issue even if their student enrollment was proportional to their student body. It was conceivable that a suburban school with a 4% Black student population could have only one or two Black students in an AP course. While this may statistically show the district as being proportionally equitable, the administrator could have perceived that the small number was a result of inequity within their system. Conversely, the urban administrators with Black majority populations may have perceived their students as being equally represented when proportionally, they may not have been. It is conceivable within the context of Social Identity Theory urban administrators with highly diverse school settings constructed social identities for the environment based on their daily experience (Tajfel, 1972). The development of this identity may have provided the administrator a false sense of representation because their AP classes mirrored the general curriculum classes due to the school's diversity.

Evaluating the principal's perceptions of how their students were represented within AP was critical for the study because the principal, as the academic leader of the building, could act as a change agent by creating the schedule and allocating resources to address the issues within their building. The historical foundation of firmly entrenched systemic racism seeps into our education system as well (Hochschild, 1984; Prager, 1972). In order for the building administrator to be a change agent, they must act with intentionality to confront a deeply rooted system slanted against their Black students (Christopher, 2016). Finding that the CAMERA schools possessed more Black students in AP and that they performed at a higher rate than the state and national averages surprised me. The results indicated to me that perhaps, due to the districts' focus on improving diversity within their system, these schools were more responsive to the needs of their Black students than those who did not have this focus. Additionally, I was surprised by the results between urban and suburban administrators. I would have surmised that urban administrators did not feel their Black students were represented equally, but this differed from the actual results. Reflecting on this result, I believed this could have stemmed from these administrators having higher percentages of Black students in their buildings. Some districts in the consortium have a Black majority student population, so they were more likely to see Black students within their AP courses. I approached these results with caution given the low respondent rate to my survey and the lack of statistical significance. Trochim et al. (2016) noted that external validity threats occurred from people, places, and time, which may have occurred within the study. While the percentage of surveys turned in was about what is expected (40%), the low number may have skewed the results. If there were multiple respondents from one district, this could have pushed the mean to an artificially high or low number. The consortium is composed of districts that have a wide array of demographic differences. The district sample

contained a large, urban public school district. The number of administrators who could have responded was large, but if only one or two replied, the data could be skewed. This issue could be exacerbated if a smaller, more affluent district had multiple administrators respond. The data showed trends and gave insight into the principals' perspective on representation in AP for their Black students, but further investigation would be needed to ensure the data was a true representation of each district.

The study data for research question two regarding the school-related factors that limited Black students from enrolling in AP indicated that certified-staff were one of the two biggest influences on matriculation. Contained under the umbrella of the certified-staff variable, the CAMERA administrators noted how teachers of their Black students had lower expectations for them when compared to their White students. The study showed that respondents held strong beliefs about teachers having lower expectations for their Black students when compared to their White students. Harbatkin (2021) cited that teacher perception was even stronger for Black students than for white students. Whitaker (2019) noted that many White teachers were ill-prepared to effectively teacher Blacks students and may have ill-conceived constructs of how Blacks students learn. In addition to these constructs, the White teacher had the power to exclude students by withholding recommendations for acceptance into AP coursework, serving as a potential barrier. Jeffries & Silvernail (2017) cited 58.8% of AP enrollments were based on teacher referrals. Respondents also noted the lack of same race teachers and that their Black students were less likely to be encouraged to enroll in AP as issues which impacted AP enrollment. Martin & Brooks (2020) contended that poor policy after the *Brown* ruling created an environment where the Black teaching workforce was severely damaged. This issue was further compounded by Black students navigating the educational environment without teachers

who looked like them. Black students may struggle to see the value of becoming an educator when the profession is in a predominately White space. Grissom et al. (2020) found that having a demographically similar teacher was also associated with movement into honors and AP courses. Morgan (2020) elaborated on the shortage of African American teachers and explained that teachers of the same race tended to believe their students were gifted more often than teachers of a different race.

The methodology, in my opinion, influenced the effectiveness of the study with regard to the exploration of this research question. The factor analysis reduced these components into one latent variable. This negated the ability to examine which individual component had the greatest impact as a barrier. The data supported well-established research surrounding the impact that certified-staff have on students, but it was difficult to ascertain which issue was the most impactful on Black student enrollment. Further analysis of the certified-staff variable displayed a lack of correlational strength within the latent variable which was surprising given the strength of the factor loads. The sample size impacted the results and statistical significance of the variable, but respondent responses were in line with what research indicated took place in our schools with the staff-student relationship, where the connection with a teacher was a reason the student opted to take advanced level coursework (Kolluri, 2020).

Interestingly, the respondents' replies to the survey called into question their responses to the representation in AP courses. While the respondents noted that they believed their Black students had lower expectations from their teachers and were less likely to be encouraged to enroll in AP, they participated and performed better than their peers across the state and nationally. Their anecdotal responses to the questions did not match the data. A qualitative methodology may have been better able to tease out this difference between the research

questions. Regardless of the study results statistically, what the study revealed was the impact of the certified-staff on student matriculation in AP within the consortium, supporting what has been researched in other national studies.

There are many personal and familial factors impacting Black students and whether or not they enrolled in AP. The study found that these factors had the biggest impact on student enrollment. The factor analysis of these items showed that the items contained here grouped together to create the biggest impediment for Black students enrolling in AP. Contained within this variable were the impact of poverty, caregiver educational levels, and peer influence. These results did not surprise me because of the well-established research surrounding poverty, but I was amazed that all items in this area were able to be reduced to one latent variable. I felt this constrained the study because I was then unable to extrapolate which item under this umbrella had the greatest impact. Given this constraint, I found it interesting that this variable was the most impactful. Reflecting upon the respondents' answers, I was left with the question that I believe confounded most educators- "How do you fix the things beyond your control?" Most of the items contained within this variable were outside the respondents' sphere of influence. Nowicki & U.S. Government Accountability Office (2018) noted how hunger and homelessness were sources of school challenges. Morgan's (2020) research revealed that harsh living conditions could cause children to be behind their peers upon beginning their education. These students were then tasked with catching up throughout the remainder of their educational experience. Kolluri (2020) stated, "29.1% of students whose parents did not finish high school took at least one AP class by graduation, compared with 54.4% of those whose parents earned a college degree" (p. 31). Administrators are unable to control for poverty and caregiver educational levels. While they can become involved in combating negative peer influences, there

were greater cultural and community forces pulling at students outside of the walls of the school that could persuade decision making.

This reflection generated another question that may have been better explored with a qualitative methodology- Due to not being able to control these factors, do educators assign more blame to them as an excuse? If we denounce the things we cannot control, we can then shift the blame to these factors and not our practices within the buildings. There may have been implicit bias within the respondent answers that could be better explored with a different methodology.

The last component of the research explored whether there were statistical differences between the sample respondents based on their demographic characteristics. By examining these relationships, the goal was to be able to identify if there were differences in the perceptions of administrators based on their personal or district demographics. Examining these differences was what highlighted that urban and suburban administrators disagreed on how their students were represented in AP. Additionally, this analysis unearthed differences between Black and White administrators, with Black administrators agreeing that certified staff have a large impact on student enrollment in AP, while White administrators did not agree or disagree. The White administrators view conflicted with Morgan's (2020) research, which noted that schools with more minority teachers had more minority enrollment in advanced classes. This result was surprising given the strength of the relationships when the factor analysis was completed. Recognition of this discrepancy brought about questions of how bias may have played a part in the respondent's answers. Could the Black administrator have responded based on their lived experience or was the response rooted in what they experienced in their current school building?

The research also showed strong relationships between all of the demographic subgroups and the personal variable. These groups were aligned in their responses that this variable had the

biggest impact on Black student enrollment in AP. Given the small sample size and the negligible magnitude of the relationships, I again questioned whether the quantitative approach to this research gave a complete answer to the question. A qualitative methodology would have allowed for further inquiry as to why these results were what they were. Understanding the background of the respondents and how that potentially influenced their response would provide better context to the results of the study. Seeing that almost all demographic subgroups identified the personal variable as the most impactful, it would have been more informative to explore the items within the variable separately, as opposed to one all-encompassing variable. Was it poverty or the cultural and community impact of "acting White" that was keeping Black students from enrolling in AP? Kolluri (2020) would argue that minority students struggle to move beyond the social impacts of doing well in advanced courses. Jeffries & Silvernail (2017) opined that socioeconomic differences caused the discrepancy between Whites and Blacks in AP. The factor analysis determined it was all impactful, but learning directly from Black suburban versus White urban administrators why poverty was a limiting factor would have provided a richer experience for the research.

Discussion

Almost 250 years after Thomas Jefferson declared that "all men are equal," our country remains mired in forms of inequity which have been ingrained through time and, in some cases, law. Nowhere is this inequity more damaging than in our nation's schools. Education is supposed to be a vehicle toward equity and the provider of opportunity. Even as progress has been made in legislating equity within our schools, there is still legal inequity found within the opportunities for Black students to enroll in AP coursework. This quantitative study explored what principals in a Northeast Ohio consortium believed to be the biggest barriers keeping their students from

enrolling in AP courses. The study determined that Black students in the consortium enrolled and performed at higher rates than other Black students across the state and nation. Even with this exemplary data, principals within the consortium noted that teachers had lower expectations for their Black students when compared to their White students. Exacerbating this issue was the lack of Black educators found in the study, supporting what was found in current literature surrounding the topic. They also noted how personal and familial factors like poverty and negative peer influences presented problems for Black students attempting to access AP courses. Components of racism, critical race theory, and social-identity theory, examined within the theoretical framework, were affirmed within the study; presenting a barrier to enrollment. Examining the barriers in Northeast Ohio may influence how others across the state and nation engage their Black students and how they attract and retain Black educators to their district.

Black student enrollment in AP

This study demonstrated that Black students in AP made up 34.12% of the student enrollment. This was almost equal to the total Black student enrollment average in the consortium at 39.61%. The findings within the consortium contradicted the research which showed that for every 1,000 Black Ohio students during the 2015-2016 school year, 48 would take an AP course (Chatterji et al., 2021). The consortium data also contradicted the research on Black student engagement and performance on the EOC exams in AP. In the consortium, Black students enrolled in AP courses participated in the EOC 67.28% of the time and obtained a 3 or higher on the exam 41.88% of the time. Chatterji et al. (2021) continued to report that only 36 of 1,000 Black Ohio AP students would sit for the exam and of those students, only 10 would receive a 3 or higher (p.21). The incredible differences found within the CAMERA consortium warrant further study to determine what practices are being employed to show such positive data.

Replicating this data across the nation would considerably reduce the opportunity gap detailed by the U.S. Department of Education Office for Civil Rights (2014), which relayed that minorities such as Black and Latinx were found to comprise only 27% of students taking AP classes, yet they made up 37% of students in high schools.

Efforts to increase Black student enrollment in AP have been underway. Black student participation in AP coursework expanded by over 200% from 1994-2013, however, Black students scored considerably lower than their peers (Darling-Aduana & Heinrich, 2020; Kolluri, 2018). Bell, through a Critical Race Theory lens, opined that this invitation for Blacks into AP only serves the political agenda of a White majority society, who sought to maintain its technological advantage over a hard-charging foreign power (1980). To maintain our tenuous grip as the world's primary superpower, the nation needs more students taking advanced coursework. Inviting Black students into the courses is not enough to ensure a successful experience though. Black students should be provided with the foundational experiences needed to be adequately prepared for this level of coursework. Schools should be required to develop programming and identification policies that will more equitably identify and enroll Black students in advanced track work. Morgan (2020) stated that high-ability students of color were less likely to be enrolled in rigorous courses and placed in gifted education programs, which was often a gateway to more advanced coursework. This coursework was needed because it became a predictor of future success for students. Many of the districts within the consortium have robust gifted programming, which identifies students early and provides summer programming to enable more successful experiences. One district within the consortium develops a summer long tutorial program for those who are taking advanced math at the elementary and middle school ages. This allows the students to enter the advanced classroom with a richer background than

those who have had no exposure to higher level content. If access to gifted programming is an indicator of AP success, and taking AP courses and passing the EOC is an indicator of college success, schools must provide equitable access to the foundational systems available to ensure students can successfully enroll in and complete AP courses.

Recommendations for Action for Increasing Black Student Enrollment

The Center for American Progress recommended a series of actions that schools may employ to improve access for Black students. While every school district must address these actions on a individual basis, the following guidelines were recommended. First, "one thing that policymakers at both the federal and state levels can do right now is ensure that there are clear, transparent, and disaggregated data available on advanced coursework offerings, participation levels, and outcomes for high school students" (Chatterji et al., 2021). This valuable information would provide school districts with necessary data about any opportunity gaps that existed and would allow students to make informed decisions about whether the districts offer advanced level coursework. In addition, Chatterji et al., (2021) believed that states should include information on all kinds of advanced level coursework on the state report cards so that information was readily available to the public.

Districts need to be held accountable for their minority student enrollment in advanced coursework. This could be done by explicitly reporting this data on the state report card. Districts could receive a higher "equity score" on the report card for obtaining benchmarks toward district proportionality. There are negatives to this sort of reporting because the hard data does not take into account the daily function of the school. Essentially, this would only serve as a data point but could indicate the efforts of the local district to shrink the opportunity gap for their students. This method could also potentially unfairly punish or reward districts who have school

demographics with very high or low Black student enrollment. In the case of AP enrollment, where many have cited the benefits, the risk may be worth the reward to help hold schools to account for intentionally identifying those Black, or any minoritized group, students who could be successful in the courses. By doing so, the research shows that the students would be better prepared for college-level coursework and increase their chances of graduating with a bachelor's degree.

The next action that states could take would be to seek access to federal and state funds and to use those funds to create partnerships with groups and organizations to increase and expand advanced level coursework offerings (Chatterji et al., 2021). For example, in the state of Kentucky, there is a partnership between the Kentucky Department of Education and the National Math and Science Initiative called AdvanceKentucky. According to the AdvanceKentucky website, "the goals of the program are to increase the number of students enrolling in AP mathematics, science, English, Capstone, and computer science courses and to strengthen the teaching of those courses" (www.advancekentucky.com). States and districts should capitalize on federal funding from the Every Student Succeeds Act (ESSA) and the American Rescue Plan Act to augment their advanced coursework offerings and to increase rigor in their entire curriculum (Chatterji et al., 2021).

On the local level, districts need to carefully examine their current practices to ensure that all tools and resources used are evaluated to ensure they are culturally sensitive to the needs of their Black students. The district then needs to create a policy surrounding the identification of students for advanced-level coursework at the elementary level. To improve Black student access to advanced level coursework, schools should implement vertical alignment, or the concept of "mapping out the skills and competencies students in higher grade levels should know and using

that as the foundation for developing curricula priorities and standards all the way down to the kindergarten level" (Chatterji et al., 2021). This does not refer to only gifted programming, which many districts already have in place. This involves practices used to identify, select, and enroll students in advanced coursework as a precursor to AP. Funds may be used to pay for professional development for teachers, which would then assist students in preparation for advanced coursework. Once students are identified, districts should consider summer academies to prepare students for the rigor of the coursework. By creating these programs, the strain of being in AP level courses is reduced because the student will not be engaging in such a large transition from general education courses to the AP coursework. This summer bridge program would lessen this transition and better enable students to handle the rigor of the course. Given the potential financial cost of this sort of program, perhaps the program would be for those who did not have the prerequisite scores/skills that would indicate future success.

Another approach schools may utilize to reduce the barriers to enrollment involves the use of "automatic enrollment," where "students who meet benchmark proficiency levels on statewide examinations or prerequisite courses are automatically enrolled in the next highest available class, including advanced coursework opportunities" (Barry, 2019). Those who wished to opt out are then given the opportunity, should they so choose. Other school districts found success in AP enrollment numbers when a freshman student was mentored by an upperclassman student who provided assistance, tutoring, and introductions to AP teachers. Once the freshman became a senior in AP coursework, they would become a mentor themselves (Chatterji et al., 2021).

Low Expectations for Black Students and a Lack of Black Teachers

The study found that the principals within the consortium held the research-supported notion that teachers have lower expectations for their Black students compared to their White students. This notion of lowered expectations is grounded in racism, which has been a function of our society since its inception. Freire (1970) described the distorted realities that exist between the oppressor and the oppressed. While there appeared to be improvements for Black society during the civil rights movement, much of that work was done to combat the government's battle against communism (Briker & Driver, 2022; Dudziak, 2004; Finn & Scanlan, 2019; Rothschild, 1999). This supported Bell's (1980) interest-convergence theory within Critical Race Theory that improvements for Blacks in society is only done when it is in the best interest of Whites. These correlations have persisted throughout our nation's development in spite of gains made to alleviate the divisive stratification of Whites and Blacks. The state of Ohio forbade the education of Black students until 1848. The court cases, namely *Plessy v. Ferguson* and *Brown v. Board,* highlighted the segregationist practices found in our country and discussed the later efforts to reduce these barriers. During the drive toward integration, many Whites were enraged that they were losing cases to "able and sophisticated Negro lawyers…violating the traditional racial fitness of things" (Muse, 1964, p. 39). While the intent was good, it could be argued that *Brown v. Board* may have contributed to the lowered expectations for Black students that exist in our current educational climate. *Brown*, while justly considered an overwhelming success, ultimately led to the decimation of the Black teaching workforce. Attributing lowered expectations solely on the *Brown v. Board* decision would oversimplify the complexities impacting Black students in America. Blaming *Brown* overlooks the damage caused by socioeconomic ills and the unequal distribution of resources in our educational environments. The inadequate implementation of the

law led to a deepening of the segregation already occurring in schools around the country (Johnson & Larwin, 2020). *Brown* ultimately did lead to the decline of Black educators in the nation, but this was the result of entrenched racism eliminating jobs once held by Black educators (U.S. Bureau of Labor Statistics, 2021; Davis et al., 2019; Johnson & Larwin, 2020; Lutz, 2017). As Martin & Brooks (2020) argued, the consequence of these ill-conceived policies resulted in generations of Black students who were left traumatized by their educational experiences and which then deterred them from pursuing entering the profession.

The teaching staff within the CAMERA consortium consisted of an average of 8.33% Black educators. Compared to the Black student body average of 39.61%, there is a large chasm that has been created for the Black students in CAMERA schools. Social-Identity Theory would posit that the Black educator could be considered as a part of the outgroup because 80% of their colleagues were White or part of the ingroup. There is a danger in this labeling of the Black educator because as outgroup members, they are often treated as "less than" those who are part of the ingroup. This has the potential to create a stratified workforce with the potential of discriminatory workplace practices. Statistically, it is difficult for Black students to see a teacher who looks like them and can share a common culture and understand their lived experiences, affirming who they are ethnically and personally (Gay, 2004). According to Will (2022), before *Brown*, Black educators in 17 segregated states constituted 35%-50% of the workforce. Today, that number has been reduced to less than 20% and only 2% of those educators are Black males (U.S. Bureau of Labor Statistics, 2021; Davis et al., 2019). Without the Black educator as a presence, schools have been slow to respond effectively to how Black students learn. This does not mean that White teachers are ineffective at educating Black students, they just do not possess the shared experience, making it harder to relate and respond to the needs a student may present.

While *Brown* was impactful in expanding equitable access to an education for Black students, Black teachers paid the price through non-renewed contracts, job loss and harassment forcing them out of the profession. This has left a lasting negative impact from which the field of education has never recovered. As our student bodies grow more diverse, targeted actions must be taken to address the lack of Black educators in our society.

Recommendations for Action to Increase the Number of Black Educators

Just as efforts must be made to better identify Black students who can be successful in AP courses, efforts must be made to diversify the teacher workforce, particularly amongst Black males. As our society has adopted various social causes in recent years, one to be considered is a national program to diversify the educator workforce. Love (2019) supported the idea of increased compensation for teachers of color. Increased compensation packages could encourage more Black students to pursue a field that is viewed as poorly paid. Funding should be put aside to provide financial assistance for Black students who choose to enter the field. While I believe this financial incentive should be given after graduation from an accredited program, I believe this should be done immediately upon completion of the undergraduate program. Perhaps a 75/25% program could be put in place, requiring the student to pay for 25% of their tuition costs and then have that reimbursed or paid upon completion. This would be a worthy and just use of funds to create a more equitable workforce in education. All students deserve teachers who look like them and who they could have a shared experience with.

Higher education also needs to consider changes to their teacher preparation programs. One component to be considered is that all teacher preparation candidates must complete field methods or student teaching in diverse environments. Some higher education institutions have mandated this practice and should be instituted across our state. Regardless of the setting, a

teacher is likely to encounter a minoritized student in their career. It is critical that the educator knows how to effectively address the needs of this student. As reported by the Nowicki & U.S. Government Accountability Office (2018), there were 480 civil rights complaints regarding accessibility and resource issues for minority students between Fiscal Year 2011-2017 (p. 62). Not only would developing a more diverse workforce address these inequities, but developing a cadre of more culturally responsive educators would help mitigate the bias faced by many Black students in our schools.

Locally, schools need to conduct grassroot efforts to identify and support their Black students who they believe would be good educators. This means talking to the student and their parents about their future plans and exposing the student to what it means to be a teacher. School counselors could help the student complete the FAFSA, which is a practice many districts already employ. The last component a district could employ is a Grow Your Own program where the student graduates and attends the partner school. The student then returns to the district as a teacher with the district helping either reduce or pay for their schooling. Working in a district which employed this model, we had success with two teachers going to school and then returning to the district. We secured a candidate and the new teacher was not saddled with the student loan debt creating a winning situation for all involved.

Personal and Familial Factors Impacting AP Enrollment

According to the principals in the study, personal and familial factors were the biggest deterrent for a Black student enrolling in AP coursework. Poverty was viewed as the most impactful experience in keeping Black students from enrolling in AP courses. In a society where almost half of the students in our schools experience poverty (Nowicki & U.S. Government Accountability Office, 2018), there are a multitude of problems stemming from this affliction.

Jensen (2009) documented the negative impact poverty had on students by citing the impact on brain development when living in this condition. The stress from this environment can cause attention problems and increased absenteeism. This creates a compounding negative impact because these students then face higher rates of suspension and discipline (Rust, 2019). As this cycle begins, students lose hope and challenging them to take harder coursework is the least of their concerns. This established a system which precontrived against Black students in poverty because their course options were unavailable, limited, or they were not academically qualified to enroll when compared to their White peers.

Schools from poverty districts have fewer advanced course options available. The Nowicki & U.S. Government Accountability Office (2018) report highlighted that only 50% of high-poverty schools offered calculus and 62% of high-poverty schools offered physics. This is considerably less than affluent schools which saw 85% of schools offer calculus and 90% offer physics (pp. 13-14). This lack of opportunity creates an environment where even if the student wants the challenge, they may not be able to obtain it in their homeschool. This problem increases when students are then assessed the fees associated with AP coursework and the EOC exam. Thankfully, many schools have adopted fee waiver programs, but many students may not qualify simply because they do not complete the fee waiver documentation.

The other personal and familiar factor cited as an issue by CAMERA principals involved negative peer influences. While there were some discrepancies here with Black CAMERA principals disagreeing, the other administrators felt this had an impact on student enrollment. This supports research by Kolluri (2020) who has said minority students, particularly male students, struggle to move beyond the social ramifications of taking advanced coursework. This is another area where the lack of Black educators is exacerbating the issue because the Black

student does not have someone to look to for social reinforcement and pride in the accomplishment of being successful in AP coursework (Fenwick, 2022). These students also faced the possibility of being socially outcast by being alienated from their Black peers (Chambers & Huggins, 2014). Combining these societal pressures with a lack of representation by same race teachers who could be a support has created an environment with inaccurate constructs of Black students and who they are as learners (Whitaker, 2019). Cook & Ludwig (1998) stated both Black and White students faced inappropriate labeling when they were high achieving. Leveraging the Black educator as a positive cultural image and role-model could lessen the Black student jeopardizing their standing within the Black community.

Recommendations for Action on Personal and Familial Factors

Poverty's negative impact on Black student education is just one of many difficult issues stemming from the problem. Schools exist to educate our youth and as educators, we have to navigate the difficulties our students present us with as deftly and compassionately as possible. Schools have to be willing to fund students from poverty taking AP courses and the EOC exams. According to the Education Trust, "the state should also work with districts to eliminate financial barriers to participation in advanced coursework, including investing in subsidies so that students from low-income families are not required to pay fees for books; pay to take exams to qualify for, get into, or get credit for advanced courses; or pay for transportation to attend advanced courses" (Ed Trust, 2019). This needs to be explicitly advertised and explained to stakeholders to remove cost as a barrier to enrollment. Once the financial barriers are removed, districts must ensure that information about advanced coursework opportunities, testing registration deadlines, and testing fee waivers is properly communicated to families in digestible language (Chatterji et al., 2021).

Additionally, these students may require support so intentionally scheduling an AP study period within their schedule is recommended. This would allow the student to have dedicated time to work on their AP work during school hours and not after when they are potentially working to help support their families. Optimization of the master schedules would allow schools to reduce conflicts in students' schedules thereby creating time for them to enroll in AP courses taught by qualified teachers who were able to cater the content to them (Chatterji et al., 2021). When the location of the school made access to AP coursework difficult, or when there were not adequate numbers of AP teachers, schools should employ the use of virtual classes. While not always ideal, virtual courses that are held to the same rigorous standards as in person classes and with the proper supports in place, may serve as viable options (Chatterji et al., 2021).

Given that most educators in the workforce are White, many Black students interact with an adult who, based on the color of their skin, was part of their outgroup. As seen in previous calls to action, diversifying the teacher workforce would help Black students better navigate the social ramifications that exist when they excel academically. These teachers, just by being present, show the students that it is OK to be educated and that it is OK to go to college. It constructs a counter-narrative to the propagated false thought that Black students are less inclined to excel academically. Black educators may also provide a confidence boost for their same race students, allowing the student to change their mindset and know they can be successful in the course.

Calling All Future Black Educators

As previously discussed the Black educator has largely disappeared, not necessarily by choice, from the profession. This loss has been profound as we enter another generation of Black students who may be devoid of an education from a teacher who looks like them. McCall (2018)

claimed a caring and passionate educator is the most valuable resource within a school. This thought is further supported when considering Kolluri's (2020) research noting that students who take advanced level coursework often do so because of their connection with the teacher. Teachers who have the same racial heritage of their students are more likely to understand their cultural backgrounds and are more likely to recommend them for advanced coursework (Grissom, et al., 2020; Morgan, 2020). Almost 100 years ago Woodson (1933) discussed how the Black school demotivated African American students by crushing their spark of genius. What has changed during that time? Our student bodies have become more diverse and our students impacted by poverty have increased, but our workforce has stayed primarily White. Black students, for the most part, are expected to conform to an environment that was not constructed for or by them. Racism has been a daily occurrence through both overt and covert acts and over time has led to a society where White success has been propagated and Black achievement has been devalued. Without acknowledging how racism has impacted and continues to impact our society, we will continue to struggle to provide equitable enrollment opportunities in AP for Black students. One way to mitigate the impact of racism and reconcile the poor decisions of our past is to identify future Black educators and fund their training so they can serve future generations of Black students and build a workforce which existed pre-*Brown v. Board*.

It is well documented in the literature that Black students do not enroll in AP courses nearly as much as their White peers and determining which barriers exist for these Black students is essential to improving matriculation rates. While the study found that Black students in the CAMERA consortium enrolled and performed at higher rates than other black students across the nation, the same cannot be said for others. Several recommendations were proposed in order to increase enrollment, to increase the number of Black educators, and to remedy personal

and familial factors. There were numerous ways proposed to increase enrollment and these included: acquiring and sharing data on coursework offerings to identify opportunity gaps; making districts report advanced level coursework on the state report card; creating partnerships with organizations and utilizing federal funds to increase the number of AP offerings as well as to strengthen teaching of the courses; initiating earlier identification processes of Black students eligible for future AP coursework; and utilizing "automatic enrollment" of those Black students who have met the requirements for AP. The methods to increase the number of Black educators included the development of a national program to diversify the workforce; better preparation of student teachers to work in diverse workplaces; and grassroot efforts to identify Black students who would become good educators in the future. The ways that personal and familial factors could be resolved included elimination of all potential financial barriers for participation in advanced level coursework and optimization of schools' master schedules to reduce student conflicts and to allow for time in AP enrollment. For there to be tangible improvements in Black student enrollment, schools must first identify the opportunity gaps and then take the initiative to institute the changes because the resources are readily available.

Future Recommendations

Based on these conclusions, educators should consider replicating the study to gain deeper insight into the new questions which emerged from the research. Those who would consider a quantitative approach should consider launching the survey to a broader sample pool. This would have increased the chances of gaining enough respondents to gather data which would produce statistically significant results. This approach to the methodology would also allow future researchers to avoid the impact that disproportionate responses could have on the study results. The lack of statistical significance in the analysis resulted in the study containing

potential Type I errors, so a replication of the study should include an increase in the sample size.

Another option to better understand the implications of these results may be to reduce the respondent pool to a purposive sample of one administrator per district. This would have allowed for each district to respond with equal weight in their responses. The research as constructed could have been exposed to skewed results if multiple administrators from one school answered and only one administrator responded from another district. Controlling the respondents would have limited this impact but could have also exposed the study to bias. Given that the study was confined to the CAMERA consortium, bias may have been present based on the district's participation in the group.

To better understand the implications of these results, the study could have been issued to teachers within the consortium. Learning the perspectives of those who are in front of the students may provide a different lens for district change agents to consider when making decisions. One potential area to explore would include understanding the formal training teachers received in working with students from diverse populations. Educators draw from their own social identities to develop the narrative of what an urban student looks like. These perceptions carry the potential consequence of students being marginalized in their classrooms (Whitaker, 2019). It is important to understand the educator's perspective in order to provide research-based training on how to best serve students from diverse populations. While the pipeline of new teachers who are qualified to teach AP is lacking, throughout the hiring process administrators can work to ensure their new staff has experience with diverse populations in their methods and student teaching experiences. The state of Massachusetts understood the challenges of fulfilling their need for AP teachers and they "worked with the Department of Elementary and Secondary

Education to partner with districts and help provide teachers with the instructional resources, content training, and ongoing coaching supports to successfully offer more advanced coursework opportunities in their schools" (Advanced Academics, n.d.).

Future studies could also replicate the study by issuing the survey to other consortiums similar to CAMERA across the state. The Diversity Recruitment Educators Association for Miami Valley (DREAM) in the Dayton area is a consortium of districts with similar goals as CAMERA. Conducting this research within that consortium would allow the results to be compared to explore whether commonalities existed among the groups. The discovery of commonalities would improve the generalizability of the study and would allow for a more comprehensive look at how AP enrollment for Black students could be increased across Ohio.

Further research is needed to determine, more specifically, which personal and familial factors are impeding Black student enrollment in AP. CAMERA administrators agreed through their responses that the personal variable posed the greatest impediment to Black student enrollment. Further research on diagnosing whether this is due to poverty, peer influence, or caregiver educational levels should be considered. The importance of the school, home, and community triad on student success in school has been established in the research, but a definitive look at what keeps Black students from enrolling in AP is needed. Ascertaining which of these variables is the most impactful would assist educators in developing programming to combat the most common contributing factor to non-participation in AP by Black students.

The study findings also raised the question as to why Black students in the consortium outperformed their peers. What are CAMERA schools doing differently to better engage their Black students in AP coursework? While the opportunity gap still existed within the consortium schools, it was significantly less than in others. Future studies could examine instructional and

institutional practices being implemented that have resulted in higher Black student enrollment, higher end of course exam participation, and higher performance on AP exams than what state and national averages are. These districts have committed to participate in a consortium committed to diversifying the educator workforce, but would that intentionality and focus impact how day to day instruction could shrink the opportunity and achievement gap found in non-consortium schools? The Black student enrollment and performance in AP within the consortium would indicate that further study by non-consortium schools may be warranted.

Contributions to the Field of Education

The study endeavors to analyze administrative perspectives regarding factors hindering the enrollment of Black students in Advanced Placement (AP) courses. What the study found was that while some administrators felt their students were not equally represented in AP, the consortium outperformed state and national averages. The research in the study showed that while the consortium students were doing well compared to their non-consortium peers, administrators identified that there was work to be done. There was still an expectation and opportunity gap between White and Black students within the consortium as reported by CAMERA administrators. This connected with the disparity found between White student enrollment in AP and Black student enrollment in these courses (Jeffries & Silvernail, 2017; Patrick et. al, 2020; Riccardi & Winsler, 2021). Whether this was proof of the deeply woven fabric of racism in our society, as Gay (2004) opined, was yet to be determined, but the inequity found between the Black and White learner remains an obstacle in our classrooms today (Kolluri, 2018). What has been shown was that even when Black students were experiencing success, it was done at lower rates than their White peers.

Previous research has shown the impact that certified-staff has on student performance, which supported the findings of this study. McCall (2018) noted there was nothing more important than a caring and passionate educator in our classrooms today. In addition to serving as guides and mentors, these professionals are often trained in the best practices to improve student learning for all of their students. The research also supported how personal factors can negatively influence Black students. This study reinforced these concepts within a Northeast Ohio consortium of districts with varied typologies and socioeconomics. While the consortium students did well, the administrative respondents were united in how the personal factors and certified-staff were the two biggest influences on Black student enrollment in AP. In order to address the equity gap these challenges present, educators must continue to confront the question posed by the student who launched my interest in this topic- Why do you care?

Suggestions for Future Research

The perceptions of CAMERA principals identified how societal issues like poverty created barriers for their Black students. They also noted how their teachers had lower expectations for Black students. While perception is often reality, future research should explore the issue of Black student AP enrollment by going directly to the source and valuing the voice of Black students. Replicating this study and gathering the perceptions of Black students would allow future researchers to explore if there are similarities between what school administrators report and what the students say. Extending this to teachers would also be helpful to gain a better understanding at every education level. Future research should consider conducting these studies in either a qualitative study or mixed methods study. This would allow the lived experience of Black students to be more deeply explored.

This study explored the CAMERA consortium located in Northeast Ohio. Further research could explore this issue in other regions of the state. Would the results be similar or different in other consortiums located throughout the state? Exploring the largest Ohio urban districts, known as the "Big 8," would also yield invaluable data to better understand the lived experiences of Black students in Ohio and what keeps these students from enrolling in AP courses. The idea for this study came from my experiences as a high school principal in a high-poverty, highly diverse school, but my former district pales in size compared to the state's largest districts.

Lastly, it would be a worthy exploration to complete a longitudinal study of Black students throughout their educational careers. The research evaluated for this study identified the under identification of Black students for gifted programming as a contributing factor as to why Black students do not enroll in AP. The long-term effects of this under identification continues to support the opportunity gap existing between White students and Black students. If we are to shrink the opportunity gap, we need to better understand how Black students progress through their school experience and how those experiences shape both their school-life and post-secondary life. Essentially, if districts began earlier in the student's education history to prepare them for the rigors of AP coursework, students would be ready when they reached the high school level. This type of long range planning would involve teachers from many grades to work in unison with lesson planning and communicating content with one another. Future research should focus on what transpires once the Black students enroll in more proportional numbers. Opening the door to the AP classroom is one thing, supporting Black students to be successful in the coursework and passing the exam are another. Conducting studies on the best practices for Black student achievement in AP needs to be explored.

Conclusion

If all of the Black kids truly are sitting together in the cafeteria as Tatum (2017) suggests, what can be done to get them to also sit together in AP courses? This study was done to discover practices districts could employ to improve their Black student population in AP courses. While the Black student AP data in the CAMERA consortium should be considered encouraging compared to state and national data, this data should be approached with caution. Even with the impressive performance of Black AP students in the CAMERA consortium, it is critical to note that an opportunity gap still exists between Black and White learners when Ohio schools were still eight times more likely to place a White student in AP than a Black one (College Board, 2019).

Existing research has pointed to the importance of the educator in influencing student enrollment in academic coursework and that White teachers tended to have lower expectations for their Black students. The study findings supported this notion of school factors adversely impacting AP enrollment. There were differing opinions between White and Black administrators regarding the lowered expectations of teachers. The study findings supported that CAMERA administrators acknowledged that as the student body became more diverse our workforce has primarily remained White. Confronting the dearth of Black educators available proved to be a challenge within the consortium, supporting the national data examined.

The study also supported the research on the need to address the personal barriers Black students encountered when attempting to access AP. Of these personal barriers, addressing poverty was the greatest obstacle students faced. Addressing the poverty problem within our schools feels insurmountable when the socioeconomic gap between White and Black families shows the median White household earns thirteen times more than the median Black family

(Tatum, 2017). Despite numerous policies and government actions, poverty in our country has increased, not decreased. Incremental gains within this area could expand enrollment in AP for Black students.

The time has come for districts to be held accountable for their efforts in providing equitable access to AP coursework. The Ohio Standards for Principals from 2018 included standards-based reforms and in particular addressed equity and cultural responsiveness. The summary stated, "The effective educational leader cultivates an environment defined by cultural responsiveness, equity and commitment to students, staff and stakeholders through sustained partnerships reflective of the unique profile of its surrounding community to promote each student's well-being and academic success" (Ohio Department of Education, 2018). While there is a fine line between contrived versus intentional focus, educators are mandated to be equitable and culturally responsive to their students.

To best serve our Black students our focus needs to shift to the recruitment, development, and retainment of a new generation of Black educators. The restoration of this lost labor force could create the necessary change needed in schools and the community to adequately support Black students. It is fair to ask what has changed since 1933 when Woodson claimed schools were demotivating to the Black learner. As the state and nation confront a teaching shortage, grassroots efforts need to be undertaken to increase the diversity found within our undergraduate educator programs. School administrators, like those found in CAMERA, need to be intentional in identifying Black students who could potentially be good educators and recruit them to this noble profession. Federal and state money should be earmarked to increase the diversity of our teacher workforce. Additional funds should be allocated to schools who undertake rigorous training in culturally responsive teaching practices. While we need new Black teachers, it cannot

be left to the current Black teaching community to develop the next generation of Black educators. White educators, as most of the workforce, need to be willing to work collaboratively with their Black colleagues to support the recruitment, development, and retention of Black teachers. Additionally, we need to support our White majority workforce with culturally responsive professional development so they can better serve their increasingly diverse students.

Establishing that Black students within the CAMERA consortium can be successful in AP has added to educational research, but does not solve the existing opportunity gap facing Black student access to AP. The study has established the need for growing the Black teacher workforce, along with a more culturally responsive workforce. I confronted this issue three years ago when challenged with "Why do I care"? I care because my students helped open my eyes to the myth of education being the great equalizer. As a society and as educators, it is our duty to transform this myth to a reality. As the diversity in this nation continues to increase, our success as a country depends on our adaptability. More importantly, **all** students deserve to be given the best opportunity to be successful.

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APPENDIX A: IRB APPROVAL

Gmail [redacted]

Fw: 2023-299 - Initial: Initial - Exempt

1 message

Brian Zeller <bzeller@student.ysu.edu> Sat, Jul 29, 2023 at 6:00 PM
To: [redacted]

From: do-not-reply@cayuse.com <do-not-reply@cayuse.com>
Sent: Monday, June 5, 2023 1:57 PM
To: Brian Zeller <bzeller@student.ysu.edu>; Jane Beese <jbeese@ysu.edu>
Subject: 2023-299 - Initial: Initial - Exempt

YOUNGSTOWN STATE UNIVERSITY

Jun 5, 2023 1:57:02 PM EDT

Jane Beese
Teacher Ed and Leadership St

Re: Exempt - Initial - 2023-299 Evaluating High School Principals' Perceptions of Barriers to Black Students' Enrollment in Advanced Placement (AP) Academic Coursework within the CAMERA Consortium

Dear Dr. Jane Beese:

Youngstown State University Human Subjects Review Board has rendered the decision below for Evaluating High School Principals' Perceptions of Barriers to Black Students' Enrollment in Advanced Placement (AP) Academic Coursework within the CAMERA Consortium

Decision: Exempt

Selected Category: Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;
Category 2.(ii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or

Any changes in your research activity should be promptly reported to the Institutional Review Board and may not be initiated without IRB approval except where necessary to eliminate hazard to human subjects. Any unanticipated problems involving risks to subjects should also be promptly
reported to the IRB.

The IRB would like to extend its best wishes to you in the conduct of this study.

Sincerely,
Youngstown State University Human Subjects Review Board

APPENDIX B: STUDY SURVEY INSTRUMENT

1. Introduction

My name is Brian Zeller and I am a doctoral candidate in Educational Leadership at Youngstown State University in the College of Education and I will be conducting a quantitative research study that will examine high school administrators' perceptions of barriers affecting Black students' enrollment in AP coursework in a Northeast Ohio Consortium of 20 school districts, from the perspective of high school and central office school administrators. Like you, I serve in an administrative capacity within this consortium. My passion in examining this research topic stems from previously serving as a high school principal in a diverse district who observed disproportionate numbers of Black students enrolled in AP classes when compared to the student population.

While current research acknowledges the opportunity gap between White and Black students, there is a considerable research gap related to the specific barriers found to limit Black student enrollment in AP level coursework. As a school administrator your role is to develop, build, and maintain system frameworks which will empower all students to pursue the academic pathways of their choice. This study will collect data related to high school administrator perceptions of barriers affection Black students' enrollment in AP level coursework in an effort to address these limiting forces and shrink the opportunity gap for Black students in Northeast Ohio.

There are approximately 101 high school administrators in the CAMERA consortium. Being an administrator within the consortium is why you were selected to participate in this study.

If you agree to be in the study, the following will occur:

1. Within the survey, please answer all question items.

2. This online survey will ask you demographic questions related to your age, race and school position. Additional questions will be asked regarding your perception of what you feel are barriers to Black students taking AP course work.

Your participation is crucial to provide evidence of the barriers Black students face in enrolling in AP coursework.

The survey will be conducted through an online survey and will take approximately 20 minutes to complete.

While no personal information will be gathered through the instrument, it is conceivable that identifying data could be deduced through the demographic questions within the survey. The purpose of the demographic questions is to evaluate what differences, if any, are found between urban and suburban districts.

No monetary incentive will be issued for your participation in this study. It is my hope that you see the value in identifying potential barriers Black students face so we can begin to address those issues in the education community. Upon completion of the study, all districts within the consortium will be presented with the findings.

Please complete the survey by July 1.

If you have any comments or concerns about participation in this study, please contact Brian Zeller at 419-654-0516 or bzeller@student.ysu.edu. If you are not comfortable contacting me directly, please contact the Office of Research Services at Youngstown State University at 330-941-2378 or research@ysu.edu to report your concern.

Your participation in this study is VOLUNTARY. You are free to decline to be in this study, or to withdraw from it at any time.

* 1. I have read all of the above information about the research study in addition to my rights as a research participant. I voluntarily agree to participate in this research study and will be provided a copy of this form upon written request. If I feel uncomfortable at any point in the research study, I have the right to refuse to answer any question and may also end the survey and my participation in the study at anytime.

☐ I consent to participate in the research study.

Part I. Advanced Placement Courses

Research Question 1- What is the representation of Black students in high school advanced placement classes?

The purpose of this page is to gather your unique perceptions on Black students in AP courses.

There are 6 questions in this section.

Your responses will be collectively reported with all others taking this survey and will be held confidential.

2. The high school(s) in my district have Advanced Placement (AP) courses available.

- ◯ Yes
- ◯ No

3. How many students participate in AP coursework in your school?

4. Black students make up approximately ____% of our AP course enrollment.

0 100

5. Approximately ____% of our Black students who take AP courses participate in the End of Course exam.

0 100

6. Approximately ____% of our Black students taking the End of Course exam score 3 or higher.

0 100

7. Black students are equally represented in AP classes in my high school?

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

Part II. Perceptions of School Administrators on Barriers to AP Course Enrollment for Black Students

Research Question 2- From the perspective of a secondary building administrator, what school factors act as barriers to Black student enrollment in AP courses?

The purpose of this page is to gather your unique perceptions on school factors affecting Black student enrollment in AP courses.

There are 4 questions on this page.

Your responses will be collectively reported with all others taking this survey and will be held confidential.

8. When compared to White students, teachers have lower expectations for Black students.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

9. The lack of teachers from the same racial background negatively impacts Black students from enrolling in AP courses.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

10. Black students are more likely to not meet course requirements (Pre-requisites, GPA) for enrollment in AP courses than their White peers.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

11. As a whole, Black students are less likely to be encouraged to enroll in AP courses by school counselors than their white peers.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

Part III. Perceptions of School Administrators on Barriers to AP Enrollment for Black Students

Research Question 3- From the perspective of a secondary building administrator, what personal/family factors act as barriers to Black student enrollment in AP courses?

The purpose of this page is to gather your unique perceptions on personal/family factors affecting Black student enrollment in AP courses.

There are 5 questions on this page.

Your responses will be collectively reported with all others taking this survey and will be held confidential.

12. Black students living in poverty are less likely to enroll in AP coursework in my district.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

13. Black students living in poverty have fewer educational options, including AP courses, available to them.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

14. Parents with low formal education levels reinforce lower expectations of their children, creating an external barrier for enrollment in AP courses.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

15. Negative peer influences are more likely to keep Black students from enrolling in AP courses than White students.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

16. Fearing being labeled as "acting White", some high achieving Black students refrain from taking AP coursework in order to remain tied to the Black community.

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

Part IV(a). Participant Demographics

Research Question 4- Are there differences in Black enrollment in AP courses between school administrator demographics (gender, years experience, or race)? The purpose of this page is to gather your demographic information to determine if there are differences between that information and Black student enrollment in AP coursework.

There are 5 questions in this section.

Your responses will be collectively reported with all others taking this survey and will be held confidential.

17. Gender: How do you identify?

- ◯ Female
- ◯ Male
- ◯ Non-binary
- ◯ Prefer to not respond

18. What is your age range?

- ◯ 25-34
- ◯ 35-44
- ◯ 45-54
- ◯ 55-64
- ◯ 65+

19. How long have you worked in education?

- ◯ <10 years
- ◯ 10-19 years
- ◯ 20-29 years
- ◯ 30+ years

20. How long have you worked as a high school administrator?

- ◯ Less than 5 years
- ◯ 5-10 years
- ◯ 11-15 years
- ◯ 16-20 years
- ◯ 21+ years

21. Which race/ethnicity best describes you? (Please choose only one.)

- ◯ American Indian or Alaskan Native
- ◯ Asian / Pacific Islander
- ◯ Black or African American
- ◯ Hispanic
- ◯ White / Caucasian
- ◯ Multiple ethnicity / Other (please specify)

Part IV(b)- School Demographics

Research Question 4- Are there differences between Black enrollment in AP courses and school administrator demographics (gender, years experience, or race)?

The purpose of this page is to gather your demographic information to determine if there are differences between that information and Black student enrollment in AP coursework.

There are 5 questions in this section.

Your responses will be collectively reported with all others taking this survey and will be held confidential.

22. My district would be best described as a _____ district?

- ◯ Urban
- ◯ Suburban

23. Approximately _____% of our students identify as White/Caucasian.

0 100

24. Approximately _____% of our students identify as Black/African American.

0 100

25. Approximately_____% of our students are economically disadvantaged.

0 100

26. Approximately _____% of our high school staff racially identifies as Black.

0 100

APPENDIX C: PILOT TESTING FEEDBACK

[redacted]

4/3/23, 8:02

[redacted]

Brian Zeller [redacted]

Survey

1 message

[redacted] Mon, Apr 3, 2023 at 2:01 PI

To: Brian Zeller [redacted]

ıe description of your work and why the survey is being sent to CAMERA administrators was logical. The flow of the survey, broken ıs, was also logical. The appearance (colors, organization, etc...) was professional and clean.

ıns are around the open ended questions at the end of the survey. How will you quantify and / or analyze the responses? Will the call for more questions on your part back to the group? Do you think (or maybe you have already done this) asking the open ended prior to the survey might help drive additional or more specific questions?

r labor is fruitful and more black students are registered for AP coursework in NE Ohio.

ːs,

[redacted]

NTIALITY NOTICE: The contents of this email message and any attachments are intended solely for the addressee(s) and may nfidential and/or privileged information and may be legally protected from disclosure. If you are not the intended recipient of this ır their agent, or if this message has been addressed to you in error, please immediately alert the sender by reply email and then message and any attachments. If you are not the intended recipient, you are hereby notified that any use, dissemination, copying, or this message or its attachments is strictly prohibited.

[redacted]

APPENDIX D: CITI CERTIFICATION

From: CITI Program No Reply noreply@citiprogram.org **Subject:** CITI Program – Course Completion for Brian Zeller

Date: October 26, 2022 at 3:55 PM **To:** mrbzeller@gmail.com

Course Completion for Brian Zeller

Congratulations on your recent course completion!

Name:
Institution:
Course:
Stage:
Completion Date: Expiration Date: Completion Record ID:

Brian Zeller (ID: 11698635)
Youngstown State University (ID: 2520)
Social & Behavioral Research – Basic/Refresher 1 – Basic Course
26 Oct 2022
25 Oct 2025
52320328

APPENDIX E: EMAIL REQUEST FOR CAMERA CONTACT INFORMATION

Information for Dissertation

2 messages

Brian Zeller <bzeller[redacted]> Sat, Apr 1, 2023 at 11:15 PM
To: [redacted]

Hello,

A few months ago I talked to our group about sending the survey instrument for my dissertation to people in your districts. I asked at that time if the consortium would be willing to double check what I have collected on your district thus far, and add anything that may be missing or inaccurate.

It is now time for me to begin that process in the hopes of sending my survey out in May/June. Within the google sheet that I will be sharing I am looking for the following information:

CAMERA Representative and email
Superintendent name and email
Assistant Superintendent and email
Curriculum Directors and supervisors who would serve at the HS level and email
HS Principal name and email
HS AP(s) name and email

The link for the sheet is: CAMERA Contact List for Zeller Study. You all have editor access (trust exercise :-)) to edit your district as you see fit.

For the edification of the group, my study is on the institutional and external barriers Black students face enrolling in AP coursework. My survey questions will be centered around those barriers and which are the most impactful.

I would greatly appreciate any help that you can provide as I work on this study. If you have any questions, please let me know.

Thanks,
Brian

--

Brian Zeller

[redacted]

Need to meet? Click here to access my appointment calendar.

APPENDIX F: REQUESTING YOUR PARTICIPATION IN MY RESEARCH STUDY

Sent invitation

From: mrbzeller@gmail.com via SurveyMonkey

Date: Wednesday, June 07, 2023 11:00 AM

Sent to: 94 recipients

Subject: Requesting your participation in my research study

Message:

Principal's Perceptions of Barriers Black Students' Face in Enrolling in AP Coursework

Hello,

My name is Brian Zeller and I am a doctoral candidate in Educational Leadership at Youngstown State University in the College of Education and I will be conducting a quantitative research study examining high school administrators' perceptions of barriers affecting Black students' enrollment in AP coursework within the CAMERA consortium. Like you, I serve in an administrative capacity within this consortium. My passion in examining this research topic stems from previously serving as a high school principal in a diverse district who observed disproportionate numbers of Black students enrolled in AP classes when compared to the student population.

If you could please take a moment to complete the embedded survey, I would greatly appreciate it. The survey should take between 10-12 minutes and contains items related to the barriers Black students face in accessing AP level coursework. Your responses will be used to determine which barriers are the most prevalent within our consortium. Armed with this information, the hope is that we can begin to plan on how to lessen the damaging impact this lack of equitable access presents to our students. Thank you for your time and help.

Sincerely,
Brian Zeller

APPENDIX G: CONSENT FORM TO COMPLETE THE SURVEY

My name is Brian Zeller and I am a doctoral candidate in Educational Leadership at Youngstown State University in the College of Education and I will be conducting a mixed-methods research study that will examine the barriers Black students face in accessing AP coursework in a Northeast Ohio Consortium of 20 school districts, from the perspective of high school and central office school administrators. Like you, I serve in an administrative capacity within this consortium. My passion in examining this research topic stems from previously serving as a high school principal in a diverse district who observed disproportionate numbers of Black students enrolled in AP classes when compared to the student population.

While current research acknowledges the opportunity gap between White and Black students, there is a considerable research gap related to the specific barriers found to limit Black student enrollment in AP level coursework. As a school administrator your role is to develop, build, and maintain system frameworks which will empower all students to pursue the academic pathways of their choice. This study will collect data related to external and institutional barriers facing Black students in pursuing AP level coursework in an effort to address these limiting forces and shrink the opportunity gap for Black students in Northeast Ohio.

There are approximately 109 high school administrators in the CAMERA consortium. Being an administrator within the consortium is why you were selected to participate in this study.

If you agree to be in the study, the following will occur:

1. Within the survey, please answer all question items.

2. This online survey will ask you demographic questions related to your age, education level, race and school position. Additional questions will be asked regarding your perception of what you feel are barriers to Black students taking AP course work.

The survey will be conducted through an online survey and will take approximately 20 minutes to complete. While no personal information will be gathered through the instrument, it is conceivable that identifying data could be deduced through the demographic questions within the survey. The purpose of the demographic questions is to evaluate what differences, if any, are found between urban and suburban districts.

No monetary incentive will be issued for your participation in this study. It is my hope that you see the value in identifying potential barriers Black students face so we can begin to address those issues in the education community. Upon completion of the study, all districts within the consortium will be presented with the findings.

Please complete the survey by July 1.

If you have any comments or concerns about participation in this study, please contact Brian Zeller at 419-654-0516 or bzeller@student.ysu.edu. If you are not comfortable contacting me directly, please contact the Office of Research Services at Youngstown State University at 330-941-2378 or research@ysu.edu to report your concern.

Your participation in this study is VOLUNTARY. You are free to decline to be in this study, or to withdraw from it at any time.

I have read all of the above information about the research study in addition to my rights as a research participant. I voluntarily agree to participate in this research study and will be provided a copy of this form upon written request. If I feel uncomfortable at any point in the research

study, I have the right to refuse to answer any question and may also end the survey and my participation in the study at any time.

☐ I consent to participate in the research study.