

THE RELATIONSHIP BETWEEN TEACHER-STUDENT ASSIGNMENT AND
HIGH SCHOOL STUDENT EQUITY IN ONE NORTH CAROLINA SCHOOL DISTRICT

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A dissertation submitted to the faculty at the University of North Carolina at Chapel Hill in
partial fulfillment of the requirements for the degree of Doctor of Education in the Educational
Leadership Program in the School of Education.

Chapel Hill
2017

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ABSTRACT

R. Spencer Hawkins: The Relationship Between Teacher-Student Assignment and High School Student Equity in One North Carolina School District
(Under the direction of Kathleen Brown)

When teacher assignments are optimized for some students but not others, then the high school scheduling process becomes an exercise of inequity. Scholarly research reviewed for this study consistently showed a lack of access to the highest quality teachers possible for students of color and also correlated the *achievement* of students with their assignment to teachers. In some cases, research reported a causal link specifically between teacher assignments and the racial achievement gap. The purpose of this study was to illuminate a potential contributor to the achievement gap, one heretofore under-emphasized in existing research: the inequitable assignment of the highest quality teachers to white high school students at the expense of African American and Hispanic students.

Employing a mixed methods approach, the researcher chose the high schools of one North Carolina school district to use as a case study in illuminating the values and priorities at play when assigning teachers possessing varying degrees of quality to students from different racial backgrounds. Key agents from each of the district's three high schools participated in qualitative interviews, answering questions germane to teacher assignment practices. Upon analyzing interview results, each school's master schedule was audited to *quantitatively* affirm or contradict *qualitative* findings. The purpose of the audit was to uncover evidence of equity or inequity with regard to access to teacher quality for students from historically marginalized backgrounds. A cross-case analysis is provided for each school as well as for the school district

to relate *congruence* between qualitative and quantitative findings, as well as *incongruence* via the presentation of contradictory data.

Findings include: (1) Within a given high school, access for students from marginalized populations to the highest quality teachers is *generally* inequitable compared to students of privilege. (2) Racial equity and the achievement gap are not considerations driving teacher assignments. However, student and teacher requests are key factors that drive master schedules. (3) Teachers ply capital with varying degrees of success to influence assignments. (4) Parents of white students attempt to harness capital to influence assignments to a significantly higher degree than do parents of African American and Hispanic students.

ACKNOWLEDGEMENTS

Dr. Kathleen Brown, you are the first person I met in the Ed. Leadership department. Your kindness, patience, guidance, occasional “tough love,” and friendship have made all of this possible. I consider you a lifelong friend, Dr. B. Thank you for pushing me and helping me grow.

I would also like to thank the professors who have deftly guided me through two degree programs, over the past seven years. Specifically, Dr. Fenwick English, Dr. Erik Houck, Dr. Stan Schainker, Dr. Dana Thompson Dorsey, and Dr. Jim Veitch—I wouldn’t have accomplished anything without your accessibility, advice, consideration, and encouragement. Thank you.

Thank you also to my dissertation committee members—Dr. Brown, Dr. English, Dr. Schainker, and Dr. Thompson Dorsey as well as Dr. Kelly Batten for your time, support and consideration. Dr. Batten, you and Dr. Amanda Hartness were incredibly helpful during my research phase (thank you again!).

My principals have supported my journey by providing time to attend class and to write, as well as occasional reminders to sleep and take care of myself throughout this process. Dave Ebert, Phil Holmes, LaVerne Mattocks, and Rick Webber—you mean much more to me than a mere boss/employee dynamic would imply. You are mentors and cherished friends. Thank you.

My mother and father-in-law, Bill and Nettie Brogden, have done so much to enable me to focus on my work for seven years and have never said “no” to a single request made of them. “Thank you” is not big enough for all the time and energy you have given to us, our kids, our cars, and our home.

My parents have been champions of mine over the last seven years too but more importantly, thank you for the sacrifices you made for me while I was at UNC Greensboro. Because of it, I was able to focus on being a college student and not worry about food, rent, car insurance, fraternity dues, tuition, or books. My time there led to my career as an educator. Thank you for your sacrifice and support—I'll never forget it.

Having said all of that, I actually *dedicate* this work to the three most important people in my life without whom, I would have had no reason to persevere when times were tough... without whom, this accomplishment would mean very little. I am sorry I have missed so much over the last seven years. I will strive to make that up to you. You mean the world to me.

Hannah, the day you were born was the greatest day of my life. I hope you never forget how incredibly important you are to me. I love you more than you could possibly ever know—nothing will ever change that. Your beauty, natural talent as an artist, dedication as an athlete, and strong performance as a student inspire me and make me unbelievably proud. I am so excited to watch where life takes you, my little girl. I love you <3!

Owen, you are a constant source of happiness and pride for me. I tell everyone that you are the nicest, kindest person that I know. I literally would not have been able to finish this work without your hugs and smiles—they are like oxygen for me. I am probably more excited about spending time with my best buddy than any other aspect of finishing my dissertation. I can't wait for more time to bond with you over our favorite super heroes and rock music. I love you so much, my son. (All that, plus one.)

And lastly, to Beth, mere words cannot capture the debt I owe you and the gratitude that I have for you. I could not have a better partner in my crazy life. Thank you for your patience with me, for your own hard work, and for your encouragement. I am very aware that being a “single parent” has been incredibly difficult for you. I could work the rest of my life to repay you for the last seven years and it still would not be enough...but I will still try anyway. Thank you for alleviating every possible burden for me along the way. I love you very, very much.

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LIST OF ABBREVIATIONS

AASA	American Association of School Administrators
AP	advanced placement
APHS	Artist Point High School
BLCS	Bay Lake County Schools
DOE	Department of Education
EDS	economically disadvantaged students
ELL	English language learners
EOC	end of course
EVAAS	Education Value-Added Assessment System
HMHP	high minority/high poverty
KRHS	Kali River High School
LSHS	Liberty Square High School
NAEP	National Assessment of Educational Progress
NASSP	National Association of Secondary School Principals
NBCT	National Board Certified Teachers
NBER	National Bureau of Economic Research
NBPTS	National Board of Professional Teaching Standards
NCDPI	North Carolina Department of Public Instruction
NCEE	National Center for Education Evaluation and Regional Assistance
NCES	National Center for Education Statistics
NCLB	No Child Left Behind
NCTAF	National Commission on Teaching and America's Future
NYC	New York City

PD	professional development
SIPs	school improvement plans
SWD	students with disabilities
TWC	teacher working conditions
VAMs	value-added measures

CHAPTER I: INTRODUCTION

Overview

The synthesis of knowledge and the creation and strengthening of skills are types of learning achievements for students. The instruction of a course curriculum through the delivery of lessons to students and the assessment of skills mastery are tasks expected of teachers. It is a significant responsibility of school leaders to ensure that each student is assigned to a teacher with the skills and training necessary to maximize the student's learning potential. When teacher/student matches are optimized for some students but not for others then the scheduling process becomes an exercise of inequity. This is a research study the purpose of which was to illuminate a potential contributor to the racial achievement gap, one that was heretofore under-emphasized in existing scholarly research: the inequitable assignment of the highest quality teachers possible to high school students from historically privileged backgrounds—specifically white students—at the expense of students from historically marginalized backgrounds—specifically African American and Hispanic students.

Existing research reviewed for this study revealed that the marginalization and institutionalized oppression of specific student groups—especially low-income, “black and brown,” and/or English Language Learners (ELL students)—is manifested in the school setting in consistently negative and impactful ways. Research (Clotfelter, Ladd & Vigdor, 2006; Darling-Hammond, 2002; Feng, 2010; Jackson, 2009; Kalogrides & Loeb, 2013; Lankford, Loeb, & Wyckoff, 2002) consistently demonstrated a lack of access to the highest quality teachers for students of color, students of low socioeconomic status, or otherwise historically

marginalized students. In a study of teacher sorting in New York, the authors found that non-white, poor and/or ELL students are assigned to less experienced teachers 50% more often than students from privileged backgrounds and four times more likely to be assigned teachers lacking subject certification than are white, non-poor, and non-ELL students (Lankford et al., 2002). Researchers in another study of 29 school districts from across the country serving high percentages of at-risk students concluded that, when compared to students from the majority culture, students in grades 4-8 from historically marginalized populations had less access to effective teaching—a disparity which resulted in a shift of two percentile points in the racial achievement gap (U.S. Department of Education [DOE], 2013).

In Chapter 1 of this research study, a research problem is proffered with a rationale for the study. The statement of the problem and rationale is followed by a research synthesis question germane to 21st century educational leadership practice and theory, the focus of which is teacher assignment. The research question is accompanied by a set of sub-questions that guided a review of existing scholarly literature and was subsequently addressed through the study. A section regarding the potential significance of the research follows the research questions. Contained within this section is a listing of data sources as well as the types of data that was collected and interpreted in the study. A theoretical framework for the study is put forward in the next section, followed by a list of essential terms and concepts defined for purposes of the study. Completing Chapter 1 of this research study is an accounting of research assumptions and limitations relevant to a study of teacher assignment and student equity followed by a summary of the chapter.

Singleton and Linton (2006) urged readers to “accept a certain degree of ambiguity” (p. 9) with their use of descriptive terms for race. Similarly, for purposes of this research study and in consideration of access to excellence, the term “at-risk students” should be interpreted to

include “black and brown,” low-income, and/or ELL students. This simply means that to some extent all students in those subgroups encounter equity challenges, implicit bias, and negative stereotyping in educational and social arenas in a manner that the privileged, dominant and/or white culture does not. Interchangeable terminology and intentional clustering of subgroups should not be misunderstood as an assumption that “black and brown,” low-income, or ELL students necessarily share every quality of each subgroup label (i.e. not every black or brown student is low-income or ELL). Similarly, there is no assumption that all white students are affluent or vice versa. Research simply and clearly demonstrates that advantaged white and/or high-income students do not encounter the sorts of disparities in equity in educational and social arenas as at-risk students of other historically marginalized subgroups. It is the plight and cause of student populations who are at-risk or who have been otherwise historically marginalized for which this research study was constructed.

Statement of the Problem/Purpose of the Study

The landmark court decision *Brown v Board of Education* in 1954 was the impetus for the modern prioritization at federal, state and local levels to improve educational outcomes for black students. Yet despite many subsequent court decisions and resultant increases in school spending specifically for students of color, a historically static achievement gap has persisted between them and their white peers such that by age 17, the average black student is performing at approximately the 20th percentile of white peers (NBER, 2006). For its report on the achievement gap as manifested on college readiness benchmarks, ACT, Inc. (2012) analyzed the results of 123,541 2011 high school graduates on benchmark assessments in grades 8 (the EXPLORE), 10 (the PLAN), and 11 or 12 (the year a given student completed the ACT) for English, reading, math, and science. Its report found that black and Hispanic students met college readiness standards at substantially lower rates than white and Asian peers. Black high school

graduates were less than half as college ready in English (35%) than white peers (77%). The report (ACT, Inc., 2012) stated that the racial achievement gap also grows over time. Asian students started out with the highest scores in 8th grade and showed the greatest growth across grades in all four subjects whereas black students exhibited the opposite trend, starting with the lowest scores in 8th grade and showing the least growth across grades in all four subjects (ACT, Inc., 2012).

Singleton and Linton (2006) characterized the achievement gap as one solely of race. The authors reported that black and brown students are outperformed by white students at every income level and that black students are the lowest performing group at every level. They also reported that *poor* white students actually outperform black and brown students from *middle-income* families. French sociology scholar and theorist Pierre Bourdieu would suggest that such a phenomenon is a matter of cultural reproduction, a concept which will be detailed later in Chapter 1.

Except for a brief period of progress in the 1970s and early 1980s, the achievement gap has remained essentially static since the Civil Rights Movement. Despite ample attention given to the achievement gap in funding and policy circles, there have been persistent, commensurate disparities along racial lines in many other social domains including enrollment in and completion of college degrees, unemployment rates, and rates of criminal incarceration all to the disadvantage of racial minorities and to the advantage of the dominant white culture. In short, the strategies generated by school leaders to erase gaps in achievement between racial subgroups have been largely ineffectual. Policies such as the federal No Child Left Behind (NCLB) legislation (Ravitch, 2010; Roza, 2010) enacted by political leaders have also been essentially impotent in eradicating the achievement gap (NCLB is discussed further in Chapter 2). Thus, the poor educational, professional, and economic outcomes for students of color persist.

Acknowledging the lack of success consistently achieved by “throwing money at the problem” or any other prior initiative designed to negate or at least mitigate the racial achievement gap, it is incumbent upon 21st century educators to seek and identify different or underemphasized contributors to the gap.

Pierre Bourdieu (1991) analogized the role played by public education in the achievement gap to Maxwell’s demon, a scientific theory regarding the differences in fortune between faster molecules (students from privileged backgrounds) and slower molecules (students from historically disadvantaged backgrounds) in their attempts to exit one chamber of gas and enter another in an exercise regulated by a demon (the educational system) who quickly opens and closes the door which inherently advantages the faster molecules. Systemically and procedurally, schools maintain the existing order which includes the perpetuation of the achievement gap between students of privileged backgrounds and students from historically disadvantaged backgrounds (Bourdieu, 1991). With the aforementioned analogy, Bourdieu (1991) stipulated that the role in reproducing the social order that is played by agents in the educational system is not one that is intrinsically conscious or purposeful. Regardless, by maintaining the academic achievement gap, modern schools in essence have played a significant role in maintaining the greater social hierarchy ordering the social classes not much differently than Europe centuries ago when “social borders... separated nobility from gentry and gentry from common people” (Bourdieu, 1991, p. 645). Bourdieu (1991) painted a pessimistic picture of the permanence of the ultimate destiny that the educational system assigns to teenagers for better or worse, and for which there is no appeal. By linking scholastic aptitude with cultural heritage, schools ostensibly establish for students from the dominant class lasting traits of nobility which are further legitimized by subsequent achievement in postsecondary settings (Bourdieu, 1991).

Riehl, Pallas, and Natriello (1999) in their study of the course scheduling process for at-risk students in urban high schools referred to the process as “one of the most important administrative routines supporting the core instructional program of the school” (p. 116). There is an element of common sense to the premise that students who are matched with the most highly qualified, effective, well-trained, experienced, and invested teachers will maximize achievement potential more often than students matched with teachers with less experience, less training, and fewer skills. However, if the simplicity of that premise was matched by an equally simple system of assigning students *only* to the most effective teachers, then the achievement gap between racial and socioeconomic student subgroups might not exist because the learning potentials of *all* students would be maximized. Scholarly research (Clotfelter et al., 2006; Feng, 2010; Kalogrides & Loeb, 2013; Lankford et al., 2002) used for this study correlated a relationship between the achievement of students and the procedural assignment and scheduling of students to teachers with varying degrees of quality or qualifications. In some cases, research (Clotfelter, Ladd, & Vigdor, 2005; DOE, 2013; Kalogrides, Loeb, & Beteille, 2012; NBER, 2006; NCEE, 2014) reported a causal link specifically between student/teacher assignments and the racial achievement gap.

Teacher assignment patterns show a higher likelihood of minority and/or low-income students receiving an inexperienced teacher compared to white or higher income peers (Clotfelter et al., 2005; Kalogrides et al., 2012; NBER, 2006). According to Kalogrides et al., (2012), “within schools, minority and poor students are assigned less experienced teachers since they tend to be lower achieving on average... [and] novice teachers are consistently less effective at raising student achievement compared with their more experienced peers” (p.120). For example, their study of teacher characteristics and class assignments in Miami found a novice teacher effect of -.02 to -.03 standard deviations in math achievement (Kalogrides et al., 2012).

There is also a propensity for over-identification in special education for at-risk students, almost as if educators cannot determine what else to do with an underachieving student but label him or her disabled and lower the bar of expectations. Black students are assigned to “special ed” classrooms at higher rates than students of other races and once separated, black students are less likely to be returned to the regular education setting (Johnson, 2002).

It is critical that both education researchers and practitioners focus a clearer lens on the roles played by teacher assignment via the scheduling process in the persistence of the racial achievement gap. Compared to research on many other topics related to student achievement, equity in education, and pedagogical practice, there has been a substantive dearth of prior research pertaining to the teacher assignment process *in general*, much less research specific to the assignment of teachers to students at the *high school* level. Calling teacher assignment “an often-neglected factor in teacher labor market decisions,” Feng (2010, p. 312) completed what she identified as “the first large-scale analysis” that linked the impact of teacher assignments to specific student groups and classroom environments with teacher attrition and mobility. Kalogrides et al., (2012) studied teacher-student sorting and decried the lack of clarity in existing research for “the extent to which the systematic matching of teachers to students... occurs *within* schools.” Clotfelter, Ladd, and Vigdor (2003) examined racial segregation in classrooms within schools and found that most prior social science research data pertained instead to segregation *between* schools rather than within. Riehl et al., (1999) indeed studied the high school course scheduling process but mostly examined the procedural elements of routines instead of access and equity issues with student assignments to quality teachers. A problem with the few existing studies that “do measure access [of disadvantaged students] to effective teaching using learning gains [is that they] do so in different ways, making it difficult to synthesize the lessons learned” (NCEE, 2014, p. 2).

Considering the relative modicum of previous research on teacher-student assignments in public high schools, a very real opportunity exists to contribute research on a topic that's critical to ensuring student equity and perhaps reducing the racial achievement gap. While the achievement gap has remained a lowlight in the narrative on modern American education, it is compelling to ponder what theoretically simple remedies might be applied to the problem. It was to that end and in the spirit of discovery and enlightenment that this research study on student equity as it is manifested in the assignment of teachers to students was undertaken.

Research Questions

American culture is rife with stories of high school teachers who inspire students to accomplish greatness and to sometimes rise above unfortunate personal circumstances to maximize potential. Conversely there are stories of pedagogues whose influences, methodologies, or communications are detrimental or actually harmful to the ultimate well-being of students. New scholarly research specific to the assignment (or “matching”) of high school students to teachers holds relevance to school leaders tasked with achieving the equilibrium necessary to simultaneously raise and maintain student achievement levels, to eliminate achievement gaps between demographic subgroups, and to recruit and retain quality teachers. Thus, the prime research question for this study was:

From a leadership perspective, how are teachers assigned to students at the high school level (i.e., what criteria—formal and informal—are and are not considered, including issues of equity)?

The following sub-questions are germane to the research question, were proffered to guide the review of existing scholarly literature, and were subsequently addressed through the study:

- Are the racial achievement gap and equity for students from historically marginalized or at-risk populations considered *primary* considerations that drive or influence the construction of high school master schedules and if so, how?
- Do high school teachers wield social and/or cultural capital effectively to influence school principals to gain preferable course assignments and by default, to control the types of students to which they will be assigned to teach and if so, how is it manifested?
- How actively involved are the parents of students from historically privileged or dominant populations in determining the courses to which their children enroll and advocating with principals and counselors for the teachers to whom their children are assigned than are the parents of students from historically marginalized or at-risk populations?
- How adequate and equitable is the access to preferable teacher assignments enjoyed by students from historically marginalized or at-risk populations when compared to students from the historically privileged, dominant population?

Significance of the Research

As a social justice champion and as an advocate for students, this researcher assumed a moral obligation to heighten awareness of inequities with student/teacher scheduling, a process which itself can exemplify institutionalized racism. Research (Clotfelter et al., 2005; DOE, 2013; Kalogrides et al., 2012; NBER, 2006; NCEE, 2014; Roza, 2010) on teacher sorting among and within schools supported the researcher's belief that the school scheduling and teacher assignment processes which may outwardly appear to be somewhat innocuous routines to the layperson are in essence forms of institutionalized racism, examples of school finance inequity,

and contributors to the racial achievement gap, deserving of greater attention in leadership and policy circles.

This research study used the students, teachers, and master schedules of the traditional high schools from a single, relatively small district in north central North Carolina as its research subjects. Data sources for the study that offered maximum validity and were germane to participant schools were those that already existed as a matter of state record. Examples of quantitative data sets appropriate for this research that are compiled and maintained by the North Carolina Department of Public Instruction are North Carolina School Report Cards and EVAAS data for particular high schools or school districts, both of which will be discussed further in Chapters 2 and 3. While it may not offer maximum validity in the scholarly sense, the North Carolina Teacher Working Conditions survey (also discussed further in Chapter 3) is an example of a data set that served as a substantive, school-specific source of supporting data. Another critical data source for each participant school was its master schedule (current for the year the study was being conducted) and demographic data for students enrolled in core courses required for graduation in North Carolina (from these subject areas: English, Math, Science, and Social Studies). A modicum of personnel information related to teacher credentials was obtained from the teachers themselves via an online survey and was pertinent to the study as well (though the teachers self-reported their credentials, the Human Resources department of the participant district filled in very few gaps of missing information). Supplementing the aforementioned quantitative student and personnel data were data collected from qualitative means such as interviews with active agents in the scheduling process at each participant school including principals, assistant principals, counselors, and department chairpersons.

The findings of this research are significant on a number of fronts. First the study can add substantively to the scholarly discourse by focusing attention on an often overlooked or at least

underrated contributor to the racial achievement gap: the role that high school teacher assignment plays as an exercise in equity. Additionally, outcomes of the research can inform the planning of school leaders and the efforts of policy makers as they work to eradicate the achievement gap by creating protocols and scheduling structures that will optimize the provision of equitable learning experiences for every high school student.

It is important to note that for the purposes of this research study, the terms equity and equality were not interchangeable. Equality in education could be manifested in the provision of school supplies to students such that each student receives a desk, a binder, and two unsharpened pencils- each item of the same brand, age, quality, size, and color as the others. Equity in education is achieved when each student receives the type, amount, and level of quality of instruction, scaffolding, and personalization necessary for each student to overcome personal circumstances, achieve proficiency, and maximize individual potential. Equity in public education is not necessarily or even possibly achieved by the insurance of equality because each student requires differing amounts of support and attention in order to maximize potential. A same-sized slice of a pie for each person is neither fair nor equitable necessarily, depending on many unique factors.

Theoretical Framework

Twenty-first century scholars often use postmodern theoretical perspectives to frame their research, analyses of policy, and assessment of equity, adequacy, and power dynamics in social realms. Postmodernism acknowledges “that subjectivities are embedded into all analyses of policy issues, even in the questions and research designs” and though it is “used to describe current theoretical shifts, it encompasses both a particular theoretical perspective and a historical shift in how we view the world” (Marshall & Gerstl-Pepin, 2005, p. 78). Pierre Bourdieu’s theory of cultural reproduction is one such postmodernist theory that provided a contemporary

conceptual framework for research that epitomizes the French educator-researcher's influential work in the sociology of public schooling.

The social world is represented by Bourdieu (1985) as a space, with agents and groups of agents being defined by their social class—the positions of power and influence they hold—within that space. Social space functions as a symbolic space characterized by status groups enjoying different lifestyles (Bourdieu, 1989). There are dimensions to the agents' distribution within the social space based on total volume of capital and the weight of the different forms of capital (Bourdieu, 1989). Within a group occupying the social space, power may be exerted by a single spokesperson that appears to hold domain over those who are the actual source of the power. One's perception of the place he occupies in the social space inclines him to accept the social space as it is, rather than to reject or rebel against it:

The sense of one's place... implies a tacit acceptance of one's place, a sense of limits... a sense of distances, to be marked and kept, respected or expected. And it does so all the more strongly where the conditions are most rigorous...(Hence the profound realism that generally characterizes the world view of the dominated...) (Bourdieu, 1985, p. 728-729)

Cultural reproduction as conceptualized by Bourdieu (1985; 1986; 1991) is the cyclical perpetuation of inequity and power differentials in institutional settings. Capital as a commodity (in its varied forms) is a primary component of cultural reproduction. Capital can be economic, cultural, social, or symbolic. Agents in the social world wield a power in proportion to their symbolic capital (i.e. the distinction and recognition the agents receive from a group). Those who are dominated within the social space are similarly dominated in symbolic cultural reproduction.

Cultural reproduction is characterized by habitus, a term used to characterize the hidden values, norms, and behaviors known, coveted, and prioritized by the dominant culture (Bourdieu, 1985; Bourdieu, 1989; Bourdieu, 1991; English & Bolton, 2015; Sullivan, 2002). In essence, privilege in this framework is bequeathed from generation to generation in the form of cultural

knowledge. Habitus is analogous to the modern sports concept of “the feel for the game,” inherent or subconsciously reflexive knowledge of how to act in a given situation to engineer a successful end result (Bourdieu, 1991). The adoption and adherence to habitus within the dominant culture provides an immeasurable advantage in educational settings over those lacking memberships in the dominant culture (English & Bolton, 2015; Sullivan, 2002). Access to opportunity is eased, systems are more effectively navigated, and advocacy from others within the dominant culture (especially parents) is practically a given, all of which can contribute to higher quantifiable achievement.

In a study of equity as manifested in systemic school routines and practices such as assigning students to teachers—a process that can have positive or negative long-lasting effects on students—Bourdieu’s Theory of Cultural Reproduction was determined to be an appropriate theoretical lens through which to analyze equity and access to excellence. Bourdieu’s framework effectively allowed for a critical review of the historic motivations of the leaders and agents of educational systems as well as of the “tricks of the trade” used by successful navigators of those systems from the dominant culture.

Definitions of Key Terms/Concepts

What follows is a list (albeit, a non-exhaustive one) of key terms and concepts pivotal to this research study.

1. Cultural Capital: Cultural capital is a type of unwritten social rule—intangible and hard to quantify, yet powerfully pervasive in institutional settings that are controlled by the dominant social class (class is a distinct variable in cultural capital). Cultural capital consists of intimacy and familiarity with the knowledge base which founds and promotes the dominant social order. It is hereditary and heavily camouflaged or even invisible to the eye (Bourdieu, 1986). Cultural capital may be “institutionalized in the form of

educational qualifications” (Bourdieu, 1986, p. 242). The knowledge conveyed through cultural capital provides the ability to effectively and linguistically behave as would the educated members of that social order.

2. Cultural Reproduction: Cultural reproduction as conceptualized by Pierre Bourdieu (1985; 1986; 1991) is the cyclical perpetuation of inequity and power differentials in institutional settings.

[R]eproduction of the structure of the distribution of cultural capital is achieved in the relation between familial strategies and the specific logic of the school institution (Bourdieu, 1991, p. 643)

In systems and structures that are rife with inequalities among and between social groups, the dominant or more privileged group will assume a survivalist mindset and, using a level of cultural capital superior to that possessed by underprivileged groups, will seek to perpetuate their privilege (Macris, 2011).

3. Equity: Scott (2001) defined systemic equity as “the transformed ways in which systems and individuals habitually operate to ensure that every learner—in whatever learning environment that learner is found—has the greatest opportunity to learn enhanced by the resources and supports necessary to achieve competence, excellence, independence, responsibility, and self-sufficiency for school and for life” (p. 1). Considering specific research-based predictors of quality, equity that was conceptually most germane to the research study is achieved when each student in a particular school enrolling in a particular course is assigned to the highest quality teacher on-staff that is qualified to teach the course. Approaching equity from another angle, it is more readily achieved when the school’s principal intentionally assigns the highest quality, most effective teachers to students that lack the privilege and the cultural and social capital enjoyed more abundantly by students of the dominant culture.

4. **Equity Audit:** An equity audit is a tool that can be used by school leaders as a guide for “working toward equity and excellence” in schools (Brown, 2010, p. 5). An equity audit is a systematic method for school leaders to assess the levels of equity or inequity observable or evidenced in key areas of education: programs, teacher quality, and achievement (Skrla, McKenzie, & Scheurich, 2009). Equity audits use school and district data to locate and address patterns of inequality embedded within school systems and processes (Brown, 2010).
5. **Education Value-Added Assessment System (EVAAS):** EVAAS is a data set used by NCDPI that provides statistical growth and achievement data (such as is based on state standardized test scores) and can be disaggregated specifically by student, teacher, school, district, or demographic subgroup (such as race or low socioeconomic status). It quantifies the predicted value added by the teacher to student achievement (NCDPI).
6. **Habitus:** Habitus is a set of prevailing perceptions, attitudes, behaviors, and values transmitted within one’s home or between one’s intimate relations (Bourdieu, 1989) and is generally established in a person without conscious recognition, as more of a tacit adoption (English & Bolton, 2015). The dominant habitus is a set of attitudes and values maintained by the dominant class, a major component of which is a positive attitude towards education (Sullivan, 2002). Habitus nurtures “a sense of one’s place” as much as it nurtures “a sense of the place of others” (Bourdieu, 1989, p. 19).
7. **Institutionalized Racism:** Racism becomes institutionalized in public education when the attitudes or values of the majority culture are incorporated into institutional policies and practices in such a way that works to the disadvantage of people from minority cultures (Singleton & Linton, 2006). Blair (2008) purported that the power of institutionalized racism is its ability to refocus problems experienced by black students in school onto the

black community itself. As with other forms of racism, institutionalized racism can be viewed as “unintentional, colorblind, or disguised in history or ideology” (Williams, 2012, p. 42). Examples of institutionalized racism include inequitable allocation of resources, “tracking” practices that assign students of color to less experienced teachers and burden those students with lower expectations for performance—a trajectory from which they usually don’t escape (Singleton & Linton, 2006).

8. **Master Schedule:** A master schedule is simply a compilation of all the individual student schedules for a given school. The construction of a master schedule is the formal process during which teachers are assigned to courses and ostensibly assigned to students. In its physical form, the master schedule is a structural template on which classes are generally organized by semester, department, subject, course name/number, period, teacher name, and/or room number. Data pertaining to each class such as demographic numbers for students enrolled in the class (grade levels, sex, races, etc.) might also be included on the master schedule. The National Association of Secondary School Principals (2011) likened a school’s master schedule to the grading practices of an individual teacher in that the master schedule exemplifies the values, beliefs, and priorities of the school.
9. **National Board Certification:** National Board Certification is a rigorous, voluntary, peer-reviewed process through which teachers are certified by the National Board of Professional Teaching Standards (NBPTS) against set standards for professional competency related to content knowledge, commitment to students, participation in learning communities, reflection, and the management and monitoring of student learning (NBPTS, 2016).
10. **Novice Teacher:** For purposes of this study, a novice teacher is a teacher who had not yet completed his or her first year of teaching.

11. Social Capital: Bourdieu (1986) defined social capital as a confluence of resources that result from institutionalized relationships or memberships in groups. Members of the groups have credentials by virtue of group membership and an ability to play on credit within the group. Social capital is manifested in educational domains when stakeholders such as parents or teachers wield their influence as accepted members of the given social network to assist students in gaining an instructional edge. This can be seen for example in a brokered accessibility to certain resources for a student that advantages him over his peers (Rew, 2009).
12. Symbolic Capital: Symbolic capital as defined by Bourdieu (1985) is a form of social distinction or recognition which equates to symbolic power that is bequeathed from agents within the social world to one another. Agents enjoying the most symbolic capital are those best equipped to equalize the social paradigm yet least inclined to do so. Capital takes time to accumulate and “contains a tendency to persist in its being” (Bourdieu, 1986, p. 241).
13. Teacher Assignment: Teacher assignment is quite simply the matching of teachers to students or student groups by school leaders during the scheduling process and the construction of the master schedule. At the high school level, teachers are assigned to teach specific courses which by default concurrently assigns them to teach the students who enroll in those courses.
14. Teacher Quality: For purposes of this study and as supported by ample research (Adamson & Darling-Hammond, 2012; Berliner, 2001; Boyd, Lankford, Loeb, Rockoff, & Wyckoff, 2008; Chingos & Peterson, 2011; Clotfelter et al., 2006; Cohen-Vogel, Feng, & Osborne-Lampkin, 2013; Darling-Hammond, Berry, & Thoreson, 2001; Feng, 2010; Kalogrides & Loeb, 2013; Knoepfel & Rinehart, 2008; Neild & Farley-Ripple, 2008;

Rivkin, Hanushek, & Kain, 2005; Wayne & Youngs, 2003), teacher quality is defined and delineated as matters of:

- Years of experience
- Full licensure/certification in subjects to which teachers are assigned to teach
- Level of education as signified by the completion of master's or doctorate degrees
- National Board Certification
- Teacher certification exam scores
- Data from value added measurements.

15. Value-Added: Value-added refers to a teacher's impact on students' achievement gains, usually based on several years of student test data (NCEE, 2014). Value-added data are often referenced in research and used to inform school leaders and individual teachers themselves regarding the effectiveness of a given teacher's instruction as well as the growth of individual students.

Assumptions and Limitations

For the purposes of research, assumptions are certain, inherent considerations related to the research topic that should be considered true or at least plausible. The researcher directly acknowledged and articulated these assumptions prior to the conduction of the research study.

This study included a few inherent assumptions:

- At high schools each spring and summer, it is standard practice for either the principal and/or a cadre of building leaders facilitated by the principal (including assistant principals, counselors and department chairpersons) to create the master schedule to be used the following year. Such school personnel may outright build the schedule or may simply influence its revision.

- School-specific equity audits of master schedules and fixed data sets (including but not limited to demographic enrollment data for individual course sections and human resources data regarding professional teaching credentials) will yield information necessary for proving or disproving that students who are racially and/or socioeconomically disadvantaged lack equitable access to preferable teacher assignments.
- Participants in interviews are knowledgeable about the process of constructing master schedules for their schools and related considerations.
- Participants in interviews have knowledge and opinions about the factors that influence teacher assignments and have no reason not to be truthful when responding to questions.
- Teachers completing the online survey regarding their own credentials are certain of their own credentials and have no reason not to be truthful when responding to survey questions.

Similar to assumptions, limitations exist with any scholarly research study and must be acknowledged and articulated for the subsequent research to be legitimated. Limitations are considerations (or in some cases, actual *weaknesses*) related to the research study which are mostly out of the researcher's control. For example, a researcher can follow all proper channels to secure access to school records or protected data and still ultimately be denied access. The researcher can follow all proven protocols and practices for structuring a safe, confidential, comfortable focus group and ultimately still not be guaranteed candor and honesty from participants. Potential limitations inherent for this research study included:

- Neither sufficient access *to* esoteric school data by the researcher nor the accuracy *of* the data (including but not limited to demographic course enrollment data and personnel data regarding teacher credentials) was guaranteed.
- Sufficient access at individual high schools to potential interview participants by the researcher (including but not limited to school administrators, counselors, and department chairpersons) was not guaranteed.
- The accuracy of data collected via the online survey germane to teacher credentials was dependent upon the honesty and accuracy of the teacher completing the survey.
- The accuracy of qualitative data collected through interviews at participant schools was dependent upon the candor, transparency and personal perceptions of research subjects.
- The parameters of the study of teacher assignment and scheduling practices were limited to only high schools and only high schools in one relatively small district in North Carolina. The results of such a study cannot be guaranteed to be generalizable as an accurate indicator throughout the United States or of assignment and scheduling practices at the elementary and middle grades.
- The parameters of the study of the assignments of teachers possessing various indicators of quality were intentionally limited to include only four tangible, specific quality indicators—years of experience, licensure, and possession of advanced degrees and National Board Certification—despite the acknowledgement of the existence of many other factors that affect teacher quality including but not limited to more subjective, intangible factors.

- The parameters of this study of teacher assignment and scheduling practices includes an emphasis on the influence of parent capital yet does not attempt to quantify that influence. An intentional choice was made by the researcher to research the influence of parent capital only through qualitative means.
- The focus of this study is limited to only one aspect of student equity—teacher assignment—and only offers cursory or tangential mention to other potential influences on equity including but not limited to: AVID, ESL, and EC programming.

Conclusion

In this introduction to his study of the high school teacher assignment via scheduling protocols, the researcher has stated the research problem to be the persistence of the racial achievement gap in general and of inequities suffered by students of color with regard to teacher assignment more specifically. One intended purpose of the study was the opportunity to contribute substantive findings on an aspect of student equity and the achievement gap that had been more overlooked in research existing at that point than most other aspects. A research question and a set of substantive, supportive sub-questions were posited that were germane to teacher assignment as well as to the potential considerations that influence the scheduling process. Data sources were identified for the study. The significance of research findings as a means to inform educational leadership practice was suggested.

With its emphasis on cultural habitus and its identification of cultural capital as a tool for systemically perpetuating inequity, Pierre Bourdieu's theory of cultural reproduction was identified as the most appropriate theoretical framework through which to conduct a study of high school teacher assignment and student scheduling. Key terms and concepts related to Bourdieu's framework, teacher assignment and the scheduling process were defined and

clarified. Finally, researcher assumptions toward the study were affirmed and potential limitations of the study were acknowledged. It is the researcher's fervent hope that the completion and outcomes of the study will lead to more equitable access to pedagogical excellence for students of color as the result of more intentional, student-focused scheduling by school leaders.

CHAPTER II: LITERATURE REVIEW

Introduction

“When educators fail to provide an effective, in-school learning environment for students, the uncontrollable, external mitigating factors have a more devastating impact on their achievement (Singleton & Linton, 2006, p. 212).” Even the most passionate social justice champions and advocates in our schoolhouses cannot control the personal challenges faced by students of color and/or low socioeconomic standing such as poverty, fractured family dynamics, or lived racism. What should and must be within our control is the quality of instruction, guidance, and investment experienced by such students while at school. As such, the focus of Chapter 2 of this research study was the identification of the characteristics of high quality teachers. Also germane to the focus of this chapter were studies of the access of disadvantaged student groups to teachers with specific professional characteristics that portend excellence or quality—specifically career experience, teaching licensure/certification, advanced degrees, National Board Certification, teacher test scores, and value-added measures—and the student achievement effects that result from such access. Research detailing the key tenets of Pierre Bourdieu’s theory of cultural reproduction and supporting its use as the theoretical framework for this study are also reviewed in Chapter 2.

It is acknowledged formally as a limitation of this research study that the study’s scope encompasses only one aspect of high school student equity—teacher assignment—while relegating other key equity factors (including but not limited to: the influences of AVID, ESL, and EC programs or the racial disparity with enrollment in Honors and AP classes) to mere

tangential reference and even ignoring others (including but not limited to: the influence of dual language programs, access to instructional technology, and college enrollment percentages). The following sections are contained in Chapter 2 of this research study:

1. Teacher quality characteristics as predictors of quality
2. Access and equity considerations for teacher assignment
3. Bourdieu and the influence of teacher assignment in cultural reproduction
4. Conclusion

Teacher Quality Characteristics Considered in Equitable Teacher Assignment

It is the ethical and moral obligation of school leaders to ensure that every student at risk of falling through the proverbial cracks has access to teachers of the highest possible quality. In Berliner's (2001) effort to define "high quality teaching," he distinguished the difference between a *good* teacher and an *effective* teacher:

Good is normative. It is what is expected of competent people in a field. In education, good practice might require that: homework will be graded in a reasonable amount of time; feedback will be given for assignments and soon after tests; polite and private reminders about student conduct are provided before public statements are made; fairness in grading and in classroom experiences are perceived by the students; parents are kept informed of their children's progress; and so forth. As distinguished from good teaching, effective teaching is about reaching achievement goals. It is about students learning what they are supposed to in a particular class, grade or subject. A teacher of high quality shows evidence of both good and effective teaching. (p. 6)

The value of being assigned a high-quality teacher is definitely quantifiable. Rockoff (2004) found that a one-standard-deviation increase in teacher quality resulted in an increase of approximately 0.1 standard deviations on reading and math test scores for students. This begs the question: What indicators of "a teacher of high quality" exist and which are the most relevant to student success and—most specifically—to narrowing the racial achievement gap?

Research proves that students achieve at a higher level when assigned to teachers with certain characteristics (Boyd et al., 2008; Chingos & Peterson, 2011; Clotfelter et al., 2006; Ehrenberg & Brewer, 1994; Wayne & Youngs, 2003) but the *degree* to which student achievement is affected by teacher characteristics is somewhat inconclusive. Wayne and Youngs (2003) synthesized the results of 21 studies of the relationship between student achievement and teacher characteristics and were unable to find consistent links between some teacher characteristics and student achievement. However, their review and synthesis of study data did consistently indicate positive relationships between student achievement and assignment to teachers who graduated from more highly rated undergraduate institutions (as ranked by the Princeton Review's Gourman Report) and/or assignment to teachers who scored more highly on teacher licensure tests. Their findings also revealed that high school students consistently learn more when assigned to math teachers who hold certification and/or an undergraduate degree in math (Wayne & Youngs, 2003).

In their study of assessment-based accountability policies affecting New York City public schools, Boyd et al. (2008) looked at student achievement effects based on students being assigned to teachers with varying degrees of several quality indicators including experience and certification (referred to as the most studied indicators in recent research) as well as competitiveness/quality of teachers' undergraduate institutions and scores on college entrance and certification exams. As detailed below, the authors found substantially different achievement outcomes between teachers based solely on these quality indicators.

In a study of North Carolina fifth grade teacher-student assignments, Clotfelter et al. (2006) found that the primary teacher characteristics that positively influence student achievement are experience and scores on licensure tests. Findings of their study also indicate that teachers with more experience, degrees from more competitive colleges, and/or advanced

degrees taught at schools serving higher percentages of white, affluent, or higher achieving students and that within schools, more advantaged students were assigned to more highly credentialed teachers (Clotfelter et al., 2006).

This section will focus on professional characteristics of teachers identified by the literature as relevant to student equity and achievement: experience, licensure/certification status, advanced degrees, National Board Certification, college admissions and/or licensure test scores, and value-added measures of quality and effectiveness. Other indicators that have been studied but that are not as conclusive in terms of their roles in identifying teacher quality will also be discussed such as the competitiveness of undergraduate institutions from which teachers graduate and the outcomes of teacher observations/evaluations. See Table 2.1 for a list of teacher characteristics, reasons for or against their use as indicators of teacher quality, and a sampling of research citations that supported or disavowed their use as quality indicators in this study.

Teacher Experience

There is perhaps no teacher quality indicator more widely studied or mentioned in scholarly education research than teacher experience. There is not significant disagreement about two key factors related to teacher experience: that the majority of students taught by inexperienced or novice teachers are from historically marginalized backgrounds and that experience correlates positively with achievement. There are however some mixed results regarding *how* significant of a role experience plays in teacher quality as detailed below.

Studies attributed that a propensity of minority or low-income students are assigned to inexperienced or novice teachers—a phenomenon that perpetuates the racial achievement gap (Boyd et al., 2008; Cohen-Vogel et al., 2013; Clotfelter et al., 2006; Feng, 2010; NBER, 2006).

For example, a seven-year study of teacher assignments in the Miami-Dade County Public School district (the fourth largest district in the United States) found that less experienced

teachers are assigned black, Hispanic, and/or low-income students more often than experienced teachers, yet are consistently less effective at raising student achievement than experienced teachers (Kalogrides et al., 2012), a finding supported by Boyd et al.'s (2008) study of New York City students. Hanushek and Rivkin presented findings that the majority of the expansion of the racial achievement gap between kindergarten and 8th grade occurs between schools rather than within them, with teacher experience playing a key role in the widening gap (NBER, 2006). Similarly, Cohen-Vogel et al. (2013) in their study of the distribution of teacher quality in Florida school districts found that the percentage of Hispanic students in a school district is significantly and negatively related to the lower-than-average percentage of teachers with three or more years of experience in the same district. Interestingly and perhaps contradictory, the same study found that districts with larger shares of students eligible for free or reduced-price lunch (an indicator of student poverty) appear to average larger percentages of experienced and nationally board certified teachers.

Table 2.1 Most Commonly Used Indicators of Teacher Quality

<i>Descriptions of most often researched/cited indicators of teacher quality</i>	<i>Reasons for/against (+/-) use as indicator of teacher quality</i>	<i>Sample of citations for/against (+/-) use as indicator of teacher quality</i>
<u>Years of Experience:</u> Teachers who have at least a modicum of experience	+experience is measurable, unbiased +strong findings in recent research -experience only makes the biggest measurable difference in student achievement within the first few years and may even be considered a negative indicator in later years	+Clotfelter et al., 2006 +Cohen-Vogel et al., 2013 +Jackson, 2009 +Kalogridis & Loeb, 2013 +Kalogridis et al., 2012 +NBER, 2007 +Rockoff, 2004 -Boyd et al., 2008 -Chingos & Peterson, 2011 -Hanushek & Rivkin, 2004 -Rivkin et al., 2005
<u>Licensure/Certification:</u> Teachers who are fully licensed to teach course to which they're assigned	+supported consistently as a quality indicator in most previous research +an achievable and unbiased indicator	+Adamson & Darling-Hammond, 2012 +Boyd et al., 2008 +Cohen-Vogel et al., 2013 +Goldhaber & Brewer, 2000 +NBER, 2007
<u>Advanced Degree:</u> Teachers who have an advanced degree (master's or higher) in their content area	+evidence of validity for certain grades/courses +an achievable and unbiased indicator -research is mixed on its usefulness as a teacher quality indicator	+Adamson & Darling-Hammond, 2012 +Dewey et al., 2000 +Ehrenberg & Brewer, 1994 +Ferguson & Ladd, 1996 +Goldhaber & Brewer, 2000 +Greenwald, Hedges, & Laine, 1996 +Knoeppel & Rinehart, 2008 -Chingos & Peterson, 2011 -Clotfelter et al., 2006 -Clotfelter, 2007 -Hanushek, 1986 -Hanushek & Rivkin, 2004 -Rivkin et al., 2005
<u>National Board Certification:</u> Teachers who have earned National Board Certification via a lengthy, challenging assessment process including the completion of a portfolio and tasks designed to test applicants' knowledge of their field and general pedagogy	+strong, consistent support for indicator in research +an achievable and unbiased indicator	+Berliner, 2001 +Chingos & Peterson, 2011 +Clotfelter et al., 2006 +Cohen-Vogel et al., 2013 +Goldhaber & Anthony, 2007 +NBER, 2007

<u>Teachers' Scores on Tests:</u> Teachers who scored more highly on college entrance exams and/or on certification exams	+research consistently correlates higher teacher test scores with higher student achievement and lower scores with lower student achievement +research consistently shows teachers with lower scores are assigned to at-risk students -scores may be inaccessible due to confidentiality with personnel records -SAT/ACT scores may not be universally accessible due to age of scores or teachers	+Boyd et al., 2008 +Chingos & Peterson, 2011 +Clotfelter et al., 2006 +Cohen-Vogel et al., 2013 +Jackson, 2009 +NBER, 2007
<u>EVAAS/Value-Added:</u> Student-specific, quantifiable data for the value added by the teacher based on growth from the previous year	+emphasis on teacher's ability to influence student growth vs. student proficiency +quantifiable indicator -teacher/student matching can skew results -validity/reliability concerns	+Boyd et al., 2008 +DOE, 2013 +NCEE, 2014 +NCDPI, 2016 -Kupermintz, 2003 -Lockwood, McCaffrey, Hamilton, Stecher, Le, and Martinez, 2007 -Loeb, Soland, & Fox, 2014 -Ravitch, 2010
<u>Teacher Evaluations:</u> Teachers who perform well as evidenced by supervisory classroom observations and supervisory evaluations	+used by the state of North Carolina in its evaluation process +may reflect relevant (albeit more qualitative) aspects of teacher quality not captured by student test scores -lack of reliable measurability and correspondence with other indicators -potentially influenced by subjectivity and/or bias -dearth of recent/current substantive scholarly research	+Jacob & Lefgren, 2008 +Rockoff & Speroni, 2010 -Milanowski, 2004
<u>Undergraduate Institution:</u> Teachers who attended more selective/competitive/highly rated colleges or universities	-recent research shows only a weak relationship with student achievement if it exists at all	+NBER, 2007 -Boyd et al., 2008 -Chingos & Peterson, 2011 -Clotfelter et al., 2006

Rockoff (2004) used data on student test scores and teacher assignment to study the impact of teachers on student achievement and found that teacher experience is positively linked to reading test scores. Ten years of teaching experience can be predicted to raise vocabulary and comprehension test scores by 0.15 and 0.18 standard deviations respectively (Rockoff, 2004). He also found that two years of teaching experience appear to raise scores significantly for math computation—by approximately 0.1 standard deviations (Rockoff, 2004).

In their study of teacher-student matching with North Carolina fifth graders, Clotfelter et al. (2006) found that novice teachers are associated with the lowest student test scores. Students being assigned to highly experienced teachers resulted in math test scores approximately one-tenth of a standard deviation higher and reading scores slightly less than one-tenth of a standard deviation higher (Clotfelter et al., 2006).

The costs of being assigned an elementary school teacher with little to no experience are substantially higher for black students than for their white peers. The coefficients indicate that being assigned a novice teacher reduces achievement by -0.15 standard deviations for black students and by -0.08 standard deviations for white students from what it would be with a teacher with at least two years of prior experience (NBER, 2006). In another study of the effect of teacher credentials on student achievement in North Carolina completed by the same authors, Clotfelter, Ladd, and Vigdor (NBER, 2007) posed a question about whether positive student outcomes attributed to experienced teachers are actually reflective of improvement via experience or of an attrition of less effective teachers from the ranks of educators but their findings showed that almost half of the positive achievement returns to experience occur during the first few years of teaching (even though returns still do rise modestly across most of the range of experience).

Research (Clotfelter et al., 2003; Feng, 2010; Jackson, 2009; Kalogrides & Loeb, 2013) shows that the scheduling of minority and/or disadvantaged students to novice teachers occurs in every conceivable assignment dynamic: across districts, within schools, and within levels of courses within schools. Pulling data from “two complementary and... widely used national data sets,” Feng (2010) found that novice teachers generally “taught in schools with low-performing, minority, or ELL students from economically disadvantaged backgrounds” (p. 312). Within schools, novice teachers were more likely to teach larger shares of “low-performing, unruly students and students from disadvantaged backgrounds” (Feng, 2010, p. 312) than more experienced colleagues. Utilizing empirical data from the North Carolina Department of Public Instruction through the North Carolina Education Research Data Center at Duke University, Clotfelter et al. (2003) found that black 7th grade students in North Carolina were 54% more likely to be assigned a novice math teacher than white 7th grade students and 38% more likely to be assigned a novice English teacher. This corresponds with the trend of distribution of students by levels of courses. In the state’s two largest districts—Wake and Mecklenburg—regardless of course level (remedial or standard), 7th grade black students were far more likely to be assigned a novice English or math teacher than white students (Clotfelter et al., 2003). Clotfelter et al.’s study (2003) is supported by Jackson (2009) who, in a study of the correlation of teacher quality and the end of student busing in Charlotte (the largest city in the state), found that schools which experienced an increased enrollment of black students concurrently suffered a decrease in the proportion of experienced teachers.

Kalogrides and Loeb (2013), using administrative data from over 900 schools in three urban school districts, find that the sorting of students by race, ethnicity, socioeconomic status, and achievement occurs at every level but is more prevalent at middle and high schools than at elementary schools. Their study reveals that, during the student sorting, students from

historically marginalized backgrounds are assigned more often to novice teachers and that they share classes with lower achieving and similarly less privileged peers than white and/or non-poor students in the same grade within the same school (Kalogrides & Loeb, 2013).

Research (Boyd et al., 2008; Chingos & Peterson, 2011; Hanushek & Rivkin, 2004; Rivkin et al., 2005) has found that while teacher experience does correlate positively with student achievement, there is a ceiling in terms of its positive impact on student outcomes. In their study which drew connections between education policy initiatives and various bodies of research on teacher characteristics and student outcomes, Hanushek and Rivkin (2004) found very little measurable achievement gains following the first few years of teaching—a finding that was supported by Rivkin et al. (2005) in their study of the impact of teacher quality on student outcomes in Texas. Boyd et al. (2008) studied the effects of differing amounts of teacher experience—as well as other quality indicators—on student achievement in New York City schools and found that teachers transitioning from complete inexperience to having just one year of teaching experience accounted for the largest experience-related gain in achievement—about 0.06 standard deviations (Boyd et al., 2008). Studying value-added reading and math test data of students in Florida (grades 4-8) for eight school years, Chingos and Peterson (2011) found an initial bump in teacher effectiveness after the first couple of years of on-the-job training but the results were modest—and even *negative* (declines after a few years in elementary math, after about 15 years in elementary reading, and steady declines in middle grades reading and math)—after that.

Boyd et al. (2008) found that experience was not the only critical indicator of teacher quality. In analyzing a substantive reduction of the racial achievement gap in New York City schools between 2000 and 2005, the authors found that about 80% of the reduction of the achievement gap between students of historically privileged backgrounds and students from

historically marginalized backgrounds was attributable to characteristics *other* than experience. Among 4th and 5th grade math teachers in high poverty schools, there was a difference in effect size (value added) of 0.11 between teachers of the top and bottom quintiles based on indicators excluding experience. Omitting experience as a factor in predicting achievement, the authors found that there was still an 11% difference of a standard deviation in achievement gains between the top and bottom quintiles of teachers—approximately twice the gains attributable to achievement gains associated with completion of the first year of experience (Boyd et al., 2008). The effects of other teacher quality indicators popular in scholarly research are detailed below.

Licensure/Certification

The intent of teacher licensure or certification is to guarantee a basic level of competency, quality, or skill of school teachers (National Commission on Teaching and America's Future [NCTAF], 1996). To demonstrate the relevance of teacher certification to student outcomes, Goldhaber and Brewer (2000) studied standardized math assessment results of 12th grade high school students whose assigned teachers either lacked certification or held probationary, emergency, or private school certification as compared with the results of students assigned to teachers holding standard certification in their subject area. Assignment of students to teachers who held a standard math certification resulted in at least a 1.3-point increase (equivalent to about 10% of the standard deviation) on the math assessment. Clotfelter, Ladd and Vigdor (NBER, 2007) analyzed data on students and teachers in North Carolina over a ten-year span and found negative effects on student achievement for students assigned to teachers with provisional or emergency licenses (licenses other than the regular or traditional sort). The authors reported statistically negative effects for math (a range of -0.033 to -0.059 standard deviations) as well as for reading (a range of -0.017 to -0.024 standard deviations) (NBER, 2007). Boyd et al. (2008) found that teachers who lack subject-specific certification in the course to which they

were assigned to teach accounted for a reduction of 0.042 standard deviations. In a study of how funding disparities result in inequitable distribution of teacher quality in California and New York, Adamson and Darling-Hammond (2012) found that the percentage of teachers lacking full certification is significantly correlated to the percentage of students failing state English and math tests in New York and poorer state test performance in California.

In state after state, students from historically marginalized backgrounds are three to ten times more likely to be taught by teachers who are uncertified or teaching outside of their field of preparation than students of privilege (Darling-Hammond, 2010). Regarding the assignment of disadvantaged students specifically to teachers holding certification in their assigned subjects, Lankford et al. (2002) reported that 17% of non-white students in New York State were taught by teachers who lack certification in the subjects they were assigned to teach compared with 4% of white students. Similarly, Cohen-Vogel et al. (2013) in their study of collective bargaining agreements between teacher unions and school districts in Florida found that teachers in districts with high percentages of black and/or Hispanic students are less likely to be fully certified.

Is the mere obtainment of a bachelor's degree sufficient enough to provide quality instruction?

The next section details research germane to the value of students being assigned to teachers who hold advanced degrees.

Advanced Degrees

When it comes to using the level of a teacher's education as a reliable indicator of teacher quality, the results were decidedly mixed but—similar to experience and licensure/certification—the merits of using the possession of an advanced degrees as a teacher quality indicator has been an oft-studied and discussed topic in scholarly research. Hanushek (1986) published a somewhat controversial study examining research on the economics of education—specifically the production and efficiency aspects of schools—and found that certain

quality indicators including graduate education of teachers and teacher experience had no correlation with student achievement. Similarly, in their study which connected education policy initiatives with various bodies of research on teacher characteristics and student outcomes, Hanushek and Rivkin (2004) found that “a master’s degree has no systematic relationship to teacher quality as measured by student outcomes” (p. 14). Surprisingly, Clotfelter et al. (2006) in their study of teacher-student matching with North Carolina fifth graders found a “consistently *negative* effect” on achievement for students assigned to a teacher with a master’s degree than for students whose teachers did not possess a master’s degree leading to the suggestion that “teachers with master’s degrees are less effective than those without” (p. 799). Studying value-added reading and math test data of students in Florida (grades 4-8) for 8 school years, Chingos and Peterson (2011) found that holding a master’s degree did not correlate positively with teacher effectiveness. In a study of the links between teacher credentials and student achievement, Clotfelter, Ladd and Vigdor (NBER, 2007) analyzed data on students and teachers in North Carolina over a ten-year span and similarly concluded that there was no statistically significant effect on student achievement as a result of teachers holding master’s degrees and in some cases, there was a statistically *negative* effect—a result mirrored by Rivkin et al. (2005) in their study of the impact of teacher quality on student achievement that utilized data from Texas students and teachers.

There is however a significant body of research that counters those detailed above and underscores the importance and value to students being assigned teachers with advanced degrees. Reviewing data from 60 research studies, Greenwald et al. (1996) utilized meta-analytic methods to assess the magnitude of various school inputs (such as teacher quality indicators) on student achievement. Forging an explicit contradiction of Hanushek (1986), the authors found that specific indicators such as advanced degrees and experience correlated very strongly with

student achievement. Using the U.S. Department of Education's High School & Beyond achievement data for over 30,000 high school sophomores, Ehrenberg and Brewer (1994) found a statistically significant correlation between scores on achievement tests for black students and assignment to a teacher possessing a master's degree—that when assigned to teachers with at least a master's degree, black students scored higher than black peers assigned to teachers without an advanced degree. Ferguson and Ladd (1996) in their study of education spending used the test data of Alabama fourth graders to find that—along with class size and teacher ACT scores—the attainment of an advanced degree did positively affect achievement for 3rd, 4th, 8th, and 9th grade students in math specifically (although it had no effect on reading achievement for students at any grade level). The authors found that a one-standard deviation increase in the fraction of teachers with a master's degree (0.33 points) increased student math test scores by 0.026 standard deviations—a small positive effect, but a positive effect just the same. Goldhaber and Brewer (2000) studied 3,786 12th grade students' math test scores and 2,524 12th grade science test scores and found that math students assigned to teachers with bachelor's and master's degrees in math outperformed those whose teachers had degrees from other subjects by an average of one point on standardized math tests, representing approximately 8% of the standard deviation for the test (there was however no impact on student achievement of teachers holding advanced science degrees). Dewey, Husted, and Kenny (2000) found that teachers holding advanced degrees have statistically significant positive effects on student SAT scores. Using multiple regression analysis to study data from 193 Kentucky high schools, Knoepfel and Rinehart (2008) concluded that the educational level of teachers (specifically those who hold master's degrees) was a “significant predictor of student achievement” (p. 37). In a study of how funding disparities result in inequitable distribution of teacher quality in California and New York, Adamson and Darling-Hammond (2012) found that, in both states, the proportion of

teachers with master's degrees is significantly and positively related to the proportion of student proficiency on state tests.

Despite the relative disagreement on the value of it as an indicator of teacher quality, the attainment of an advanced degree is an achievable, tangible accomplishment for teachers.

Another type of personal achievement for teachers—their scores on college admissions tests and licensure/certification exams—is detailed below.

Teacher Test Scores

Ferguson and Ladd (1996) in their study of education spending used the test data of Alabama fourth graders and found “consistently strong and positive effects on student learning” with teachers who had higher high school ACT scores. The authors found that the difference of one standard deviation in teachers’ ACT scores could account for an increase of 0.25 standard deviations in student reading and math test scores (Ferguson & Ladd, 1996). Similarly, in their study of teacher quality indicators associated with student achievement from 2000-2005 in New York City schools, Boyd et al. (2008) found a positive correlation between improving a teacher’s SAT score by one standard deviation and improving student achievement by 0.041 standard deviations. These studies are supported by Chingos and Peterson (2011) whose study of 8 years of value-added reading and math test data of students in Florida (grades 4-8) found “a fairly strong positive relationship between certification exam performance and classroom effectiveness” (p. 456).

Clotfelter, Ladd and Vigdor found that teachers in North Carolina who scored higher than average on licensure tests are positively associated with higher than average reading and math scores for students, with far larger effects for math over reading (NBER, 2007). The authors found that teachers who scored 2 or more standard deviations above the average on licensure tests are positively associated with student gains of 0.068 standard deviations over gains

attributable to teachers with average test scores. Conversely they found that teachers who scored 2 or more standard deviations below the average on licensure tests are responsible for *reducing* achievement by 0.062 standard deviations (NBER, 2007).

Research cited above clearly shows a distinct connection between teacher test scores and student achievement but to what student groups does the research find teachers with lower test scores being assigned? An average of 28% of teachers assigned to teach poor students had failed certification exams in New York State versus 20% of teachers of non-poor students (Lankford et al., 2002). Boyd et al. (2008) found that New York City teachers in the highest poverty schools failed state licensure tests at a rate of three times that of teachers in lower poverty schools and also had much lower SAT scores than did teachers in lower poverty schools. Similarly, Cohen-Vogel et al. (2013) in their study of collective bargaining agreements between teacher unions and school districts in Florida found that teachers in districts with high percentages of black students are more likely to have lower SAT scores. In a study of the end of student busing in Charlotte, NC and its effects on teacher quality, Jackson (2009) found that in schools whose enrollment of black students increased, its share of teachers who scored highly on licensure tests decreased. Clotfelter et al. (2006) found that teachers with the lowest licensure test scores tended to teach students with less average ability and are assigned classes with lower than average percentages of white students. The authors also found that higher licensure test scores are associated positively with modestly higher student test scores in math and reading. Specifically, a one-standard-deviation increase on a teacher's licensure test increased predicted student math achievement by 1-2 percent of a standard deviation with a somewhat smaller increase for reading (Clotfelter et al., 2006).

As clearly as with other teacher quality indicators, students from historically marginalized populations are assigned to lower achieving teachers based on teacher test

performance. National Board Certification is a distinction bestowed upon some teachers after surviving a rigorous challenge of a different sort. The next section describes the process of National Board Certification and its utility as an indicator of teacher quality.

National Board Certification

Originating in 1987, the National Board of Professional Teaching Standards (NBPTS) was created as the teaching profession's vehicle for "defining and recognizing accomplished teaching" (NBPTS, 2016). The NBPTS standards are created by and for teachers and used as criteria for National Board Certification—a voluntary process through which teachers are certified against the set standards for professional competency (NBPTS, 2016). The standards and the products submitted by teachers for certification are based on the following five core propositions:

1. Teachers are committed to students and their learning.
2. Teachers know the subjects they teach and how to teach those subjects to students.
3. Teachers are responsible for managing and monitoring student learning.
4. Teachers think systematically about their practice and learn from experience.
5. Teachers are members of learning communities (NBPTS, 2016).

North Carolina has had a rich, storied tradition with NBPTS and National Board Certification. North Carolina Governor James B. Hunt chaired the first Board of Directors for NBPTS and as of 2014, it far outpaced every other state in the nation with the largest number of National Board Certified Teachers (NBCTs) with 20,611. The next closest state, Florida, had 13,637 NBCTs in 2014 (NBPTS, 2016).

Berliner (2001) studied methods and models for assessing teacher expertise. He analyzed the performance of 65 similarly qualified and experienced teachers, approximately half of which

had earned National Board Certification and half of which who had gone through the process but had failed to earn NBCT status. He hypothesized 13 prototypical features of teacher expertise for measurement, several of which could be reasonably expected to impact student equity including:

- better adaptation and modification of goals for diverse learners, better skills for improvisation,
- better classroom climate,
- better perception of classroom events, better ability to read the cues from students,
- greater sensitivity to context,
- greater respect for students.

There were other features of expert teachers he measured that were less germane to equity and racial and ethnic diversity specifically but still relevant to the quality of instruction such as:

- better monitoring of learning and providing feedback to students,
- more challenging objectives,
- extensive pedagogical content knowledge, including deep representations of subject matter knowledge (Berliner, 2001).

Considering such characteristics, he found that when compared to teachers who had not earned National Board Certification, NBCTs excelled in each area of analysis with a statistically significant difference in 11 of the 13 areas analyzed. Empirically speaking, the differences between the two otherwise highly experienced, similarly qualified teachers was anywhere from one-quarter of a standard deviation to 1.13 standard deviations in favor of the NBCTs (Berliner, 2001).

In their research on the correlations between teacher credentials and student achievement in North Carolina, Clotfelter, Ladd, and Vigdor found a positive link between student

achievement and being assigned to a NBCT (NBER, 2007). Students assigned an NBCT in North Carolina scored from 0.024 to 0.055 standard deviations higher on state math tests and 0.026 to 0.038 standard deviations higher on state reading tests (NBER, 2007). Similarly, Chingos and Peterson (2011) found a positive correlation between the NBCT credential and student achievement in math and reading in both elementary and middle grades. The average differences in effectiveness of teachers with and without this credential ranged from 0.02 and 0.03 standard deviations (Chingos & Peterson, 2011).

In their study that Goldhaber and Anthony (2007) dubbed “the first large-scale study of [the NBCT program] and its relationship to student achievement” (p. 135), the authors found that while the NBCT process does not in and of itself make teachers more effective, the process is in fact adept at *identifying* effective teachers. Teachers who pass the NBCT process are quantifiably more effective than NBCT applicants who fail. Findings suggested that students who are taught by NBCTs would be expected to achieve growth by approximately 5% of a standard deviation in reading and approximately 9% of a standard deviation in math over students taught by unsuccessful NBCT applicants (Goldhaber & Anthony, 2007). The authors found significant and positive correlations between NBCTs and achievement for all students but in terms of subgroups, they found that the magnitude of the effect of having an NBCT is significantly larger in reading and in math for students who receive free or reduced price lunch than for students who are not receiving free/reduced price lunch as well as for elementary students more than upper grades (Goldhaber & Anthony, 2007).

In terms of equity and access to NBCTs by student groups, Clotfelter et al. (2006) in their study of the teaching assignment of highly qualified teachers with fifth graders in North Carolina—the state with the largest number of NBCTs in the nation at the time of the study—found that NBCTs were more often than not assigned to teach students who were more affluent

and had parents with college degrees. Students taught by NBCTs in this study scored an average of 0.030-0.045 standard deviations higher in reading (Clotfelter et al., 2006).

Experience, licensure, advanced college degrees, and National Board Certification are all research-proven indicators of teacher quality but how much value can teachers truly add to student achievement? The next section defines and details the concept of value-added measures of instruction.

Value-Added Measures

“Value-added” refers to a teacher’s contribution to students’ learning gains, usually based on several years of student test data. EVAAS is a value-added data set used by NCDPI that provides statistical growth and achievement data (such as is based on state standardized test scores) and can be disaggregated specifically by student, teacher, school, district, or demographic subgroup (such as race or low socioeconomic status). It quantifies the predicted value added by the teacher to student achievement (NCDPI, 2016). The NCDPI website (2016) provides this endorsement of its use of EVAAS as an accurate indicator of teacher and school effectiveness:

EVAAS provides North Carolina's educators with tools to improve student learning and to reflect and improve on their own effectiveness. EVAAS examines the impact of teachers, schools, and districts on the learning of their students in specific courses, grades, and subjects. Users can... produce customized reports that predict student success, show the effects of schooling at particular schools, or reveal patterns in subgroup performance. The North Carolina State Board of Education has selected EVAAS as the statewide model for measuring student growth when common assessments are administered (for example, the End of Course and End of Grade assessments). Beginning in 2011-12, EVAAS data became part of the North Carolina Educator Evaluation System for teachers and school administrators. Beginning with the 2012-13 school year, the State will report on EVAAS data in the school accountability model.

In their study of the achievement effects of New York City teacher quality indicators, Boyd et al. (2008) found that the improvement of teacher qualifications such as experience, full certification, and higher teacher test scores resulted in an average improvement of 0.03 standard

deviations for students from the poorest schools. The authors also found that teachers with the weakest value added tended to be those with the least experience, those who lack certification in the subject they were assigned to teach, those who failed their certification exam the first time they took the test, and those who had low SAT math scores (Boyd et al., 2008).

There is not however universal consensus that value-added measures (VAMs) are wholly flawless indicators of teacher quality. Analyzing longitudinal data from math scores of 8th grade students in a large school district, Lockwood et al. (2007) provided findings that necessitate prudence for those that would overemphasize value-added as a sign of effectiveness: "...there is the potential for teacher performance to depend on the skills that are measured by the achievement tests" (p. 56). The authors caution proponents of VAMs as "pure, stable" indicators of teacher effectiveness to accompany the use of VAMs with an examination of the test and its alignment with the curriculum and instructional methods. Loeb et al. (2014) researched the accuracy of using VAM in teacher evaluation specifically by studying same teacher effectiveness with different subgroups—specifically Limited English Proficiency (ELL) students compared to non-ELL students. The authors found that VAM may cause misclassification of teacher effectiveness in the evaluation process because approximately 40% of teachers rated highly on their work with one subgroup may not be as effective with another (Loeb et al., 2014). Ravitch (2010) criticized VAM as "a product of technology" that did not always accurately capture the "actual lived experiences" of students (p. 180), making curriculum and instruction subservient to data.

Regardless of consensus, much like most other indicators of teacher quality, access to teachers with strong value-added data is more limited to students from historically privileged backgrounds. Jackson (2009) studied the correlation of teacher quality and the end of student busing in Charlotte—North Carolina's largest city—and found that highest-value-added teachers

and those with the highest test scores and most experience were more likely to leave schools that experienced increases of black students. The National Center for Education Evaluation and Regional Assistance (NCEE, 2014) released a brief synthesizing the findings of three studies on the access to effective teaching for students from historically marginalized backgrounds that spanned 17 states. The three studies define teacher effectiveness based on VAM. The NCEE studies indicated that more advantaged, low-poverty elementary and middle school students were approximately 2.5 times as likely to have access to more effective teachers than peers in high-poverty elementary and middle schools (NCEE, 2014). One of the three studies included in the NCEE brief focused on access to effective teaching for students in grades 4-8 in 29 diverse school districts over a three-year span. On average, disadvantaged students did not have equal access to effective teaching. In a given year, the differences in effective teaching for poor and non-poor students equated to a shift of two percentile points in the achievement gap. Teachers of advantaged students “had higher value added than teachers of [disadvantaged] students on average, with statistically significant differences of 0.034 standard deviations of student test scores in ELA and 0.024 standard deviations in math” (DOE, 2013, p. 1). Based on the study data, researchers predict that balancing access to effective teaching for disadvantaged and advantaged students would reduce the achievement gap from 28 to 26 percentile points on average per district in ELA and from 26 to 24 percentile points on average per district in math (DOE, 2013).

In June 2015, in an effort to identify and address the causes of inequity in teacher assignment for poor and minority students (specifically the reasons why inexperienced teachers are most frequently assigned to such student populations), the United States Department of Education required each state to submit an “educator equity plan,” many of which focused on reforms for teacher preparation programs as a key to improve teacher quality (Mader, 2015).

Does the quality of a teacher's undergraduate college or university ultimately influence the quality of the teacher? As detailed in the next section, the research on teacher college selectivity is more conclusive (although less supportive) than the comparatively balanced research supporting characteristics described above as quality indicators.

Undergraduate Institutions

As stated above, there is greater consensus among scholars for the devaluing of teachers' undergraduate institutions as an indicator of teacher quality. Boyd et al. (2008) found a positive correlation with student achievement between being taught by a teacher who attended a more competitive undergraduate institution versus a less competitive institution, although the effect was statistically small (-.014). Similarly, Clotfelter et al. (2006) in their study of teacher-student matching with North Carolina fifth graders found that the estimated impact of the quality of a teacher's university was meager and statistically insignificant. However, the same authors in a later, different study found contradictory results. In a study of the links between teacher credentials and student achievement, Clotfelter, Ladd, and Vigdor used a mix of specific teacher credentials which included the competitiveness of teachers' undergraduate institutions—as well as experience, licensure status, and other indicators—and found a statistically significant, negative correlation between achievement and a teacher with weak credentials (NBER, 2007). Specifically, a student assigned to a teacher with weak credentials including a less competitive undergraduate college scored between -0.150 and -0.206 standard deviations lower in math and between -0.081 and -0.120 standard deviations lower in reading than students assigned teachers with stronger credentials including a more competitive college or university (NBER, 2007).

Studying value-added reading and math test data of students in Florida (grades 4-8) for eight school years, Chingos and Peterson (2011) found that the correlation between the selectivity of a teacher's undergraduate institution and a student's average gains in reading and

math during the year the student was in the teacher's classroom was statistically insignificant. If anything, the authors saw a negative correlation in the case of elementary math scores in which students scored approximately 0.017 standard deviations *less* well when assigned to a teacher from a selective university (Chingos & Peterson, 2011).

There is a modicum of research defending the competitiveness of a teacher's college or university as an indicator of teacher quality. One of the studies cited in Wayne and Youngs' (2003) review was Ehrenberg and Brewer's (1994) study of student achievement and dropout potential as related to teacher characteristics. Using data from the U.S. Department of Education's High School and Beyond longitudinal survey, Ehrenberg and Brewer's (1994) study corroborates Wayne and Youngs' (2003) conclusion that student achievement is positively affected by being assigned to teachers who graduated from more highly rated undergraduate institutions. However, the majority of research reviewed for this study found that teacher college competitiveness was either positively *insignificant* when correlated with student achievement or in some cases even negatively correlated with student achievement. Another possible indicator of teacher quality with a dearth of support in the existing scholarly literature is subjective teacher evaluations as detailed in the next section.

Teacher Evaluations

Berliner (2001) wrote about the trouble with determining and defining expertise in education: "Unlike the small number of fields with tournaments to determine experts, like chess or bridge, one is usually deemed to be an expert by the judgement of others" (p. 466). The use of teacher evaluations as a reliable teacher quality indicator for this study was somewhat problematic due to the subjective nature of the tool and due to the relative dearth of existing scholarly research on the topic.

In their study of the accuracy of principal evaluations as predictors of teacher quality, Jacob and Lefgren (2008) found that principal evaluations are effective at identifying teachers who produce the largest and the smallest student achievement gains (the 10-20% on either end of the range) but have more difficulty distinguishing teacher quality in the middle of the distribution (the middle 60-80% of the range). Rockoff and Speroni (2010) studied how accurately subjective evaluations of new teachers in New York were at predicting the new teachers' impact on future student achievement. They found that new teachers who received higher ratings on subjective evaluations produced above average student achievement gains in reading and math. However, the evaluations for this study were not completed by school administrators but by teacher mentors and/or administrators from an alternative licensure program. Milanowski (2004) analyzed the relationship between teacher evaluations and student achievement in Cincinnati per scores on reading, math, and science tests for students in grades 3-8. He found only small to moderate positive relationships between teacher evaluations and student gains for most grades in each tested subject (Milanowski, 2004).

Summary

Based on the scholarly research detailed above, it was clear that there are several evidence-based indicators of teacher quality: years of experience, licensure/certification, advanced degrees, National Board Certification, teacher test scores, and data from value-added measures. There was far less support in research for the value of the quality of teachers' undergraduate institutions and of subjective teacher evaluations as quality indicators. The next section focuses on access and equity considerations associated with the scheduling and assignment of teachers to students and student groups.

Access and Equity Considerations for Teacher Assignment

Throughout the previous sections detailing previous research on specific teacher quality indicators, the researcher has shared corresponding measures of inequitable access for students from historically marginalized backgrounds to teachers of the highest quality when compared to students of privilege as well as findings of the positive outcomes that occur for historically marginalized students who are assigned to teachers of the highest quality. Jackson (2009) found that schools in Charlotte, NC with higher enrollments of black students also had: 1.53 percentage points more teachers with 0-3 years of teaching experience, a teacher turn-over rate of 1.86 percentage points higher, 0.73 percentage points fewer teachers with advanced college degrees, 0.86 percentage points fewer teachers who attended a highly ranked college, 2 percentage points fewer teachers who scored in the 75th percentile of their certification exams, and approximately 0.14 standard deviations lower average teacher value added in math and reading. Before we can rectify present inequities such as those detailed in research discussed above and previously in this chapter—as well as negate inequities in the future—we must first understand our past. How was the achievement gap formed? What have policy and lawmakers tried to do to rectify it? What implications does such systemic inequity hold for North Carolina's school, district, and state leaders? The following sections include a review of literature germane to the following: key historical and legislative moments in education equity, the racial achievement gap, education policy and finance implications, and considerations for school leaders specific to teacher assignment and an often-overlooked subgroup that suffers a dearth of teacher quality, high school freshmen. Specifically, the next section is comprised of a review of key historical and legislative events affecting equity in public education equity and a brief review of racial achievement gap statistical data.

The Racial Achievement Gap: Realizing the Impact of Policy on Access and Equity

Williams (2012) wrote that institutionalized racism is synonymous with structural inequality and is interwoven into the fabric of the policies and practices of all social institutions including but not limited to educational, economic, medical, political, and religious entities. Historically, there are myriad examples of racism being interwoven into policy and law with intent and with social malice. This section will detail a few of those especially egregious and impactful examples.

Allen (2008) reminded us that from the most initial education efforts on US soil, before we were even a country, racial equity in schools was never a consideration or priority. The Massachusetts Act of 1647 established public education as a foundation to teach reading, writing, and religion with a target demographic being the white male (Allen, 2008). Paige and Witty (2009) wrote that to uncover the true origins of the achievement gap, one must look with a wide lens at the entire history of the black American experience—from slavery in the colonial and Antebellum periods until now. Slaves experienced indoctrinated inferiority in which slave owners sought to have slaves believe that their African heritage was a curse and that their skin color in and of itself was a sign of genetic degradation. Woodson (1990) wrote in 1933:

When you control a man's thinking, you don't have to worry about his actions. You do not have to tell him not to stand here or go yonder. He will find his "proper place" and will stay in it. You do not have to send him to the back door. He will go without being told. In fact, if there is no back door, he will cut one for his special benefit. His education makes it necessary (p. xiii).

Believing that ignorance was a valuable tool to maintain control, slave owners often forced illiteracy and harshly punished any slave attempting to learn to read or write (Paige & Witty, 2009).

Immediately after the end of the Civil War and the emancipation of slaves, the Black Codes were established in the southern states and were enacted to assert institutional control over

the civil rights of blacks, regulating everything from the right to marry to the right to own property (Paige & Witty, 2009). The Black Codes ostensibly legalized institutionalized racism. In 1896, the Supreme Court in *Plessy v. Ferguson* upheld a Louisiana law segregating passengers in railroad cars—a “separate but equal” standard that soon infiltrated almost every possible social institution including public education.

The first recognition of an achievement gap between races is documented as occurring in 1917, when the US Army discovered during large-scale mental testing of soldiers that there were significant discrepancies in the achievement on tests between white and black soldiers (Paige & Witty, 2009). In 1954, the Court unanimously reversed course on *Plessy* in *Brown v. Board of Education*, repudiating the separate but equal standard deciding that schools segregated along racial lines were unequal at their core and that “education must be made available to all on equal terms.” Despite the Court’s ruling, it was still uncommon for students to even see pictures of non-white people or history makers in text books until the 1960’s when the federal government utilized its influence and funding to “integrate” texts (Spring, 2011). School books had formerly been predominantly white in their pictures and presented a decidedly WASP-oriented slant to history and stories. Publishers began to offer schools “multi-ethnic” options for texts whose pictures consistently included minorities for the first time (Spring, 2011). In *Lau v. Nichols*, the 1974 Supreme Court decision guaranteed equal education opportunity to non-English-speaking students by requiring public schools to provide special assistance to help these students learn English so they could participate equally in the educational process—the only Supreme Court case pertaining specifically to the rights of ELL students (Thomas, Cambron-McCabe, & McCarthy, 2009).

Administered for the first time in 1969, the National Assessment of Educational Progress (NAEP) was the first comprehensive source of national student achievement data (ETS, 2010).

The 1970s and 1980s saw a substantial tightening of the achievement gap between black and white students in both reading and math (with the smallest gaps recorded in the late 1980s) but was followed in the 1990s by a continued widening trend. For example, the black/white gap in reading for 13 year-old students in 1971 was 39 points, reduced to 18 points by 1988, and then widened again to 30 points by the late 1990s (ETS, 2010). The gap in math performance also grew steadily wider throughout the 1990s for both 13 and 17 year-olds (ETS, 2010).

In 1996 The National Commission on Teaching and America's Future, a reform commission chaired by then-Governor James B. Hunt of North Carolina, set a goal that every child "would be taught by excellent teachers" by 2006 (Ravitch, 2010). In 1997 in Hunt's home state, the North Carolina Supreme Court ruled in *Leandro v. State* that the state constitution entitles every student in North Carolina to a "sound, basic education." In 2004, the court followed the Leandro case with *Hoke County Bd. of Educ. v. State* otherwise known as "Leandro II" and specifically found in part that the placement of a "competent, certified, well-trained teacher" in every North Carolina classroom was the duty and obligation of the state, and that the most significant beneficiaries of such instructors are at-risk students or those with special needs. Superior Court Judge Howard Manning assessed the licensure and certification systems of teachers in North Carolina and ruled them to be adequate for the purposes of ensuring the assignment of "competent, certified, well-trained" teachers to every classroom in fulfilling the greater mission of providing every North Carolina student "a sound, basic education."

The federal No Child Left Behind Act (NCLB) signed into law by President George Bush in December 2001 was the first instance in American legislative history that academic performance was formally measured for a wide range of student subgroups (such as race, socioeconomic, and special needs) with overall school success dependent on the aggregate achievement of students in each subgroup (Guthrie, Springer, Rolle, & Houck, 2007). In terms of

the racial achievement gap, progress actually *slowed* for several years after the legislation went into effect in 2003 as compared to progress being made in the years prior to its implementation (Ravitch, 2010), as shown in Table 2.2.

Table 2.2 NCLB Achievement Gains Comparison (Black vs. White)

<i>Measure</i>	<i>2000-2003</i>	<i>2003-2007</i>
4 th grade math: Black	13-point gain	6-point gain
4 th grade math: White	10-point gain	5-point gain
4 th grade reading: Black	8-point gain	6-point gain
4 th grade math: White	4-point gain	3-point gain

Achievement gap trends have remained essentially static and consistently wide throughout the 21st century. Historically smaller class sizes and the influences of landmark legislation are seen as potential causes for the improvements observed in the 1970s and 1980s but despite much scholarly and scientific research into the history of the achievement gap, there has been little consensus and few conclusions drawn as to the cause of the improvements during those decades (ETS, 2010). In 2007, the black/white gaps in 4th grade math and reading were 26 and 27 points respectively (DOE, 2009). The math and reading gaps for 8th graders in the same year were 31 and 26 points respectively (DOE, 2009). The National Center for Education Statistics (NCES, 2016) reported that in 2013, only 7% of black students nationwide were at or above proficiency level in Mathematics and only 16% were at or above proficiency in Reading as opposed to 33% and 47% respectively for white students.

Regardless of impact on the racial achievement gap, NCLB still had significant impact over the restructuring of school priorities despite the fact that public education is a domain largely of state and local control and the fact that federal dollars are only responsible for about 7% of public school funding. The stated intent behind NCLB—that not a single child would be overlooked under a heightened national emphasis on accountability and standards—begs the question: How effective was NCLB at ensuring our schools are funded such that the most

disadvantaged students are assigned to the most effective teachers in the most successful schools? That concern will be discussed in the next section.

Equity Concerns Inherent with Current School Finance Structures and Practices

Considering the historic precedence set by judicial rulings such as *Brown* and *Lau*, one might think that the achievement gap should be dramatically smaller but black and brown students have yet to catch up to white students due to centuries of institutionalized racism which cannot be undone even in several decades. And despite fairly recent state supreme court rulings in North Carolina regarding the fundamental rights of students in NC and in light of a historically influential federal law passed in 2001, school finance structures remain designed (quite openly) to perpetuate inequity. Toutkoushian and Michael (2007), in their article regarding approaches to assessing school funding equity, provide definitions for two alternative methods of funding schools: horizontal equity and vertical equity. Horizontal equity could ostensibly be simplified as “the equal treatment of equals” but it means more officially that districts that are considered similar to one another in size, socioeconomic status, and other factors are funded equally (Toutkoushian & Michael, 2007).

A semi-random sample of select state funding formulas—including that of North Carolina—and how they compare to the national average is presented in Table 2.3. School funding is allocated at the local, state, and federal levels on a percentage basis in different formulas (depending on the state) but what is consistent across the country is that funds are allocated at the state and federal levels in the *same* amounts to school districts regardless of need. Inequity is found at the *local* level. Locally, property taxes provide inequity as wealthier communities with higher property values are able to provide more liberally to their school districts than are poorer communities.

Table 2.3 Percent Distribution of Revenue for K12 Public Education for 2010—Sample of States (Education Law Center, 2013)

<u>State</u>	<u>Local</u>	<u>State</u>	<u>Federal</u>
U.S. Average	43.8	43.5	12.7
North Carolina	26.5	58.2	15.3
Florida	52.3	31.5	16.1
Oregon	39.4	47.4	13.2
Pennsylvania	53.3	35.8	10.9
South Carolina	42.3	43.8	13.9

Vertical equity, a concept most germane to a study of student equity, means that for funding to be truly equitable, school districts who educate a greater proportion of students from historically marginalized backgrounds should receive a greater proportion of funding than districts with greater proportions of students of privilege to compensate for the difference—or looking at it more simplistically, vertical equity is “the unequal treatment of unequals” (Toutkoushian & Michael, 2007). Unfortunately, however, vertical equity is not evident in current school funding structures.

Research (Adamson & Darling-Hammond, 2012; Amrein-Beardsley, 2012; Roza, 2010) solidly shows that school district spending per pupil favors high-achieving, low-poverty students by default. An analysis of teacher salaries in many large cities such as Austin, Dallas, and Seattle showed that average teacher salaries were \$1,000 to \$5,000 higher at schools with fewer poor students than at high-poverty schools within the same districts (Roza, 2010). In their study of teacher quality distribution in California and New York, Adamson and Darling-Hammond (2012) found that the highest paid teachers working in low-poverty schools with more privileged students were paid approximately 35% more than the highest paid teachers in high-poverty schools. Amrein-Beardsley (2012) studied the distribution of expert teachers in Arizona—a state that ranks second to last nationally in per-pupil funding, a state whose overall student enrollment is approximately 30% Hispanic and non-native English speaking, and a state with the 11th highest poverty rate nationally. She found that 99% of Arizona’s highest quality teachers work in

the highest achieving schools in the state, 1% of the highest quality teachers teach in underperforming schools, and none work in failing schools (Amrein-Beardsley, 2012).

Intradistrict inequity occurs when control for teacher assignment decisions is granted to school administrators who permit the most experienced (and thus, highest paid) teachers in a district to proliferate at schools with the most advantaged students (Guthrie et al., 2007). Those students have the most influential parents who tend to advocate more vocally and persuasively for their children. More importantly, those are the students in schools at which the most experienced, fully licensed, more highly credentialed, highest quality teachers choose to teach (Adamson & Darling-Hammond, 2012; Amrein-Beardsley, 2012; Roza, 2010). With teacher salaries raised annually via step increases based on years of experience and raised in many cases based on advanced degrees or the completion of specialized training, the general teacher quality at any given school could be predicted by the average salary of teachers assigned to it (Roza, 2010). Regardless of the intent of NCLB, in many cases funding structures still work against disadvantaged students because by default, greater funding within districts is still allocated to schools with teachers holding stronger credentials serving larger proportions of advantaged students (Roza, 2010).

The North Carolina Supreme Court rulings of *Leandro v. State* (1997) and *Hoke County Bd. of Educ. v. State* (2004) that were meant to ensure the delivery of a “sound, basic education” to every student and the placement of a “competent, certified, well-trained teacher” in every North Carolina classroom as duties and obligations of the state may not have resulted in true equity. School leaders at the local and state levels must reconsider their resource allocation policies—almost wholly emblematic of horizontal equity—in order to imbed true measures of vertical equity and adequacy in the provision of resources to students. Roza (2010) suggested that current resource allocation policies—specifically the way teachers are assigned to schools

(local districts allowing teacher assignment decisions to be made by building-level administrators), the fixed salary schedule, and the use of district-wide average teacher salaries in individual school budgets—coalesce to funnel more public dollars to historically advantaged students: “...the implicit strategy at hand contradicts what education leaders promote explicitly” (p. 9). Specific and unique considerations for school leaders with regard to equity in teacher assignment—and the scholarly literature germane to them—are proffered and discussed in the next section.

Leadership Considerations

Regarding organizational leadership, Pfeffer and Sutton (2000) offered “... [O]ne of the great mysteries in organizational management [is]: why knowledge of what needs to be done frequently fails to result in action or behavior consistent with that knowledge.” School leaders face a variety of social, procedural, and diplomatic challenges when assigning teachers to specific courses and students. The subsections that follow will review literature that details some of the more prominent concerns and influences that often derail school leaders from acting and behaving in a manner consistent with their training and knowledge of what needs to be done.

The Critical Nature of Teacher Quality in Ninth Grade

Student disadvantage is not limited to racial, ethnic or socioeconomic status. Ninth grade classification is in and of itself viewed as a distinct challenge that can disadvantage students due to the academic, social, and physical changes encountered during the transition from middle to high school and the challenge may be increasing. The American Association of School Administrators (AASA, 2016) reported that the transition from 8th grade to 10th grade is increasingly more difficult for students to complete in a timely fashion. Unfortunately, the retention in 9th grade—like most other concerns detailed in this study—has proven a black and brown concern, largely. For the decade between 1992 and 2001, the enrollment numbers in grade

9 for white students nationally is consistently 6-8% higher per year than it is for 8th grade. In the same time period, for black students and Hispanic students across the nation the enrollment numbers in grade 9 are respectively 23-27% and 24-28% higher per year than they are for 8th grade (AASA, 2016).

In 2004-2005, the non-promotion rate for North Carolina high school freshmen was 14 percent—a significant increase from 1974-1975 when the non-promotion rate was 8.4 percent (NCDPI, 2008). When minority status couples with ninth grade classification for students in high minority/high poverty (HMHP) urban schools, a proverbial perfect storm can be created, impeding the yearly progression of already disadvantaged students. For example, Neild and Balfanz (2006) found that about 35% of ninth grade students in Philadelphia high schools are not promoted to tenth grade. Roderick and Camburn (1999) found that approximately 40% of high school freshmen in Chicago fail at least one core academic course in ninth grade and 20% fail two or more core courses.

In their study of teacher assignment to 9th grade students, Neild and Farley-Ripple (2008) found that students who are not promoted to tenth grade after one year in ninth pose a substantially greater risk for quitting school altogether. The authors studied 1999-2000 student data for almost 47,000 high school freshmen and over 2,600 9th grade teachers in a large urban school district. The study analyzed student demographic data, report card data, and achievement and attendance data as well as three types of teacher characteristics: subject certification, newness to the school, and the dyad of certification and newness to the school (overall experience was indeterminate). For the year studied, an approximate total of 25% of teachers in the district were either uncertified, new to their schools, or both. In general, students attending high-poverty schools in the district had a greater chance of being assigned to uncertified teachers. Ninth grade students had the greatest chance (29%) to be assigned to teachers that

lacked certification, were new to the school, or both. Odds improved at each grade level with tenth grade students having 28% chance of having such teachers, followed by 24% of eleventh grade students and 21% of twelfth grade students (Neild & Farley-Ripple, 2008). The authors suggested that the success of a school depends on the success of ninth grade. As previously mentioned, ninth grade presents leadership challenges inherently distinct from other grade levels. Students struggle to achieve in greater numbers, students exhibit difficulty with behaviors, and teachers eschew assignments to freshman courses (NCDPI, 2008; Neild & Balfanz, 2006; Neild & Farley-Ripple, 2008; Roderick & Camburn, 1999). Neild, Stoner-Erby, and Furstenberg (2008) studied Philadelphia survey and student data and correlate teacher status structures—ostensibly systems of seniority and social capital—with ninth grade students (the least desirable to teach) being assigned to the teachers with the least experience and least amount of certification on average.

Ninth grade—the first year of traditional high school—is also typically the first time in a child’s educational experience in which students are able to select classes by level (standard, Honors, or AP are the course levels used in this study) which can lead to a form of social segregation with white students selecting Honors or AP-level classes more often and black and brown students selecting or at least being assigned to standard-level classes more often, as will be detailed in Chapter 4 of this study. It is this researcher’s professional experience that such level decisions are too often made by students and parents for social reasons rather than academic, with white parents often forcing underprepared white students into higher-level classes that are too challenging for them and with black or brown students eschewing Honors or AP courses because the enrollments in those classes are “too white.” Feagin (2013) would refer to the tendency for white students to avoid academic settings with higher ratios of African

American or Hispanic students as a tangible hallmark of the *white racial frame*. The white racial frame is:

...a dominant...overarching, white world view [that] encompasses a broad and persisting set of racial stereotypes, prejudices, ideologies, images, interpretations and narratives, emotions, and reactions to language accents, as well as racialized inclinations to discriminate (p. 3)

The white racial frame is learned at an early age in everyday interactions with relatives and peers and acquired via virtually any social setting: at home, at school, through play experiences, and even from the media (Feagin, 2013). In his book, Feagin (2013) related an observance from a multiracial daycare center during an ethnographic field study. In an example of self-directed segregation with young children, a three-year-old white female moved her nap spot away from that of an African American peer and, using a racial slur, told her teacher that “Niggers are stinky. I can’t sleep next to one” (Feagin, 2013, p. 90). Social science research cited in Feagin’s (2013) book indicates that the white racial frame is so deeply embedded in society and in the psyches of individuals that most whites “apparently do not realize how routinely they act out of it” (p. 123). One stereotype related to academia and persisting in the white racial frame for centuries is that African Americans are less intelligent and creative than whites. White students congregate within advanced classes with comfort and ease and on a common ground of shared experiences and values whereas students of color frequently found immersion in such settings to be socially isolating and culturally alienating (Feagin, 2013).

A leadership strategy worth strong consideration by principals if for no other reason than the potential it holds for making high schools more equitable is the use of a high school transition program or “freshman academy.” From 2001-2007, retention rates fell in North Carolina high schools that employed freshman academies. Schools with academies held a 15% retention rate compared to a 22% retention rate held by schools without some form of high

school transition program. Schools that prioritized high school transition also reduced overall dropout rate to 6.6% from the state average of 12.5% (NCDPI, 2008). There are varying types of freshman academies from those that target at-risk students, that offer depth in specific curricular areas (the arts, career and technical, world language), or are more comprehensive and generalized in nature. There are however specific qualities of effective freshman academies that are supported by the research (NCDPI, 2008; Neild & Farley-Ripple, 2008) and that could mitigate the destructiveness of the white racial frame and substantively address obvious inequities with the teacher assignment process.

When implemented with fidelity and integrity, heterogeneous grouping accomplishes one task critical to equity and to the individual cultures of schools: it blurs the lines between the “haves and the have-nots” in the process of teacher assignment. As discussed previously, research (Boyd et al., 2008; Cohen-Vogel et al., 2013; Clotfelter et al., 2006; Feng, 2010; NBER, 2006) has shown conclusively that disadvantaged students are taught by novice or otherwise lower quality teachers. Kalogrides and Loeb (2013) report that most of the teacher assignments made along racial and socioeconomic lines can be explained by a sorting of achievement. When students of all abilities, races, and socioeconomic statuses have an equal opportunity to be assigned to the same pool of ninth grade teachers, equity can be optimized to a certain degree. Consider this “vision of equity” that students would ideally experience with their entry into any given classroom:

In class, students are exposed to a rigorous and demanding curriculum that challenges them fully. Students need not worry if this or any other class is advanced or remedial because all students are placed in classes that push them to excel, regardless of their skin color, cultural background, or previous learning challenges. This class is not disproportionately White or discernibly Black, Brown, or Asian; it includes an equal representation of all the students in the school so that no student is isolated racially (Singleton & Linton, 2006, p. 226).

Bourdieu (1991) asserted that separation by social class in academic settings perpetuates the greater social order by permanently affixing a modicum of status to the students in more desirable academic programs and assigning students in less desirable programs to a lifetime of subservience. To that point, Gamoran (1992) reported a lack of access to crowded ninth grade Honors English classes for students from historically marginalized backgrounds and found that the social capital held by students from the historically dominant population tended to positively influence access when controlling for other variables.

Neild and Farley-Ripple (2008) supported freshman academies that employ heterogeneous grouping: “One strategy is to demonstrate through teaching assignments that the ninth grade is ‘everyone’s issue.’ With this strategy, teaching ninth graders is a shared responsibility, and no one is exempt from coming into contact with these students during the day” (p. 301). The authors recommended that principals assign a core group of teachers to work almost exclusively with ninth grade and to treat their recruitment as a badge of honor as if their selection was a reward for quality teaching. Principals should recruit and assign teachers that would “know how to address the gaps in foundational knowledge and skills that ninth graders bring with them when they enter high school, and the teaching team would have strategies for helping students to manage the comparatively greater freedom of high school” (Neild & Farley-Ripple, 2008, p. 301). NASSP (2004) suggested that “Changing structures can change beliefs. Many teachers will not believe that heterogeneous grouping will work until they get involved. Once involved with teams, teachers never look back to departmental structures” (p. 54).

A modern colloquialism in education promotes the need to focus on the 3 R’s: Rigor, Relevance, and Relationships. This researcher’s experience as a school counselor showed him the substantive power of relationships in motivating students to achieve positive outcomes. The

next section will detail the impacts that relationships have—positively or negatively—on student achievement.

Teacher Quality and the Impact of Supportive Relationships

Singleton and Linton (2006) asserted that the racial achievement gap could effectively be rebranded as a “racial teaching practice gap” (p.6). The authors suggested that achievement disparities among racial student subgroups are definable as much by the inability of teachers to utilize effective instructional strategies for students of color as by students’ inability to achieve proficiency with content (Singleton & Linton, 2006).

In any given school, instructional quality differs from classroom to classroom. The importance of teacher quality was substantiated by research that shows individual teacher quality correlates positively with student achievement even in schools that are relatively ineffective (Marzano, Pickering, & Pollock, 2001). The question of how effectiveness is accurately measured from grade to grade, course to course, and school to school has persisted in research but one qualitative standard for gauging effectiveness in individual teachers is the investment of the teacher in building positive student relationships. In her chapter on teacher effectiveness, Ravitch (2010) related the positive impact that a specific teacher—“Mrs. Ratliff”—had on Ravitch’s life. Ravitch proceeded to outline the reasons that 21st century teacher evaluation models are often flawed due to an overreliance on data by decision makers with little personal or professional knowledge of life-changing, often unquantifiable instruction such as that provided to Ravitch by Mrs. Ratliff.

The relevance of the Mrs. Ratliff anecdote offered by Ravitch is found in the importance of high school students being assigned to teachers that motivate, nurture, and care about the students in their charge. “They don’t care what you know until they know that you care.” is a popular teacher’s adage about the influence of forging positive relationships and rapport with

students. This is supported by Louis and Smith (1996) who suggested: “Students must believe their teachers are engaged with the content and care about them as individuals. Unless this occurs, students fail to engage with the content” (p. 125).

A qualitative study of students who enrolled in college from HMHP high schools looked at the impact of teacher relationships on future accomplishments. High school students who were assigned to teachers from whom the students sensed stereotyping, lowered expectations, a lack of challenge, and negative perceptions reported feeling diminished respect for their school (Reddick et al., 2011). “Gwen,” a student participant in a focus group, reported:

[Some] teachers, it was babysitting to them. [They were] like . . . ‘There are too many black kids. They’re ghetto, and none of them are going to graduate.’ So their expectations were [low] . . . other students felt good if they made a C in a class . . . we’re watching Shrek and you want us to write a summary about it and you made a C? (Reddick et al., 2011, p. 605)

The authors correlated the dangers of low expectations becoming self-fulfilling prophecy with HMHP or otherwise disadvantaged high school students. Gwen, the student quoted above, was enrolled in a mix of standard-level, honors, and Advanced Placement (AP) courses and reported inequality with the type of instruction she received in differently leveled courses: hands-on, engaging instruction in advanced courses (in which Gwen was a minority student) and lackluster instruction in standard-level classes, in which Gwen reported seeing in her peers the effects of low expectations: “[O]ther students were just in class, because they had to be there.” The authors found that students in standard classes reported the majority of their time was spent preparing for state assessments whereas students enrolled in advanced classes spent more time discussing college access (Reddick et al., 2011). The futures of disadvantaged students in an educational environment like the one described by Gwen become lesser priorities or even nonfactors.

In her qualitative study comparing and contrasting novice and experienced teachers, Westerman (1991) found teachers with experience—an indicator of quality teaching as detailed above—to be more flexible and interactive with students, and more capable of adapting instruction to the needs of their learners whereas novice teachers were found to be generally more inflexible and bound to lesson plans. The next section discusses the intersections between the theoretical framework used for this study and the key stakeholders involved with it—teachers, students, and parents.

Bourdieu and the Role of Teacher Assignment in Cultural Reproduction

According to Pierre Bourdieu, social and class inequalities are legitimized and perpetuated through the educational systems in industrialized societies (Sullivan, 2002). Theoretically, Pierre Bourdieu (1991) linked academic achievement and social acclimation and effectiveness to social origin. He likened families of the dominant social classes to corporate bodies which, through their harnessing of capital in its varied forms, exhibit a tendency to “perpetuate their social being, with all its powers and privilege” (Bourdieu, 1991, p. 644). As in the stock market, students from privileged backgrounds benefitting from familial habitus can make “better educational investments” and thus earn “maximum returns on their cultural capital” (Bourdieu, 1991, p. 648). Habitus is a set of prevailing perceptions, attitudes, behaviors, and values transmitted within one’s home or between one’s intimate relations (Bourdieu, 1989). The dominant habitus is a set of attitudes and values maintained by the dominant class, a major component of which is a positive attitude towards education (Sullivan, 2002). Habitus nurtures “a sense of one’s place” as much as it nurtures “a sense of the place of others” (Bourdieu, 1989, p. 19).

Research (Clotfelter et al., 2006; Reddick et al., 2011; Useem, 1992) shows the inherent advantages that are enjoyed by students whose parents hold undergraduate and graduate degrees.

Advantages provided for students by the involvement of educated parents include increased awareness of the implications of academic decisions, more frequent integration into school affairs, and greater influence over course selections (Useem, 1992). According to the research of Reddick et al. (2011), students who enjoy the luxuries of social capital—parents who guide the college preparatory process and are otherwise involved in the high school experiences of their children—are more likely to enroll in college. Affluent parents and/or parents of high-achieving students often successfully influence the assignment of their children to better-credentialed teachers (Clotfelter et al., 2006).

Social/Cultural Capital Influence on Teacher Assignment

Bourdieu (1991) couched the role that privilege plays in advantaging students of the dominant culture thusly: “...the highest school institutions, those which give access to the highest social positions, come more and more to be completely monopolized by the children of privileged categories...” (p. 644). The unwritten interpersonal and diplomatic influences on the teacher assignment process are most appropriately identified as forms of capital. For a study of student equity in teacher assignments, it was most appropriate to consider the effects of cultural and social capital on educational outcomes and decision making. It should be noted that there exists little systematic, quantitative data in research regarding how capital is implicitly manifested in the assignment of teachers to students. Researchers (Clotfelter et al., 2005; Kalogrides et al., 2012; Monk, 1987; Rothstein, 2009) in most cases have extrapolated the influence of capital on the scheduling process utilizing qualitative methods of data collection (interviews, focus groups, surveys) and analysis of certain types of quantitative data that most logically lend themselves to inferences about the influence of capital.

Cultural capital is defined as culturally valued tastes and consumption patterns (Bourdieu, 1985; 1986; 1991). Class is a distinct variable in Bourdieu’s concept of cultural capital and as

such he believed that the education system rewarded those of the higher socioeconomic class who possessed cultural capital making it difficult for students lacking cultural capital in the same measure to succeed educationally (Sullivan, 2002). Bourdieu's concept of cultural capital originated as an alternative to the common view of unequal academic achievement between students from differing social classes as a byproduct of natural aptitude (Bourdieu, 1986). At a given moment "like aces in a game of cards," cultural capital represents power over other agents in the shared space (Bourdieu, 1985, p. 724).

Bourdieu's concept of cultural capital in education aligns with the social structure and is manifested in such a way that schools subsume the mores of the dominant class as desirable and appropriate for all. Students of the dominant culture instantly benefit from social acclimation—earning capital by birthright—and are subsequently viewed as naturally talented or superior (English & Bolton, 2015). Cultural capital of an *academic* nature enables student members of the dominant demographic by providing inherent opportunities to perform more capably and effectively than student members of passive or minority demographic groups who are disabled by their particular station in life. Cultural capital in academia may be subtle and hidden, or more direct and overt. With regard to education, cultural capital assumes the forms of curriculum, standardized or teacher-designed assessment items, and/or academic expectations which are created with the cultural cache of a specific, usually dominant demographic group—be it race, class, gender, age, religious affiliation, sexual preference, or some combination thereof—at the core of a given vehicle for learning or assessment. Cultural capital manifests itself not just through standardized test items, but also expectations for classroom behavior, school policies, college admissions expectations, etc.

Bourdieu's concept of social capital qualifies it as an advantage acquired via exclusivity, an influence gained by association with like-minded individuals as one might find in religious,

political, or fraternal organizations (English & Bolton, 2015; Nash, 1990; Rew, 2009).

According to Rew (2009), social capital “is the investment in social relationships with the expectation of returns” (p. 3) and can be used in educational settings by stakeholders such as parents or teachers “to facilitate the realization of science and mathematics achievement... instructional change and accessibility to instructional resources” (p. 5). Possessors of inherited social capital are known by more people than they know and are able to transform superficial acquaintances into undying connections (Bourdieu, 1986). A type of quid pro quo dynamic, social capital is the engagement in reciprocal relationships in which participants expect returns on their investments in such relationships.

The mere existence of social capital places black and brown students at a disadvantage. Disadvantaged students often lack social capital as a result of personal and social factors beyond their control. Victims of low expectations and an accompanying lack of self-esteem, disadvantaged students must overcome a deficit in confidence and capital in addition to mastering the high school curriculum (Reddick et al., 2011). Similar to Bourdieu, Feagin (2013) employs capital as an element in his white racial frame asserting that capital enables whites to operate with significant ease in white-dominated spaces without the inherent fear of profiling or awkwardness experienced by people of color. The facilitation of school work, job interviews, and virtually any other formal or informal social interaction is eased among whites within white-dominated arenas due to the possession of capital.

Research shows that parents with higher socioeconomic status and college educations have more social interaction with personnel at their child’s school, have more accurate knowledge of school resources in the event of a problem, and have more direct involvement with planning for the child’s academic experience (Baker & Stevenson, 1986). Useem (1992) conducted a qualitative study of middle schools in two adjacent school districts in suburban

Boston and found a significant correlation between level of parent education and level of involvement in educational decisions related to their children:

Parents with baccalaureate and graduate degrees appear to pass on their educational advantages to their children in many direct and indirect ways. They do so by being much more aware of the implications of academic choices made in schools, by being more integrated into school affairs and parent-information networks, by having a greater propensity to intervene in educational decisions that are made for their children in school, and by the greater likelihood that they will exert influence on their children over the choice of courses (p. 275).

In her qualitative study of parental influence via social capital on North Carolina elementary school principals, Zimmerman (2006) found that parents do frequently employ information channels to determine which teachers are most desirable for assignment and what process is most effective for making requests of principals. Gamoran's (1992) findings correlated desirable placement in ninth grade Honors English classes with socioeconomic status. Average student test scores coupled with higher socioeconomic status and parental involvement and advocacy equated to successful placement in Honors English classes more easily and more often than average scores coupled with average socioeconomic status (Gamoran, 1992).

The use of capital for gaining desirable teacher assignments is not limited to parents. Teachers themselves use influence for placement in desirable districts, desirable schools within a given district, and desirable classes and student groups within a given school (Cohen-Vogel et al., 2013; Kalogrides et al., 2012). Finley's (1984) qualitative study on high school teacher assignments found that teachers prefer to be matched to students that are college-bound, motivated, and responsive to the curriculum which incidentally tend to be privileged and white as well. Again, while most studies on teacher assignment surmise and offer conjecture about teacher capital, there is ample evidence (Boyd et al., 2008; Cohen-Vogel et al., 2013; Clotfelter et al., 2006; Feng, 2010; Kalogrides et al., 2012; NBER, 2006) as presented earlier in this chapter that novice teachers routinely teach the most challenging, disadvantaged groups of students.

Kalogrides et al. (2012) suggested that that phenomenon is at least partially due to the capital exercised by more experienced colleagues: “In contexts where teachers have been working together longer and have formed stronger social ties, experienced teachers may be particularly adept at excluding their new colleagues from the most desirable courses” (p. 119). The sort of cronyism described by the authors suggests a sort of micro-level cultural power that, if valid, could prove highly culpable in student scheduling inequity. In some situations, capital becomes actual policy. Cohen-Vogel et al. (2013) in their study of collective bargaining agreements between teacher unions and school districts in Florida found that levels of teacher experience and percentages of fully licensed teachers is lower in school districts where senior teachers are given preferences for transfer.

Ample research (Cohen-Vogel et al., 2013; NCDPI, 2008; Neild & Balfanz, 2006; Neild & Farley-Ripple, 2008; Roderick & Camburn, 1999) exists that teachers prefer teaching high-achieving students and advanced courses. If high school teachers with stronger credentials and more experience wield influence over school administrators with decision making discretion over teacher assignments, they may use this influence to obtain more preferable assignments (Kalogrides & Loeb, 2013; Neild et al., 2008). In order to insure equity in the teacher assignment process, school leaders must find an answer to the leverage power wielded by teachers.

Principals are tasked with recruiting and retaining the best quality teachers possible. A key aspect to retaining high quality teachers is balancing their preferences and requests with the needs of students. The measure of the effectiveness of principals is based partly on their ability to achieve that balance but for true equity in access for disadvantaged students in the teacher assignment process to occur, consideration for student needs must take precedence. Mitigating the influence of capital on school protocols may be an uphill climb. Roza (2010) urged that “powerful forces” work to protect those that benefit from the status quo and present allocation of

school resources such as the more experienced teachers, influential parents with students in high-achieving schools, and school board members with affluent constituencies. Boyd et al. (2008) in their study of the reduction of the racial achievement gap in New York City schools delineated leadership strategies that clearly contributed to the NYC success story: the virtual elimination of uncertified candidates from newly hired teacher ranks and the recruitment and retention of teachers—especially in the poorer schools—with stronger credentials such as better test scores and more experience.

Lisa Delpit (1995) challenged teachers to recognize “the haze of [their] own cultural lenses.” Singleton and Linton (2006) suggested that eradicating the achievement gap “begins with refocusing schooling on the children’s educational needs rather than on the personal needs of the adults who inhabit the buildings.” Doing so effectively may also produce a healthy byproduct in the reduction of burnout and attrition of promising novice teachers from the teaching ranks. Pfeffer and Sutton (2000) in their text on effective professional organizations offered this challenge: “[K]nowledge of how to enhance performance is not readily or easily transferred across firms... knowledge of how to enhance performance doesn’t transfer readily even within firms.” New teachers do not always benefit from the osmosis of effective mentoring. They are often left to their own devices to survive professionally, especially in high schools which are typically structured in a way that is more isolative, requiring teachers to operate with more self-reliance. If a new teacher receives a challenging assignment in an environment that lacks collaboration, burn-out and attrition is a logical outcome. Feng (2010) found that voluntary teacher mobility rates (i.e. teachers who were not dismissed) depended on the types of classrooms in which they were assigned to teach. In particular, her study showed that relatively inexperienced teachers assigned to classes with chronic behavior and achievement problems were more likely to leave the profession (Feng, 2010). Pfeffer and Sutton (2000) discussed the

negative impact of fear in the workplace on employee performance. New, probationary teachers are given the most challenging students and classes. They may likely experience some level of intimidation and paranoia about the nature of their performance-based evaluations that may in turn affect their confidence and instructional quality. Scafidi, Sjoquist, and Stinebrickner (2007) found that race was the most important factor for teachers in Georgia transferring out of schools or leaving the teaching force altogether especially for white teachers.

Bourdieu might reasonably have argued that the use of social capital by advantaged parents and teachers of the dominant culture is not only occurring, it's being allowed to occur and encouraged as evidenced by the positive results it achieves for white, advantaged families. Privileged parents and teachers only use the leverage they are allowed to use. Success with social capital begets further use of social capital. Mitigating the influence of capital enjoyed by advantaged families and experienced or more credentialed teachers in the teacher assignment process and balancing the assignment of teachers to the benefit of disadvantaged students more equitably will likely coalesce to not only produce positive results in student achievement but also in increased support and overall retention of novice teachers.

Conclusion

This literature review has provided research and findings demonstrative of consistently systemic and pervasive inequity with regard to the assignment of disadvantaged students to the most experienced, qualified, effective teachers available. The lack of access to instructional excellence and related educational opportunities for disadvantaged, historically marginalized students is experienced to the advantage of students from the dominant majority culture. Teacher preferences have been proven to positively influence their assignment to advantaged groups to the consistent detriment of at-risk students.

Implications for school leaders were shared with regard to equity in teacher assignment. Recent court decisions have necessitated that education leaders assess teacher quality and provide quality instruction in every classroom and prioritize disadvantaged students and yet school principals experience influence for preferable teacher assignments from advantaged parents who enjoy higher levels of social and cultural capital. The access enjoyed by advantaged parents is at the expense of disadvantaged parents who participate in the educational experiences of their children at reduced levels. Conclusive, quantifiable research on the influence of parents in the teacher assignment process is lacking but researchers consistently provide data that qualitatively supports the influence of social capital on the scheduling process via interviews, focus groups, and surveys. Research has conclusively shown consistent patterns of capital employed by more experienced, more highly qualified teachers to optimize their opportunities for preferable teacher assignments at the expense of disadvantaged students and novice colleagues. Current school structures have been shown to perpetuate inequity rather than addressing it effectively.

The literature supports models of teacher teaming, professional collaboration, and heterogeneous student grouping such as high school transition programs or freshman academies as methods of providing equity at the often problematic ninth grade level. Research also suggests the need for schools to engage in equity work in order to realize individual and collective racial consciousness. Schools that have prioritized engaging in courageous conversations about race and its influence on educators and instructional practices have demonstrated progress in reducing the racial achievement gap. The dynamics of politics and policy were discussed as they relate to school reform. The findings of this research study offer the foundation for further research on student equity in the high school teacher assignment process.

CHAPTER III: METHODOLOGY

Introduction

The research term “mixed methods” essentially means to combine quantitative and qualitative data collection/analysis approaches during a research study. A mixed methods approach is primarily utilized in research for reasons of practicality and appropriateness, to provide the optimal opportunity to address research questions and particular sub-facets of the research topic (Morrison, 2007). In this chapter, the researcher will provide clarity regarding qualitative and quantitative data collection methods and goals that were used for this research study. Following this introduction and preceding a conclusion, components for Chapter 3 include the researcher’s purpose, a review of the theoretical framework and research questions, a rationale for utilizing a mixed methods research approach, a description of the research site and participants, and a review of data collection and analysis procedures.

Research Purpose

First articulated in Chapter 1, the purpose of this study was to illuminate a potential contributor to the racial achievement gap, one that was heretofore under-emphasized in existing scholarly research: the inequitable assignment of the highest quality teachers possible to high school students from historically privileged backgrounds—specifically white students—at the expense of students from historically marginalized backgrounds—specifically African American and Hispanic students. Characterized as a process that by its very nature bypasses opportunities to contribute to the improvement of larger social and educational inequities and instead prioritizes efficiency and wish fulfillment, research supports the notion that the school

scheduling process substantively contributes to the achievement gap by assigning students of color, students of low socioeconomic status, or otherwise historically marginalized students to teachers that are of lesser quality than those to which students from the historically dominant population are assigned (Delaney, 1991; DOE, 2013; Feng, 2010; Kalogrides et al., 2012; NCEE, 2014).

As detailed in Chapter 2, for purposes of this study, teacher quality was measured by six quality indicators: experience, full licensure/certification, advanced college degrees (masters/doctoral), National Board Certification, scores on licensure exams, and value-added data. Also previously noted, it is acknowledged formally as a limitation of this research study that the study's scope intentionally encompasses only one aspect of high school student equity—teacher assignment—while relegating other key equity factors (including but not limited to: the influences of AVID, ESL, and EC programs or the racial disparity with enrollment in Honors and AP classes) to mere tangential reference and even ignoring others (including but not limited to: the influence of dual language programs, access to instructional technology, and college enrollment percentages). It is the fervent hope of the researcher that findings from this study will inform future school scheduling and teacher assignment policies and practices germane to issues of inequity in public education as well as offer a substantive contribution to the existing yet comparatively meager amount of scholarly discourse on the topics of high school scheduling and student-teacher matching. The next section details the conceptual framework chosen for this study—Bourdieu's (1985; 1989; 1991) theory of cultural reproduction.

Conceptual Framework

Pierre Bourdieu's (1985; 1989; 1991) contemporary conceptual framework of cultural reproduction is based on the theory that privilege in the form of cultural knowledge is bequeathed from generation to generation in the form of habitus, a term used to conceptualize the

hidden values, norms, and behaviors known, coveted, and prioritized by the dominant culture. Cultural reproduction in the theoretical sense is the cyclical perpetuation of inequity and power differentials in institutional settings primarily through the use of cultural capital wielded by members of the majority or dominant class (Bourdieu 1985; 1989; 1991).

Within the conceptual framework of cultural reproduction provided by Bourdieu, the methodological goal of this study was to crystalize the potential distinctions in teacher assignment between the “have’s” and the “have-not’s.” The research interest regarding differentials in capital at the heart of this study pertained not only to students but also to teachers and to parents. Bourdieu’s framework was most useful in this study during a phase of qualitative data collection during which educators directly responsible in varying measures for the scheduling processes at each participant high school were interviewed to ascertain the perceived degree of influence held by specific stakeholders over the construction of the master schedule and the subsequent assignment of teachers to specific courses and/or student groups. The researcher sought congruence in the data collected for each participant school through a mixed methods approach. In other words, if a particular principal claimed that cultural capital played little role in the scheduling process, then subsequent interviews with counselors regarding the process for individual schedule changes should have yielded similar results for congruence to be evidenced within the data. If educators of a particular school claimed an equity-minded approach for assigning teachers to courses and students, for the data to be found congruent, then the master schedule should have shown that the most qualified, high quality teachers consistently are assigned to the neediest students—those from historically marginalized backgrounds—or at least might have shown a level of balance with each teacher’s assigned work load through a mix of Honors and non-Honors courses, remedial and advanced courses, and/or students from upper and lower grades.

Viewing data critically through the lens of Bourdieu's framework in this study should have ultimately validated or debunked the researcher's hunch that the teacher assignment process in high schools is a form of institutional inequity for students of color or from otherwise marginalized backgrounds. As will be detailed in the next two chapters and although there was a modicum of contradiction, the findings from subject interviews were in fact somewhat mirrored—for better or worse—by the data collected from the equity audit of each school's master schedule. The research questions that guided this study are proffered and detailed in the next section.

Research Questions

Osborne-Lampkin and Cohen-Vogel (2014) in their study of the influence of performance data on the decisions of elementary school principals in the teacher scheduling process define student assignment as “the process that guides school management decisions about how students are organized into classes and by whom they will be taught” (p. 189). This researcher's interest in divining the motivating factors of high school principals and other school-based agents during the assignment process led to the construction of the following research question for this study:

From a leadership perspective, how are teachers assigned to students at the high school level (i.e., what criteria—formal and informal—are and are not considered, including issues of equity)?

The following sub-questions were germane to the research question, were proffered to guide a review of existing scholarly literature, and were subsequently addressed through the study:

- How adequate and equitable is the access to preferable teacher assignments enjoyed by students from historically marginalized or at-risk populations when compared to students from the historically privileged, dominant population?

- Are the racial achievement gap and equity for students from historically marginalized or at-risk populations considered *primary* considerations that drive or influence the construction of high school master schedules and if so, how?
- Do high school teachers wield social and/or cultural capital effectively to influence school principals to gain preferable course assignments and by default, to control the types of students to which they will be assigned to teach and if so, how is it manifested?
- How actively involved are the parents of students from historically privileged or dominant populations in determining the courses to which their children enroll and advocating with principals and counselors for the teachers to whom their children are assigned than are the parents of students from historically marginalized or at-risk populations?

Research strategies and data collection methods that are described in the following section were chosen intentionally as the most potentially effective means possible for securing answers to these research questions.

Rationale for a Mixed Methods Approach

Inequities found in teacher assignment could easily be viewed as unintentional byproducts of routine management decisions and of adherence to routine protocols rather than the result of intentional course enrollment choices of students or of wholly conscious placement decisions made by school agents (Delaney, 1991). This researcher suggests that while intentional racial malice does not likely rest at the heart of scheduling inequity decisions, high school master schedules might still in fact be found to be tangible examples of institutionalized racism, a social and cultural dynamic embedded in systems and processes that, as such, is more often covert and subtle in its existence and influence than it is overt and obvious. This study of teacher sorting

among and within high schools was also predicted to support the researcher's belief that the seemingly innocuous high school scheduling process could in essence be an example of school finance inequity and a perhaps unheralded yet significant contributor to the racial achievement gap. To validate these hunches, research on high school scheduling practices must have been conducted and considerations influential to high school teacher assignment must have been identified. It was the view of this researcher that using a mixed methods approach that included both qualitative and quantitative methods and data sources was most appropriate for this study for a number of reasons.

Fraenkel and Wallen (2003) provided that qualitative and quantitative methods can certainly be used in tandem with one another and often should be but add "The important thing is to know what questions can best be addressed by which method or combination of methods" (p. 444). For this study, the first priority was to identify and articulate trends of equity and inequity with the teacher assignment process. The identification of patterns and systems of inequity should have been supported with data that consistently shows that students from historically privileged backgrounds are assigned to preferred teachers (possessing perceived predictors of quality) with greater frequency than students of color from historically marginalized or at-risk backgrounds. Further, specific quantitative data sets available through the North Carolina Department of Public Instruction (NCDPI) such as North Carolina School Report Cards (which are detailed in Data Procedures and Collection below) provided achievement rates and more comprehensive demographic information that, once combined with the scheduling data of participant schools, would coalesce into either a validation of the equity or indictment of the inequity found in the teacher assignment processes at each participant school.

Yin (2003) describes a case study as detailed documentation of a particular organization, program, and/or process. Case studies typically provide the reader more detail of the

organization, program or process than do more wholly quantitative or analytic types of reports (Yin, 2003). Case studies require a modicum of immersion for the researcher within the group or setting that is being researched and may require the use of multiple research methods such as interviewing, surveys, document analysis, and/or observations (Marshall & Rossman, 2011). It is a research strategy that “rests on both the researcher’s and the participants’ worldviews” (Marshall & Rossman, 2011, p. 93).

Marshall and Gerstl-Pepin (2005) supported each chapter of their text on education politics and policy with “Lived Realities:” brief personal, biographical stories, testimonials, or viewpoints used to crystalize and humanize perhaps complicated or sometimes nebulous concepts. In other words, lived realities demonstrated in the text how the theories and implementations of politics and policy were manifested in the lives of school stakeholders. A secondary yet critically valid component of the study was the combination of potential or possible priorities, belief systems, and influences that affect the scheduling and assignment processes at each participant school. Such dynamics are most effectively captured through the lived realities and personal philosophies of members of the scheduling team at each school (which is most often a combination of principals, assistant principals, counselors, and/or department chairs). The stories of these educators were collected through qualitative means and used to support data collected and presented quantitatively.

Per the tenets of case study as described by Yin (2003) and Marshall and Rossman (2011), reporting the findings of this research was determined most effective through the use of a case study. This is in fact a detailed documentation of a particular organization’s processes and protocols which required the use of multiple methods (interviews, surveys, and analysis) and substantively incorporated the worldviews of the researcher and participants through the reporting of “lived realities.”

A specific type of research design that employs a mixed methods approach is *design triangulation*. According to Creswell (2002), for research to exemplify a design triangulation, the researcher collects quantitative and qualitative data concurrently and alternately uses the findings from one method in an attempt to validate the findings from the other. The research completed for this study employed a design triangulation to offer such checks and balances to the findings of data collected through each method. The researcher's role and implications germane to his role are discussed in the next section.

Role of the Researcher

Unlike purely quantitative studies, qualitative studies—or mixed methods approaches that contain even a modicum of qualitative elements—can become at the very least mildly disruptive in the lives of the participants or subjects of the study. It is the researcher's role to deliberately and conscientiously develop a research design that mitigates the disruption and distraction posed to the participants (Marshall & Rossman, 2011). Patton (2002) proffered a set of considerations for the researcher in “situating the self” in a qualitative research study. In other words, the researcher must consider the degree of participation he will play in the research setting and with the research subjects as well as the degree of disclosure about the study that he will provide the research subjects. One extreme is full disclosure and the other extreme is complete secrecy (Patton, 2002).

In this case study, observations were not used as a research method so the consideration of researcher participation was a nonfactor. It is indeed possible that an opportunity to observe a meeting germane to the focus of the study could have presented itself, such as a scheduling team meeting at a participant high school or a board meeting specific to teacher assignment and high school scheduling in the participant school district. In that event, if the researcher had been invited and authorized to attend, he would have participated solely as a silent observer.

In terms of disclosure, the researcher assumed an overt role with participants. Interview subjects were informed proactively and clearly about the researcher's role *as a researcher* studying scheduling processes and teacher assignment considerations. The researcher in essence assumed the position of "outsider-insider" with research participants (Noblit, Flores, & Morillo, 2004). As previously stated, as a school administrator and former high school counselor, the researcher could never be wholly neutral and needed to acknowledge any inherent biases and a wealth of esoteric knowledge that was accumulated through substantial prior experience in constructing high school master schedules, changing student schedules, and assigning teachers to courses. To help establish rapport, a general level of personal disclosure related to the researcher's professional experiences as a school counselor and administrator at the high school level was also shared in the form of an *entry letter* (see Appendix A for a copy) which briefly introduced the researcher to the participants and explained the nature of the study as well as the researcher's hopeful expectations for the participant's cooperation and investment in the study either as an interview subject or as a supplier of data (Marshall & Rossman, 2011).

Site Selection and Participants

Marshall and Rossman (2011) described the selection of the site and participants of a research study as fundamental to the overall design of the study and an early yet significant decision that influences all other decisions made by the researcher during the research process. Access to sites and personnel was granted and a case study was completed with the three traditional high schools in Bay Lake County Schools (BLCS)—a relatively small public school district in central North Carolina—serving as a research sample. The U.S. Department of Education would classify the district's locale as *distant town*, meaning that it is a "territory inside an urban cluster that is more than 10 miles and less than 35 miles from an urbanized area"

(NCES, 2006). To be consistent with proper scholarly research protocols, the participant district and each participant school were assigned pseudonyms to ensure confidentiality.

Table 3.1 represents facts and figures germane to this study for Bay Lake County Schools as well as for each of the three traditional BLCS high schools (in ascending order of size): Kali River High School (KRHS), Artist Point High School (APHS), and Liberty Square High School (LSHS). Included is personnel data for each school germane to the four teacher quality indicators used for this study—years of experience, licensure/certification, advanced degrees, and National Board Certification—as well as student data. The information provided is based on 2016-2017 school data compiled from data sets received from the individual school principals, from the district office, and from teachers surveyed for this study.

The BLCS human resources department and district leaders who work specifically with scheduling or specifically with high school programs were sources of information, data, and practical assistance. Building-level educators at each high school who participate substantively in the assignment of teachers to courses and students via the creation of the master schedule and/or the processing of schedule changes for individual students served as interview subjects. Teachers assigned to each school in the four core subjects provided information regarding their own credentials via a brief online survey, the link for which was emailed to them by a district leader on behalf of the researcher.

The selection of the location of the research site and the suggested scope of the study (each traditional high school in one district) were predicated on notions of practicality and reasonableness. The researcher lives in central North Carolina and could most easily conduct research there with the fewest financial or logistical complications.

Table 3.1 Facts and Figures for BLCS High Schools (compiled from data sets provided by district officials)

	<i>BLCS Traditional High Schools</i>	<i>KRHS</i>	<i>APHS</i>	<i>LSHS</i>
Total number of core classroom teachers (English, Math, Science, Social Studies combined)	83	15	27	40
Percentage of teachers with <1 year of experience (English, Math, Science, Social Studies combined)	4%	6.7%	4%	2.5%
Percentage of teachers with 1-3 years' experience (English, Math, Science, Social Studies combined)	6%	0%	7%	7.5%
Percentage of teachers with 4-10 years' experience (English, Math, Science, Social Studies combined)	31%	40%	33%	27.5%
Percentage of teachers with >10 years' experience (English, Math, Science, Social Studies combined)	58%	53%	55%	62.5%
Percentage of fully licensed teachers (English, Math, Science, Social Studies combined)	96%	99%	93%	100%
Percentage of teachers with advanced degrees (English, Math, Science, Social Studies combined)	43%	47%	37%	48%

Total number of Nat'l Board Certified Teachers (English, Math, Science, Social Studies combined)	13	3	4	6
Percentage: Teacher turnover	17.5/average	20.3	19.0	15.7
Total number of students enrolled	2,627	401	836	1,390
Percentage: White students enrolled	53%	76.3%	23.8%	64.3%
Percentage: Black students enrolled	13%	12%	13.9	13.1%
Percentage: Hispanic students enrolled	29%	9%	57.2	16.8%
Percentage: free and reduced price lunch	46.3%	38%	72%	29%
Miscellaneous	*AVID at every high school (260 BLCS students enrolled) *High school students may take courses at other schools if not offered at home school *1:1 district technology plan *District ACT Proficiency is 69.3%, almost one percentage point over state average (59.9%)	*Smallest BLCS high school (only 3-4 teachers max per department) *2015-16 Growth Status: MET Expectations (per NC School Report Card)	*Only BLCS "majority-minority" high school *First comprehensive high school in NC to offer a dual language program *Nine bilingual teachers *2015-16 Growth Status: EXCEEDED Expectations (per NC School Report Card)	*Largest BLCS high school *2015-16 Growth Status: MET Expectations (per NC School Report Card)

Additionally, the researcher has been employed with four school districts in central North Carolina and hoped to harness the capital found in already-established professional relationships to ease access to BLCS participant schools and personnel, and also to assist in establishing rapport with interview subjects. Marshall and Rossman (2011) legitimized the use of research sites that stem from a researcher's past employment experiences for those very reasons.

Researchers using past work sites should be able to secure access with less difficulty and also be able to more effectively be accepted as a colleague during data collection (Marshall & Rossman, 2011). Of course, access is never guaranteed nor is it necessarily and easily secured but viewing access and acceptance through a lens of reasonableness, a positive past work experience the byproduct of which is a reputation of professionalism, trust and ethical performance will more reasonably be an asset to a researcher than would the lack of such factors.

The scope of the study (three traditional high schools in one district) was based on limitations of time as well as aforementioned financial considerations. Most of the districts in central North Carolina contain an optimal number of traditional high schools to make realistic and reasonable the completion of an immersive, comprehensive study of the scheduling and teacher assignment processes found in the district. As mentioned as a research limitation in Chapter 1, the results of the study of teacher assignment and scheduling practices of North Carolina high schools cannot be guaranteed to be generalizable as an accurate indicator outside of the participant district nor throughout the United States (or of assignment and scheduling practices at the elementary and middle grades). For purposes of this study, the researcher considered the assignment practices and equity concerns found in the one participant district as a possible representation of practices and concerns found elsewhere while fully acknowledging the limitation of generalizability.

An intentional distinction was made to include data from only the *traditional* high schools for the chosen district. Based on admissions and eligibility criteria that typically skew student enrollment toward a more homogeneous composition, nontraditional high schools are unique enough in nature as to warrant exclusion from the focus of the equity study. Alternative schools are generally comprised of students with significant behavioral and learning challenges, factors that lead to high percentages of minority students and/or students from less financially

privileged backgrounds. Students at alternative schools are usually assigned due to long-term or excessive behavioral suspensions from their base schools. Magnet schools by nature attract students based on unique themes (such as arts or international studies for example). Typically, admission to a magnet school is not simply open to any student in the school district and often requires a specialized application process or perhaps an audition through which students must demonstrate a base line of talent or proficiency in a specific area of specialization. Magnet schools do not use a traditional geographic attendance zone to organize student enrollment and as such, bus transportation is often not provided. Factors of this sort can again skew the enrollment composition to be more homogeneous in nature. The researcher wished to consider issues of equity in public high schools the enrollments of which could more likely include students from a more distinct range of racial, cultural, and socioeconomic backgrounds. For these reasons, only traditional high schools were used as subjects in the study. The specific data collection procedures used in this study of teacher assignment and scheduling at traditional high schools will be detailed in the following section.

Data Procedures and Collection

As previously explained, the researcher employed a *design triangulation* (Creswell, 2002) type of research plan for collecting data for this study. Quantitatively, one significant data source at each participant high school was its master schedule including demographic student enrollment information (percentages of students from racial subgroups) in each core, required graduation course. The courses that fulfill graduation requirements in North Carolina and that were available to students in each BLCS high school—as well as available to teachers for assignment in each school’s master schedule—are listed in Table 3.2.

The data were gleaned from the master schedule through an equity audit, a research strategy that harnesses school and district data to locate and address patterns of inequality

embedded within school systems and processes (Brown, 2010) and recorded on a Demographic Data Questionnaire (Capper, Frattura, & Keyes, 2000) which is a template for organizing collected quantitative data (see Appendix B for a copy of the Demographic Data Questionnaire). To guide the researcher, the questionnaire provides prompts regarding demographic, socioeconomic, and racial characteristics for a school's students and staff accompanied by a corresponding blank with each prompt in which to record the information. Poston (1992) proffered fifteen areas of analysis for use with equity audits which included: administrative and supervisory practices, course offerings and access, demographic distribution, grouping practices and instruction, and teacher assignment and work load.

Table 3.2 North Carolina High School Graduation Requirements in Core Subject Areas

<i>English</i> (4 credits required)	<i>Math</i> (4 credits required)	<i>Science</i> (3 credits required)	<i>Social Studies</i> (3-4 credits required)
<u>English I</u> (standard <u>or</u> Honors)	<u>Math I</u>	<u>Biology</u> (standard <u>or</u> Honors)	<u>World History</u> (standard <u>or</u> Honors)
<u>English II</u> (standard <u>or</u> Honors)	<u>Math II</u> (standard <u>or</u> Honors)	<u>Physical Science</u> (Physical Science, Chemistry, <u>or</u> honors Chemistry)	<u>Civics & Economics</u> (standard <u>or</u> Honors)
<u>English III</u> (standard, Honors, <u>or</u> AP Language & Composition)	<u>Math III</u> (standard <u>or</u> Honors)	<u>Earth/Environmental</u> (Earth, Honors Earth, <u>or</u> AP Environmental)	<u>American History I</u> (standard <u>or</u> Honors)
<u>English IV</u> (standard, Honors, <u>or</u> AP Literature & Composition)	4 th Math options and <u>electives include but are not limited to:</u> <ul style="list-style-type: none"> • AP Calculus AB <u>or</u> BC • AP Statistics • Discrete Math • Advanced Functions & Modeling • Pre-Calculus • Essentials for College Math 	* <u>Advanced Science</u> <u>electives include but are not limited to:</u> <ul style="list-style-type: none"> • Biology II Honors/AP Biology • Chemistry II Honors/AP Chemistry • Physics • Honors Physics • Astronomy Honors • Anatomy & Physiology Honors 	<u>American History II</u> (standard <u>or</u> Honors) (Note: students may replace American History I and II with <u>one</u> credit of AP U.S. History) * <u>Advanced Social Studies</u> <u>electives include but are not limited to:</u> <ul style="list-style-type: none"> • AP US Government & Politics • AP Human Geography • Honors Psychology • AP Psychology

These are the sorts of dynamics and school processes that were covered in this research study of high school scheduling and teacher assignment practices. Table 3.3 represents a non-exhaustive yet reasonably thorough accounting of the quantitative and qualitative methods and sources for data used in this study.

Skrla et al. (2009) suggest that one purpose of an equity audit is to examine how teacher quality is distributed within schools. Using identified indicators of teacher quality for which research (Boyd et al., 2008; Chingos & Peterson, 2011; Clotfelter et al., 2006; Ehrenberg & Brewer, 1994; Wayne & Youngs, 2003) shows positive effects on student achievement—years of experience, licensure/certification (teachers assigned to classes in or out of their area of expertise), level of teacher education (completion of advanced degrees), National Board Certification—an equity audit could be conducted to examine teacher distribution patterns across grade levels, classes, and student groups within individual schools (Skrla et al., 2009).

As discussed in Chapter 2, teacher experience is perhaps the most studied teacher quality indicator. While there is consistent agreement in research (Boyd et al., 2008; Cohen-Vogel et al., 2013; Clotfelter et al., 2006; Feng, 2010; NBER, 2006; Rockoff, 2004) that teacher experience does in fact correlate with student achievement, the amount of experience necessary to optimize student achievement outcomes is in fact a matter of ongoing scholarly debate. There is a palpable emphasis in existing research (Boyd et al., 2008; Chingos & Peterson, 2011; Hanushek & Rivkin, 2004; NBER, 2005; Kalogrides & Loeb, 2013; Rivkin et al., 2005) on the difference in student achievement effects made between being assigned a teacher of total inexperience and a teacher with even 1-3 years of teaching—but much of that same research minimizes the positive impact on achievement made beyond the first few years of experience. However, there are some studies (Amrein-Beardsley, 2012; Clotfelter et al., 2006; Feng, 2010) that found positive correlations between many years of experience and student achievement. Most research of teacher quality reviewed for this study that looked at experience as a quality indicator utilized a range of experience in their research and this study of equity in teacher assignment practices followed suit.

Table 3.3 Quantitative/Qualitative Data & Sources

<i>Quantitative Data</i>	<i>Quantitative Sources/Methods</i>	<i>Qualitative Data</i>	<i>Qualitative Sources/Methods</i>
Student proficiency data: Biology, English II, Math I EOCs and ACT/SAT	<ul style="list-style-type: none"> • Analysis of NC School Report Cards • District/School websites • School profiles 	Processes, procedures, and considerations for assigning teachers to students at each participant school	<ul style="list-style-type: none"> • Semi-structured stakeholder interviews
Enrollment data in district and each high school, course, and course level: racial demographics, free/reduced lunch, Limited English Proficiency	<ul style="list-style-type: none"> • Analysis of NC School Report Cards • District/School websites • Equity audit of master schedule 	Processes, procedures, and considerations for changing student schedules at each participant school	<ul style="list-style-type: none"> • Semi-structured stakeholder interviews
Personnel data for district and each high school (numbers of teachers w/ each quality indicator)	<ul style="list-style-type: none"> • NC School Report Cards • District/School Websites • District Human Resources Dept. • Online survey administered to teachers 	School goals and climate/culture (re: decision making and the use/influence of various forms of capital by teachers and/or parents to influence the assignment of teachers to students)	<ul style="list-style-type: none"> • Semi-structured stakeholder interviews • Teacher Working Conditions survey results • School Improvement Plans • Online survey administered to teachers
Assignments of teachers with specific quality indicators to specific courses, course levels, and/or student groups	<ul style="list-style-type: none"> • Equity audit of master schedule 	Rationale and philosophy of each principal re: teacher assignments to students, courses, course levels	<ul style="list-style-type: none"> • Semi-structured principal interviews • School Improvement Plans
Four-year graduation rates by demographic subgroup	<ul style="list-style-type: none"> • District/School Websites • School profiles 	Course offerings available to students at each participant high school	<ul style="list-style-type: none"> • Equity audit of master schedule • School profiles

North Carolina School Report Cards classify teachers in the state schools within the following experience range: 0-3 years, 4-10 years, and >10 years. This study used a similar range but with one small adjustment. Due to compelling findings (Boyd et al., 2008; Chingos & Peterson, 2011; Hanushek & Rivkin, 2004; NBER, 2005; Kalogrides & Loeb, 2013; Rivkin et al., 2005) based on the differences in student achievement between being assigned a teacher with no prior experience and being assigned to a teacher with 1-3 years of prior experience, it was reasonable to similarly differentiate teacher experience as a quality indicator for this study. As such, the range of experience used to identify teachers for this study was <1 year, 1-3 years, 4-10 years, and >10 years.

There are two quality indicators identified in Chapter 2 that were intentionally omitted from this study. While research (Boyd et al., 2008; Chingos & Peterson, 2011; Clotfelter et al., 2006; Ehrenberg & Brewer, 1994; Wayne & Youngs, 2003) does support higher teacher scores on college entrance exams and/or certification exams as well as data from value-added measures, both types of information were inappropriate for this study as well as difficult if not impossible to procure due to the type of information (teacher SAT/ACT scores are not typically on file in Human Resources departments) or the expectation of confidentiality (teacher certification test scores). Districts in North Carolina most often use EVAAS as their source for value-added data and EVAAS connects data to teachers and students by name. The equity audit of each participant high school's master schedule was conducted blindly and impersonally with regard to teacher and student names as will be detailed below in the Data Analysis section. Comprehensiveness should not have been overly compromised because there is ample research (Boyd et al., 2008; Chingos & Peterson, 2011; Clotfelter et al., 2006; Cohen-Vogel et al., 2013; Jackson, 2009; NBER, 2005) that link the two omitted quality indicators with student achievement but also

concurrently link varying combinations of the four indicators chosen for this study with achievement as well.

The researcher does also acknowledge that there are indeed many other factors that contribute to teacher quality, even beyond those researched and detailed in Chapter 2 and ultimately, intentionally omitted from this study— including but not limited to more subjective, intangible factors such as authentic desire to grow low-achieving students and motivation for working with students from diverse backgrounds. Since this was a study for which the researcher did not use personal identifiers in his analysis (as would be necessary for the use of EVAAS data and teacher test scores) and for which he wished to maintain a tighter scope, it was determined that a focus on four key, objective, measurable indicators of teacher quality— experience, licensure/certification, advanced degrees, and National Board Certification—was most appropriate.

Teachers received an email from a district director on behalf of the researcher with a link to a brief online survey. The survey document was replete with check boxes and drop-down menus from which they could choose an answer to a series of brief close-ended questions asking respondents the following:

- Their assigned high school
- Their assigned subject/department
- Years of overall teaching experience
- Years of experience at their current school
- Highest level of education completed
- Whether or not they are Nationally Board Certified

- Whether or not they are fully licensed per the state of North Carolina in the subject area to which they are currently assigned to teach

There was also a box for respondents to add optional commentary if they chose, although most did not.

Other data sources for the study that offered maximum validity and were germane to participant schools were data sources that already exist as a matter of state record. Quantitative data sets that were appropriate for this research and are maintained by NCDPI included district and school-specific information gleaned from NC School Report Cards—such as proficiency data for racial and socioeconomic subgroups on state End-of-Course exams for Biology, English II, and Math I as well as information regarding teacher qualifications for each school such as numbers/percentages of fully licensed teachers and Nationally Board Certified teachers. There were other data sets maintained by NCDPI germane to this study such as the North Carolina Teacher Working Conditions (TWC) survey results, the validity of which may be less than maximum but were used for participant schools to illuminate impressions of school climate and culture, teacher empowerment, parent involvement, and school-based concerns related to equity, the racial achievement gap, new teacher support, and school decision making.

First implemented in 2002, the TWC is an anonymous survey of licensed, school-based educators conducted by the North Carolina Department of Public Instruction biennially (TWC, 2016). School administrators integrate TWC results into goals and action steps on School Improvement Plans as well as their own Professional Development Plans. It is designed to assess teaching conditions at the school, district, and state level in eight core constructs (TWC, 2016):

- Time (for planning, collaborating, and maximized instruction)
- Facilities & Resources (availability of instructional, technological, office, and communications supplies)

- Community Support & Involvement (community and parent/guardian influence and involvement)
- Managing Student Conduct (policies/practices to address student conduct and to ensure a safe school environment)
- Teacher Leadership (teacher involvement in decisions regarding classroom/school practices)
- School Leadership (ability of school leaders to address concerns and create supportive environments)
- Professional Development (availability/quality of learning opportunities for teachers)
- Instructional Practices & Support (accessibility to data for teachers to maximize instruction and learning)

Most germane to this study were school-specific results for TWC survey items related to parent involvement and influence (items 4.1 a, c, e), teacher leadership and influence (items 6.1 a-e, 6.2 g, 6.5), diverse learners and the achievement gap (items 8.1 l, 8.2 h, 8.3 h, 9.1 d), teacher professional collaboration (items 9.1 g, i), teacher mobility (items 10.3, 10.6, 11.7), and new teacher support (items 11.1 c). The specific TWC survey items most relevant to this study are included in Table 3.4. When combined with data from the equity audit of each school's master schedule and themes/patterns found in stakeholder interview responses, an analysis of the results to specific TWC survey items for participant schools helped shed light on the equity culture of each school and the shared priorities and values founding its scheduling and teacher assignment practices.

Validity with regards to the TWC refers to the process of ensuring that the survey “accurately measures what it is intended to measure” (p. 3)—in this case, the eight theoretical constructs it was created to capture as listed above (TWC, 2016). Another name for this standard of validity is “face validity” (does the instrument *on its surface* look like it's measuring what it

Table 3.4 Relevant North Carolina Teacher Working Conditions Survey Items

Parent Involvement & Influence

4.1 a: Parents/guardians are influential decision makers in this school. (Agree/Disagree)

4.1 c: This school does a good job of encouraging parent/guardian involvement.

(Agree/Disagree)

4.1 e: Parents/guardians know what is going on in this school. (Agree/Disagree)

Teacher Leadership & Influence

6.1 a: Teachers are recognized as educational experts. (Agree/Disagree)

6.1 b: Teachers are trusted to make sound professional decisions about instruction.

(Agree/Disagree)

6.1 c: Teachers are relied upon to make decisions about educational issues. (Agree/Disagree)

6.1 d: Teachers are encouraged to participate in school leadership roles. (Agree/Disagree)

6.1 e: The faculty has an effective process for making group decisions to solve problems.

(Agree/Disagree)

6.2 g: Teachers have an appropriate role at your school in each of the following areas... The selection of teachers new to this school. (Agree/Disagree)

6.5: Teachers have an appropriate level of influence on decision making in this school.

(Agree/Disagree)

Diverse Learners & the Achievement Gap

8.1 l: Professional development enhances teachers' ability to implement instructional strategies that meet diverse student learning needs. (Agree/Disagree)

8.2 h: In which of the following areas (if any) do you need professional development to teach your students more effectively?... Closing the Achievement Gap

8.3 h: In the past 2 years, have you had 10 clock hours or more of professional development in any of the following areas?... Closing the Achievement Gap

9.1 d: Teachers believe almost every student has the potential to do well on assignments.

(Agree/Disagree)

Teacher Professional Collaboration

9.1 g: Teachers collaborate to achieve consistency on how student work is assessed.

(Agree/Disagree)

9.1 i: Teachers have knowledge of the content covered and the instructional methods used by other teachers at this school. (Agree/Disagree)

Teacher Mobility

10.3: Which aspect of your teaching conditions most affects your willingness to keep teaching at your school?... Community Support & Involvement, School Leadership, Professional Development, Instructional Practices & Support, Teacher Leadership

10.6: Overall, my school is a good place to work and learn. (Agree/Disagree)

New Teacher Support

11.1 c: As a beginning teacher, I have received the following kinds of support... Reduced workload

11.7: Overall, the additional support I received as a new teacher has been important in my decision to continue teaching at this school. (Agree/Disagree)

should be measuring?). The TWC uses factor analyses to group together survey items with shared similarities and performs confirmatory factor analyses to verify that the structure of the data reflects the expected structure per the external validation study. It uses standard criteria to determine that the data aligned with the theoretical constructs of the survey. Factor analyses confirmed that there are at least eight factors that align with eight theoretical constructs. Factor correlations above the professional standard of .70 indicate a degree of overlap between survey items and indicate that the items do not measure distinct areas of teaching and learning. There are in fact a few instances of higher correlation which could negatively affect validation if viewed through a purely scientific lens. One such case of overlap is Teacher Leadership and School Leadership which correlate at .820. However, one could logically surmise a modicum of overlap between some constructs—if a teacher is pleased with the degree of teacher leadership in a school, the teacher might also reasonably be pleased with the quality of *school* leadership that nurtures a culture of promoting teacher leaders.

Tests for reliability ensure that a survey or instrument produces the same or very similar results with repeated use—that it is generalizable across settings, in this case, from school to school, district to district, across North Carolina (TWC, 2016). According to the TWC website, the reliability analyses for the TWC produce Cronbach's alpha coefficients ranging from 0.86 to 0.96. Alphas normally range between 0.00 and 1.00. The closer the Cronbach's alpha coefficient is to 1.00, the greater the internal consistency of the items in the scale. Alpha coefficients above 0.70 are considered acceptable. Alpha coefficients for all eight constructs assessed by the TWC are above 7.0 (TWC, 2016).

Supplementing the aforementioned quantitative student and personnel data were data collected from qualitative means such as semi-structured interviews via an interview guide with

administrators, counselors, and department chairpersons. What follows is a specific yet non-exhaustive list of the steps used for collecting data necessary for this study (in order):

1. Secure research access to one school district in central North Carolina including but not limited to the following types of information:
 - the master schedule for each high school for the current school year
 - the current year's demographic student enrollment information—such as race, gender, and grade level numbers—for each core course required for graduation by the state (4 courses apiece of English and Math, 3 courses apiece in Science and Social Studies) and taught at each BLCS high school
 - personnel information (including but not limited to: years of experience, licensure/certification, completion of advanced degrees, National Board Certification, teacher certification exam scores, and value-added data) germane to the professional credentials of each teacher assigned in the current year to each course in English, Math, Science, and Social Studies that is taught at each high school and that would fulfill graduation requirements for the state
 - permission for interviews with certified educators involved with the scheduling process at each participant high school
 - student achievement data including but not limited to scores on state End-of-Course tests (Biology, English II, Math I) and on the ACT
2. Complete an equity audit of the master schedule at each participant high school (see Appendix B for a copy of the Demographic Data Questionnaire).
3. Identify the educators at each participant high school (or at the district level) who act as builders of the schedule itself or act as influences during the building process.

4. Schedule, record, and transcribe exactly nine individual, semi-structured interviews with an equal representative selection of educators involved with the scheduling process at each participant high school such as school administrators and counselors.

Patton (2002) codified interviews into three distinct types: 1) the informal, conversational interview, 2) the interview guide or topical approach, and 3) the standardized or open-ended approach. There are differences in structure and formality with each but the type most appropriate for this study was the interview guide or topical approach. With this type of interview, the interview is formally scheduled and the interviewer arrives with a predetermined list of questions or topics (unlike the conversational type of interview) but strict adherence to a script or sequence of questions is not as necessary or as likely as in a standardized interview. This interview guide/topical approach ideally allowed for the guaranteed coverage of key concepts in the interview yet also allowed a level of latitude for asking follow-up questions or exploring relevant tangents as time permitted.

Similar to answers to the research questions used to guide this study, answers to questions used in semi-structured, topical interviews for this study provided insight to not only the *processes* associated with assigning teachers to students and creating and changing student schedules at each participant school but they also provided clarity to the *primary considerations* driving these processes as well as the types and amounts of *capital* leveraged by teachers and parents during the processes to achieve preferred assignments (see Appendix C for a copy of the interview protocol). The alignment of the research questions with the questions that were posed in interviews to agents in the teacher assignment and scheduling processes at each participant school is shown in Table 3.5.

Table 3.5 Alignment of Research Questions with Topical/Semi-Structured Interview Questions

<i>Research Question/Sub-questions</i>	<i>Interview Question #</i>
From a leadership perspective, how are teachers assigned to students at the high school level (i.e., what criteria—formal and informal—are and are not considered, including issues of equity)?	1, 1a, 1b, 1c, 1d 2, 2a, 2b, 2c, 2d, 2e 3, 3a, 3b, 3c, 3d, 3e 4, 4a, 4b, 4c, 4d
How adequate and equitable is the access to preferable teacher assignments enjoyed by students from historically marginalized or at-risk populations when compared to students from the historically privileged, dominant population?	1, 1a, 1b, 1c, 1d 2b, 2e 3b, 3c 4, 4a, 4b, 4c, 4d
Are the racial achievement gap and equity for students from historically marginalized or at-risk populations considered <i>primary</i> considerations that drive or influence the construction of high school master schedules and if so, how?	1, 1b, 1c, 1d 2, 2a 3b 4c
Do high school teachers wield social and/or cultural capital effectively to influence school principals to gain preferable course assignments and by default, to control the types of students to which they will be assigned to teach and if so, how is it manifested?	1, 1a 2, 2a, 2b, 2c, 2d, 2e 3, 3c 4d
How actively involved are the parents of students from historically privileged or dominant populations in determining the courses to which their children enroll and advocating with principals and counselors for the teachers to whom their children are assigned than are the parents of students from historically marginalized or at-risk populations?	1, 1b 3, 3b 4, 4a, 4b, 4c, 4d

Interviews lasted approximately 45 minutes in duration. Interviews shorter than 30 minutes would not have allowed for depth and breadth of data collection and interviews longer than 60 minutes would have been considered inappropriately disruptive to the participant. Interview questions pertained to the procedural aspects of the scheduling and teacher assignment processes at each school, decision making criteria used for changing the schedules of individual students, school-specific information related to student and staff demographics gleaned during the equity audit and from the Demographic Data Questionnaire, and the *formal* roles played by each type of stakeholder in the scheduling process (students, parents, teachers, department chairs, counselors, and administrators). (See Appendix C for a copy of the interview protocol.) Utilizing his training and experience as a school leader and former counselor in areas of cultural leadership and diplomacy, the researcher's primary goal with participant interviews at each high school was to

reveal with utmost clarity the degree to which the following considerations influence the assignment of teachers to students:

- The racial achievement gap and issues of student equity
- The “This is the way we’ve always done it” factor (recent, relevant school and community history)
- The power dynamics in each school as related to the construction of the master schedule and the degrees of stakeholder autonomy or choice allowed by the principal
- Perceptions of the manifestations of cultural and social capital plied by parents with administrators and/or counselors to positively affect teacher assignment for their own children
- Perceptions of the manifestations of cultural and social capital plied by teachers to gain preferred teaching assignments

Interview questions did not specifically reference race, the achievement gap, Bourdieu, cultural reproduction, or forms of capital but were instead constructed to be more open-ended as to not lead the subject to an assumed response. However, once the collected interview data were analyzed, the levels of capital influencing the teacher assignment and scheduling processes at participant schools—as well as the manner in which the concept of habitus is evidenced through such processes—was able to be reasonably inferred based on the thrust of the interview questions. The alignment of key theoretical concepts with the questions that were posed in interviews to agents in the teacher assignment and scheduling processes at each participant school is shown in Table 3.6. It should be noted that habitus and the various forms of capital

Table 3.6 Alignment of Theoretical Framework with Topical/Semi-Structured Interview Questions

Theoretical Component	Interview Question #
<i>Cultural reproduction</i> is the cyclical perpetuation of inequity and power differentials in institutional settings in which members of the dominant class will leverage the capital they have inherited and/or accumulated to maintain their privilege and dominance over the underprivileged.	1, 1a, 1b, 1c, 1d 2, 2a, 2b, 2c, 2d, 2e 3, 3a, 3b, 3c, 3d, 3e 4, 4a, 4b, 4c, 4d
<i>Cultural capital</i> consists of intimacy and familiarity with the knowledge base which promotes the dominant social order. It is conceptualized to be hereditary, invisible, and—in terms of schools—institutionalized. Cultural capital is a type of unwritten social rule in which class plays a key role.	1, 1a, 1b, 1d 2, 2a, 2b, 2e 3, 3a, 3c 4, 4b, 4d
<i>Social capital</i> is an advantage or influence gained by association with like-minded individuals in social settings. A type of quid pro quo, it is an exercise in reciprocity in which participants expect returns on investments in relationships. Social capital is manifested in schools when stakeholders wield influence to assist students in gaining an instructional edge.	1, 1a, 1d 2, 2c, 2d, 2e 3, 3a, 3c 4, 4a, 4b, 4c, 4d
<i>Symbolic capital</i> is a persistent form of social distinction which accumulates over time and equates to symbolic power that is shared or bequeathed between agents within the social world. Those enjoying the most symbolic capital are best equipped to equalize the social paradigm yet least inclined to do so.	1, 1a, 1d 2, 2b, 2c, 2d, 2e 3, 3a, 3b, 3c 4, 4a, 4b, 4c
<i>Habitus</i> is a set of prevailing attitudes, behaviors, and values transmitted within one's home or between one's intimate relations without conscious recognition. The dominant habitus is a set of attitudes and values maintained by the dominant class, a major component of which is a positive attitude towards education.	1, 1a, 1b, 1c, 1d 2, 2a, 2b, 2e 3, 3a, 3b, 3c 4, 4a, 4b, 4d

listed are considered tenets of cultural reproduction. Their seeming equivalency in Table 3.6 is neither intentional nor appropriate to infer—the table is merely meant to show correspondence between the interview questions and the key concept *as well as* its individual components.

There was only one interview per key stakeholder, per school—including each principal as well as a mix of assistant principals, counselors, and subject department chairs depending on the school—although follow-up communication did occur during the course of data analysis (but merely for clarification purposes). As interviews were completed and data were collected from educators at each participant school, the researcher concurrently engaged in organizing, analyzing, and synthesizing the data. Maintaining an ongoing “immersion” in the data not only informed other interviews but also made apparent the need to contact past interview subjects again to ask clarifying questions. For a comprehensive alignment of the research questions, the semi-structured/topical interview questions that were posed to stakeholders, and key components of the theoretical framework used for this study, please refer to Appendix D.

Lastly, there are other potential, school-specific sources that held relevancy to this study. Items such as each participant high school’s School Improvement Plan, Mission and Vision Statements, school profiles (such as those that are sent to colleges and universities when students apply), and protocols for interviewing/vetting teacher candidates were analyzed and utilized to support findings and conclusions for this study.

Researcher Bias

Scholarly research should strive to reach the highest levels of neutrality and objectivity in order for it to be fully credible. The researcher is an educator with over 16 years of experience as a high school counselor and administrator as well as abundant experience not only building master schedules but also processing thousands of individual student schedule changes. As a general practice, the researcher also has employed a critical eye to uncover conditions of student inequity in his work, and has remained committed to mitigating and extinguishing oppressive and/or racist conditions that have been found within his educational institutions. As such, it was acknowledged that the researcher would predictably suffer some degree of researcher bias. An

overarching goal of the research was not to allow bias to negatively affect the work nor to have it be evident to participants. Utilizing sound research strategies such as providing appropriate amounts of disclosure to participants, employing peers as “critical friends” and barometers for neutrality, and some a priori coding schemes for data analysis helped the researcher remain hyper-vigilant in avoiding the potentially compromising damage that could be caused by bias.

Data Analysis

Researchers gather data and, during the course of review and analysis, organize or categorize the most relevant bits of data by concepts identified from review of the scholarly literature or perhaps by emergent themes or patterns found within the data itself. At its core this practice is essentially the essence of data coding. As a term, *data coding* connotes a range of approaches that assist the researcher in organizing, retrieving and interpreting data (Coffey & Atkinson, 1996). Marshall and Rossman (2011) detailed the varied schemes that coding takes (including but not limited to abbreviations, key words, colored dots, and numbers). As the researcher thoroughly immersed himself into the data analysis process, he was able to *see* data beyond its superficial significance and was then able to group or *cluster* bits of data by patterns that have become obvious over time and through study. *Subclusters* of data are also possible to identify once organized under a larger thematic code (Marshall & Rossman, 2011).

Once data for this study was collected from an equity audit of each participant school’s master schedule and from semi-structured, topical interviews with key stakeholders involved with matching teachers with students via scheduling practices at each participant school, it was analyzed and coded to uncover clusters of emergent themes or patterns. While remaining open to adjusting them during focused data analysis, qualitative researchers often rely on *predetermined* categories for coding data to aid in swifter retrieval and more efficient analysis (Marshall & Rossman, 2011). To ensure alignment of potential data clusters with this study’s data theoretical

framework, Table 3.7 demonstrates connectivity between the primary components of Bourdieu's Theory of Cultural Reproduction (Bourdieu, 1985; 1989; 1991), predetermined codes, and potential participant interview responses to be used for coding.

Table 3.7 Alignment of Theoretical Components, Predetermined Data Codes and Potential Responses for Coding

<i>Theoretical Component</i>	<i>Codes</i>	<i>Potential Responses for Coding</i>
Cultural reproduction	<ul style="list-style-type: none"> • Access • Vertical Equity • Diversity 	<u>Examples:</u> hetero/homogeneity of course enrollments; existence of forum for requesting/appealing assignments; the roles played by equity/achievement gap in scheduling; perpetuating culture of teacher seniority in assignments
Cultural capital	<ul style="list-style-type: none"> • Systems Knowledge • Socioeconomic Status • Parental Habitus • Context 	<u>Examples:</u> knowledge of college requirements; English language proficiency of students; student/parent familiarity with school resources/entities; priorities of parents/students
Social capital	<ul style="list-style-type: none"> • Reciprocity • Influence • Supportive Relationships 	<u>Examples:</u> seeking/being granted power over or involvement with scheduling decisions; department chair advocating for department colleagues; teacher mentors suggesting optimal assignments for new teacher
Symbolic capital	<ul style="list-style-type: none"> • Transparency • Autonomy with Decision Making 	<u>Examples:</u> principal's/counselor's consideration of schedule requests for unofficial reasons; level of adherence to official protocols
Habitus	<ul style="list-style-type: none"> • Agency • Advocacy • Self-Advocacy 	<u>Examples:</u> student enrollment in advanced level courses; parents requesting schedule/teacher changes; teacher volunteers to assist with scheduling; principal providing new teachers with manageable assignments

The data analysis portion of this study utilized coding in multiple distinct forms and for specific purposes. Prior to analyzing the master schedules of participant schools, codes were assigned to correlate with specific, predicted characteristics of teacher quality (i.e. number

ranges—such as <1, 1-3, and 4-10—represent years of experience, letters represent level of education such as B for Bachelors and M for Masters, and so forth). On a hard copy of each school's master schedule, teacher names were obscured for confidentiality purposes. A series of columns were drawn to the left of each section of a core, required course in English, Math, Science, and Social Studies that was listed and a code was placed within a given column to show that the teacher of a given course section holds a particular preferred characteristic.

A point value was assigned to each quality indicator possessed by a teacher. Based on consistently positive research (Adamson & Darling-Hammond, 2012; Berliner, 2001; Boyd et al., 2008; Chingos & Peterson, 2011; Clotfelter et al., 2006; Cohen-Vogel et al., 2013; Goldhaber & Anthony, 2007; Goldhaber & Brewer, 2000; NBER, 2007), a teacher earned 5 quality points apiece for having either National Board Certification or for being fully licensed in his or her assigned content area. Experience was scored based on ample research the findings of which demonstrated that novice teachers lowered student achievement (Boyd et al., 2008; Clotfelter et al., 2006; Feng, 2010; Kalogrides & Loeb, 2013; NBER, 2006), that there is a significant jump in student achievement made during the first few years of experience (Chingos & Peterson, 2011; NBER, 2007; Rockoff, 2004) and that diminishing returns were produced with student achievement after several years of experience (Boyd et al., 2008; Chingos & Peterson, 2011; Hanushek & Rivkin, 2004; NBER, 2007; Rivkin et al., 2005). As such, novice teachers were assigned 2 negative quality points (-2), teachers with 1-3 years' experience were assigned 5 quality points, teachers with 4-10 years' experience were assigned 4 quality points, and teachers with more than 10 years' experience were assigned 2 quality points. Although there are research findings that correlate teachers' advanced degrees with positive effects on student performance (Adamson & Darling-Hammond, 2012; Dewey et al., 2000; Ehrenberg & Brewer, 1994; Ferguson & Ladd, 1996; Goldhaber & Brewer, 2000; Greenwald et al., 1996; Knoeppel &

Rinehart, 2008), research was generally more mixed regarding the achievement effects caused by teachers with advanced degrees. Due to this less obvious consensus found in prior research, a teacher earned 1 quality point for holding a Master's degree and 2 quality points for a doctorate. Once teachers were sorted by total quality score, a review of student racial demographics within each course section was intended to yield findings that would either validate or dispute the researcher's hunch that high school students from the dominant culture are assigned to higher quality teachers with consistently greater frequency than are students from historically marginalized populations.

Once interviews of exactly three key agents in the scheduling and teacher assignment processes at each school were completed, the recorded interviews were transcribed and participant statements coded and organized by *research concept* (such as examples of social and cultural capital at play in the scheduling process), *emergent themes* (such as the assumption of teacher seniority or the influence of the achievement gap in assignment decisions), and *persistent patterns*. For instance, answers from interview subjects that relate thematically to the impact of parent influence on teacher-student matching were coded into comprehensive clusters (including similar responses from all educators interviewed for the study regardless of school site) as well as more distinct sub-clusters (similar interview responses from educators assigned to a specific school). Within the theoretical framework chosen for the study, the researcher articulated the level of influence of social and cultural capital wielded by school stakeholders as ultimately manifested in teacher assignment and scheduling decisions.

As would be exemplified by research conducted with Creswell's (2002) model of design triangulation, this researcher's primary goal in data analysis was to realize congruence with the data. The findings from the equity audit and from the analyses of the master schedule and demographic course enrollment data for each participant school was, as previously stated,

supported for better or worse by the interview data completed at each participant school. Each school's interview data concurrently made clear the decision-making protocols evidenced in the assignment of specific teachers to specific courses and student groups via the master schedule. The next section discusses the researcher's methods and strategies for establishing trustworthiness in his research.

Establishing Trustworthiness

As alternatives to the familiar quantitative standards used to affirm research such as reliability, validity, and generalizability, Lincoln and Guba (1985) offered standards that are arguably more appropriate for qualitative research:

- Credibility—(the alternative to validity as used in quantitative research) presenting to the reader a study that was conducted in such a way that the subject was identified and described accurately and appropriately
- Dependability—showing how the researcher will account for changing phenomena once engaged in the research (the notion that the social world is not static and is always evolving)
- Confirmability—demonstrating how the logical inferences of the researcher can make sense to others, showing with clarity how conclusions were reached
- Transferability—the qualitative “twin” of generalizability; how the researcher demonstrates the usefulness of his findings for others in similar research situations

Lincoln and Guba (1985) also provided procedural elements for researchers to employ to further insure that these qualitative standards of trustworthiness are sound and that they hold integrity. The procedures used to ground Lincoln and Guba's (1985) standards of trustworthiness are procedures that this researcher followed as well including but not limited to:

- Member checks—sharing post-analysis findings and interpretations with a small sample of participants (the researcher confirmed and clarified data collected during interviews with certain interview subjects after transcription)
- Triangulation—gather data from multiple sources using multiple methods (the researcher collected data directly from each school’s NC School Report Card and master schedule among other sources, completed an equity audit, and held participant interviews)
- Peer debriefing—sharing findings and emergent themes/patterns with “critical friends” to ensure sound analysis (the researcher identified peers and mentors who are familiar with the research topic and knowledgeable about scholarly research practices who reviewed findings and posed challenges to the researcher’s conclusions)

Remaining mindful to adhere to the systems of checks and balances established in qualitative and quantitative research practices ensured soundness in the research study. Researcher assumptions and limitations will be the focus of the following section.

Assumptions and Limitations

Researcher assumptions are certain considerations related to the research topic that exist inherently and over which the researcher has no control. The researcher directly acknowledges and articulates these assumptions prior to the conduction of the study. This study includes a few inherent assumptions:

- At high schools each spring and summer, it is standard practice for either the principal and/or a cadre of building leaders facilitated by the principal (including assistant principals, counselors and department chairpersons) to create the master

schedule to be used the following year. Such school personnel may outright build the schedule or may simply influence its revision.

- School-specific equity audits of master schedules and fixed data sets (including but not limited to demographic enrollment data for individual course sections and human resources data regarding professional teaching credentials) will yield information necessary for proving or disproving that students who are racially and/or socioeconomically disadvantaged lack equitable access to preferable teacher assignments.
- Participants in interviews are knowledgeable about the process of constructing master schedules for their schools and related considerations.
- Participants in interviews have knowledge and opinions about the factors that influence teacher assignments and have no reason not to be truthful when responding to questions.
- Teachers completing the online survey regarding their own credentials are certain of their own credentials and have no reason not to be truthful when responding to survey questions.

Similar to assumptions, limitations exist with any scholarly research study and must be acknowledged and articulated for the subsequent research to be legitimated. Limitations are considerations (or in some cases, actual *weaknesses*) related to the study over which the researcher ultimately has little to no control. For example, a researcher can follow all proper channels to secure access to school records or protected data and still ultimately be denied access. The researcher can follow all proven protocols and practices for structuring a safe, confidential, comfortable focus group and ultimately still not be guaranteed candor and honesty from participants. Limitations inherent with this study included:

- Neither sufficient access *to* esoteric school data by the researcher nor the accuracy *of* the data (including but not limited to demographic course enrollment data and personnel data regarding teacher credentials) was guaranteed.
- Sufficient access at individual high schools to potential interview participants by the researcher (including but not limited to school administrators, counselors, and department chairpersons) was not guaranteed.
- The accuracy of data collected via the online survey germane to teacher credentials was dependent upon the honesty and accuracy of the teacher completing the survey.
- The accuracy of qualitative data collected through interviews at participant schools was dependent upon the candor, transparency and personal perceptions of research subjects.
- The parameters of the study of teacher assignment and scheduling practices were limited to only high schools and only high schools in one relatively small district in North Carolina. The results of such a study cannot be guaranteed to be generalizable as an accurate indicator of teacher assignment and scheduling practices throughout the United States or of assignment and scheduling practices at the elementary and middle grades.
- The parameters of the study of the assignments of teachers possessing various indicators of quality were intentionally limited to include only four tangible, specific quality indicators—years of experience, licensure, and possession of advanced degrees and National Board Certification—despite the

acknowledgement of the existence of many other factors that affect teacher quality including but not limited to more subjective, intangible factors.

- The parameters of this study of teacher assignment and scheduling practices includes an emphasis on the influence of parent capital yet does not attempt to quantify that influence. An intentional choice was made by the researcher to research the influence of parent capital only through qualitative means.
- The focus of this study is limited to only one aspect of student equity—teacher assignment—and only offers cursory or tangential mention to other potential influences on equity including but not limited to: AVID, ESL, and EC programming.

Significance

As a social justice champion and as an advocate for students, this researcher assumes a moral obligation to heighten awareness of inequities with student/teacher scheduling, a process which by itself can exemplify institutionalized racism. Research on teacher sorting among and within schools supported the researcher's belief (if not irrefutably affirmed it) that the high school scheduling process which may outwardly appear to be a somewhat innocuous routine to the layperson is in essence a form of institutionalized racism, an example of school finance inequity, and a potential and substantive contributor to the racial achievement gap, deserving of much greater attention in leadership and policy circles.

Data sources for the study that offered maximum validity and were germane to participant schools were those that already existed as a matter of state record. Examples of quantitative data sets that were appropriate for this research that are compiled and maintained by NCDPI included End-of-Course and ACT test data gleaned from NC School Report Cards as well as data sets such as TWC survey results used to corroborate data collected from participant

interviews regarding the cultures and climates of participant schools. Another critical data source for each participant school was the current master schedule and demographic data for students enrolled in core courses. Obviously, a modicum of personnel information from teachers assigned to the participant schools and from the BLCS human resources department related to the credentials (years of experience, licensure/certification, level of education, National Board Certification, teacher certification exam scores, and value-added data) of English, Math, Science, and Social Studies teachers was pertinent to this study as well. Supplementing the aforementioned quantitative student and personnel data were data collected from qualitative means such as the completion of one interview apiece with active agents in the scheduling process at each participant school including principals, assistant principals, counselors, and department chairpersons. Through a system of checks and balances such as those conceptualized by Lincoln and Guba (1985) the researcher strived to make utterly trustworthy the qualitative findings of this study.

With a minimum yet substantive amount of congruence realized between quantitative and qualitative data sets found in this study, the findings of this research are potentially significant on a number of fronts. First this study adds substantively to the scholarly discourse by focusing attention on an often overlooked or at least underrated contributor to the achievement gap: the role that high school teacher assignment plays as an exercise in equity. Additionally, outcomes of the research can inform the planning of school leaders and the efforts of policy makers as they work to eradicate the racial achievement gap by creating protocols and scheduling structures that will optimize the provision of equitable learning experiences for every high school student.

Conclusion

The researcher chose a mixed methods approach to conduct this study of high school teacher assignment and scheduling processes. Data were collected, analyzed, and reported through a framework of Bourdieu's Theory of Cultural Reproduction. First quantitative data were collected on each traditional high school in the participant district using established data sets maintained by NCDPI and which offer maximum validity such as NC School Report Cards (for data on issues germane to participant schools such as state End-of-Course exam performance per demographic subgroups, teacher turnover rates, and percentages of teachers with specific qualifications) as well as data sets such as TWC survey results the validity of which may be less than maximum but can be used for participant schools to illuminate impressions of school climate and culture, teacher empowerment, parent involvement, and school-based concerns related to equity, the achievement gap, new teacher support, and school decision making. Each school's master schedule was coded based on predicted indicators of teacher quality as reported by existing scholarly research (years of experience, licensure/certification, level of education, National Board Certification, teacher certification exam scores, and value-added data) and underwent an equity audit. Using identified indicators of teacher quality for which research (Adams & Darling-Hammond, 2012; Clotfelter et al., 2006; Ehrenberg & Brewer, 1994; Goldhaber & Brewer, 2000; Harris & Sass, 2011; NBER, 2006; Neild & Farley-Ripple, 2008; Wayne & Youngs, 2003) showed positive effects on student achievement (such as level of teacher education, years of experience, and certification), the primary purpose of each equity audit was to examine how teacher quality was distributed within each participant school—across grade levels, classes, and student groups (Skrla et al., 2009).

Supplementing the equity audit for each participant school was a series of individual, qualitative interviews (see Appendix C for a copy of the interview protocol) with approximately

three specific educators—such as administrators, counselors, and teacher leaders—involved in assigning teachers to courses and assigning students to classes via the scheduling protocols at each high school. There was only one interview per key stakeholder, per school although follow-up communication occurred for purposes of clarification during the course of data analysis. The purpose of the interviews was to illuminate the motivations behind assignment and scheduling decisions—most specifically to gauge the influences on the process by the achievement gap, concerns for student equity, and different forms of capital as wielded by teachers and parents. Utilizing a design triangulation research model (Creswell, 2002), the researcher used quantitative findings to validate qualitative findings and vice versa. In other words, the researcher sought congruence between quantitative findings from the equity audit of each participant school’s teacher assignment and scheduling processes, the analysis of school-specific data (such as achievement and teacher quality data via School Report Cards as well as data from the TWC survey results), and qualitative data collected during stakeholder interviews at each participant school. It is the belief of the researcher that the study yielded findings that can be used by practitioners to prioritize equity in decision making over other influential considerations, used by leaders at the district level to inform scheduling and teacher assignment policies, and used to heighten attention in research circles to an underrated contributor to inequity and the racial achievement gap: high school teacher assignments via the master scheduling process.

CHAPTER IV: RESULTS

Introduction

This chapter begins with a very brief examination of the sociopolitical dynamic of race as recorded in the historical archives of Bay Lake County, located in central North Carolina. The first federal census taken in 1790 showed a Bay Lake County population of 9, 221 including over 1,500 slaves and fewer than 100 free black citizens (Siler, 1932). As a community in 1907, this town memorialized its collective role in the Civil War by erecting a statue of a Confederate soldier in front of its courthouse (Lewis, 2007)—a statue that remains to this day. Copies of the county’s newspaper (founded in 1878 and still in circulation) that were printed around the turn of the century commonly contained editorials promoting white supremacy and urging the suppression of voting rights for newly freed former slaves. The paper specifically promoted the establishment of white supremacy clubs in Bay Lake County in the early 1900’s and one was formed, attracting over 3,000 citizens from the surrounding area (Lewis, 2007). In the late 18th century and 19th century, the county’s schools were usually housed in churches. The first school specifically for African American students in Bay Lake County’s largest town was located in an Episcopal church (Lewis, 2007). The most recent census, which was taken in 2010, reported that Bay Lake County had a population of 63,505 which included (in part) residents of the following racial/ethnic backgrounds: 71% white, 13% African American, and 12% Hispanic (Chatham County, 2017).

Bay Lake County Schools (BLCS) is a relatively small public school district—the only one in Bay Lake County—the three traditional high schools of which served as the research

sample for this study. As reported by stakeholders from each high school that were interviewed for this study— Kali River High School (KRHS), Artist Point High School (APHS), and Liberty Square High School (LSHS)—there is a small town feel with the BLCS high schools such that staff members (including some of the interview participants for this study) in many cases graduated from the schools in which they now work. While the three schools are actually distinctly unique from one another in student enrollment, the number of teachers, and the racial and socioeconomic demographics of the student body, the schools share some similarities as well. To name two similarities, each school is on a block schedule (with four different 90-minute classes per day each semester for a total of eight possible classes completed each year by each student) and each school has an active AVID program, which is a college preparatory program in public middle and high schools that requires the completion of college prep elective courses. According to its website, its mission is “to close the achievement gap by preparing all students for global readiness and success in a global society” (AVID, 2016). AVID is aimed at students achieving in the “academic middle”—specifically students who earn grades of B, C or even D (AVID, 2016)—and is an elective program most often chosen by minority students, socio-economically disadvantaged students, and/or potential first-generation college aspirants. Table 4.1 represents performance data germane to this study for the district and for each of the three traditional BLCS high schools (in order of size): Liberty Square High School (LSHS), Artist Point High School (APHS), and Kali River High School (KRHS). Included are proficiency percentages for the historically dominant population of students (white) and proficiency percentages for the historically marginalized populations of students (black and Hispanic) as well as proficiency percentages for subgroups germane to this study (Economically Disadvantaged/EDS, Limited English Proficient/ELL, Students with Disabilities/SWD). The table includes proficiency data for each subgroup with the following measures or standards:

combined EOC subject proficiency, separate proficiency percentages for each individual EOC subject (Biology, English II, and Math I), ACT composite scores, and 4-year graduation rates. The information provided is based on 2015-2016 school data from the most recent available NC School Report Card for each school.

Table 4.1 Performance Data for BLCS High Schools: 2015-2016 (percentages by subgroup; sourced from NC School Report Card and district data reports)

<u>Performance Measure/Subgroup</u>	<u>White</u>	<u>Black</u>	<u>Hisp</u>	<u>EDS</u>	<u>ELL</u>	<u>SWD</u>
<u>All EOC subjects- combined</u>						
DISTRICT	70.3	33.5	41.2	38.9	11.7	12.0
LSHS	70.4	34.5	31.3	30.6	<5.0	14.3
APHS	70.6	24.4	43.6	41.7	17.9	<5.0
KRHS	57.3	44.7	36.8	44.1	<5.0	17.4
<u>Biology EOC</u>						
DISTRICT	53.5	30.9	32.1	33.8	5.0	13.3
LSHS	68.3	34.6	26.2	28.8	<5.0	15.7
APHS	66.0	14.8	35.7	34.6	<5.0	<5.0
KRHS	58.9	50.0	45.5	53.5	*	21.4
<u>English II EOC</u>						
DISTRICT	67.7	34.3	42.3	40.9	6.8	8.6
LSHS	73.0	37.7	34.2	35.2	<5.0	14.3
APHS	66.0	24.2	47.9	44.4	11.5	<5.0
KRHS	57.7	54.5	50.0	52.2	*	14.3
<u>Math I EOC</u>						
DISTRICT	76.4	35.0	47.4	41.2	20.3	13.6
LSHS	69.1	31.7	32.9	28.0	8.0	13.1
APHS	79.2	33.3	46.9	45.3	31.7	6.3
KRHS	55.2	33.3	15.4	27.7	*	16.7
<u>ACT Composite</u>						
DISTRICT	79.2	52.7	48.3	47.9	5.0	43.2
LSHS	82.5	48.8	45.7	40.7	*	52.0
APHS	65.8	68.4	52.8	50.5	*	*
KRHS	81.2	50.0	*	69.0	*	*
<u>4-Year Graduation Rate</u>						
DISTRICT	91.3	78.6	79.4	78.4	66.7	67.6
LSHS	91.0	78.9	71.4	71.0	60.0	69.0
APHS	92.1	78.6	84.2	80.8	66.7	52.6
KRHS	92.2	87.5	66.7	82.1	*	71.4

*Note: * subgroup included fewer than 10 students.*

As detailed in the previous chapter, the researcher utilized a “mixed methods” approach in completing this research study meaning that a combination of quantitative and qualitative data

collection and analysis methods were used to address the research questions. In this chapter, the researcher will present findings of his research into the teacher assignment practices of the three BLCS high schools. The findings include but are not limited to qualitative data from stakeholder interviews and analysis of school-specific data sets and documents such as TWC survey results, School Improvement Plans (SIPs), School Report Cards, and school policies germane to teacher assignment and student schedule changes, as well as quantitative data collected via an equity audit of each school's master schedule and teacher assignment practices. A sample of 2016 TWC survey responses germane to the culture of teacher leadership, collaboration, support, and retention as well as parent involvement and influence found at each of the three BLCS high schools as well as for all North Carolina high schools is presented in Table 4.2.

As presented in the preceding chapters, there was a primary research question guiding this study:

From a leadership perspective, how are teachers assigned to students at the high school level (i.e., what criteria—formal and informal—are and are not considered, including issues of equity)?

The following sub-questions are germane to the research question and were subsequently addressed through the completion of this study as well:

- Are the racial achievement gap and equity for students from historically marginalized or at-risk populations considered *primary* considerations that drive or influence the construction of high school master schedules and if so, how?
- Do high school teachers wield social and/or cultural capital effectively to influence school principals to gain preferable course assignments and by default, to control the types of students to which they will be assigned to teach and if so, how is it manifested?

- How actively involved are the parents of students from historically privileged or dominant populations in determining the courses to which their children enroll and advocating with principals and counselors for the teachers to whom their children are assigned than are the parents of students from historically marginalized or at-risk populations?

Table 4.2 Partial 2016 Teacher Working Conditions Survey Results for BLCS High Schools

<i>TWC Item</i>	<i>Percentage Per Response (KRHS)</i>	<i>Percentage Per Response (APHS)</i>	<i>Percentage Per Response (LSHS)</i>	<i>Percentage Per Response (NC High Schools)</i>
<u>4.1a:</u> Parents/guardians are influential decision makers in this school. (Agree/Disagree)	74% Agree 25% Disagree	77% Agree 23% Disagree	77% Agree 23% Disagree	71% Agree 30% Disagree
<u>4.1c:</u> This school does a good job of encouraging parent/guardian involvement. (Agree/Disagree)	96% Agree 3% Disagree	94% Agree 6% Disagree	87% Agree 13% Disagree	87% Agree 13% Disagree
<u>4.1e:</u> Parents/guardians know what is going on in this school. (Agree/Disagree)	90% Agree 9% Disagree	95% Agree 5% Disagree	87% Agree 12% Disagree	82% Agree 19% Disagree
<u>6.1a:</u> Teachers are recognized as educational experts. (Agree/Disagree)	93% Agree 6% Disagree	95% Agree 5% Disagree	89% Agree 11% Disagree	83% Agree 17% Disagree
<u>6.1b:</u> Teachers are trusted to make sound professional decisions about instruction. (Agree/Disagree)	91% Agree 9% Disagree	97% Agree 3% Disagree	90% Agree 10% Disagree	85% Agree 15% Disagree
<u>6.1c:</u> Teachers are relied upon to make decisions about educational issues. (Agree/Disagree)	84% Agree 15% Disagree	97% Agree 3% Disagree	81% Agree 19% Disagree	83% Agree 18% Disagree
<u>6.1d:</u> Teachers are encouraged to participate in school leadership roles. (Agree/Disagree)	97% Agree 3% Disagree	100% Agree 0% Disagree	92% Agree 8% Disagree	91% Agree 9% Disagree

<u>6.1e:</u> The faculty has an effective process for making group decisions to solve problems. (Agree/Disagree)	91% Agree 9% Disagree	98% Agree 2% Disagree	71% Agree 30% Disagree	76% Agree 24% Disagree
<u>6.2g:</u> Please indicate the role teachers have in each of the following areas in your school... The selection of teachers new to this school. (Agree/Disagree)	68% Agree 33% Disagree	62% Agree 38% Disagree	44% Agree 55% Disagree	36% Agree 64% Disagree
<u>6.5:</u> Teachers have an appropriate level of influence on decision making in this school. (Agree/Disagree)	79% Agree 21% Disagree	91% Agree 9% Disagree	68% Agree 32% Disagree	68% Agree 32% Disagree
<u>8.1i:</u> Professional development enhances teachers' ability to implement instructional strategies that meet diverse student learning needs. (Agree/Disagree)	84% Agree 15% Disagree	82% Agree 18% Disagree	64% Agree 37% Disagree	81% Agree 20% Disagree
<u>8.2h:</u> In which of the following areas (if any) do you need professional development to teach your students more effectively?... Closing the Achievement Gap	34% Yes 66% No	48% Yes 52% No	56% Yes 44% No	50% Yes 50% No
<u>8.3h:</u> In the past 2 years, have you had 10 clock hours or more of professional development in any of the following areas?... Closing the Achievement Gap	25% Yes 75% No	37% Yes 63% No	32% Yes 68% No	27% Yes 73% No
<u>9.1d:</u> Teachers believe almost every student has the potential to do well on assignments. (Agree/Disagree)	94% Agree 6% Disagree	94% Agree 6% Disagree	91% Agree 9% Disagree	86% Agree 13% Disagree
<u>9.1g:</u> Teachers collaborate to achieve consistency on how student work is assessed. (Agree/Disagree)	94% Agree 6% Disagree	88% Agree 12% Disagree	73% Agree 27% Disagree	82% Agree 18% Disagree

9.1i: Teachers have knowledge of the content covered and the instructional methods used by other teachers at this school. (Agree/Disagree)	87% Agree 13% Disagree	90% Agree 10% Disagree	72% Agree 28% Disagree	76% Agree 24% Disagree
10.3: Which aspect of your teaching conditions most affects your willingness to keep teaching at your school?...				
• Community Support & Involvement	31%	5%	9%	8%
• School Leadership	14%	37%	24%	29%
• Professional Development	0%	4%	1%	2%
• Instructional Practices & Support	3%	11%	16%	12%
• Teacher Leadership	10%	14%	12%	10%
10.6: Overall, my school is a good place to work and learn. (Agree/Disagree)	97% Agree 3% Disagree	98% Agree 2% Disagree	95% Agree 5% Disagree	87% Agree 13% Disagree
11.1c: As a beginning teacher, I have received the following kinds of support... Reduced workload	N/A (N=2)	62% Yes 37% No	33% Yes 67% No	29% Yes 71% No
11.7: Overall, the additional support I received as a new teacher has been important in my decision to continue teaching at this school. (Agree/Disagree)	N/A (N=2)	100% <u>Strongly</u> Agree 0% Disagree	72% Agree 27% <u>Strongly</u> Disagree	74% Agree 26% Disagree

- How adequate and equitable is the access to preferable teacher assignments enjoyed by students from historically marginalized or at-risk populations when compared to students from the historically privileged, dominant population?

The interview questions encapsulated in the interview protocol (see Appendix C) were written to adhere closely to the research questions and thus, the qualitative findings are similarly organized

to the presentation of the research questions. There are subsections within each school section specific to:

- primary and ancillary considerations driving the assignment of teachers to students via the construction of each school's master schedule
- the use and influence of capital as plied by teachers during the scheduling and teacher assignment processes
- the level of involvement or perceived influence by parents of students from historically privileged backgrounds as compared to parents of historically marginalized student populations

Interview participants were identified by each school's principal upon being asked this question in an introductory phone call: "Including yourself, which three to four staff members in your school are most involved with the processes of constructing the master schedule, assigning teachers to courses, and/or vetting/processing individual student schedule change requests?".

Each principal was interviewed, along with the lead counselor at each school and one other key agent at each school. The role of the third interview participant was unique from school to school—one was a teacher and department chair, one was a second counselor, and one was an assistant principal—but in every case, one of the participants (other than the principal) seemed much less involved with the scheduling processes than the other two. It seemed that the bulk of the master schedule construction at each school was—at best—predominantly a two-person effort.

Interview data germane to the issues of adequacy and equity with access to preferable teacher assignments and scheduling considerations for students of historically marginalized backgrounds is provided in each school's qualitative section, but the most substantive findings

addressing equity and access is found within the quantitative sections for each school which contain data collected through audits of each master schedule.

Quantitatively, as detailed in the previous chapter, each school's master schedule was audited for equitable access by African American and Hispanic students to the highest quality teachers. Teacher quality for this study is signified by four predetermined, research-based quality indicators: years of experience, completion of an advanced degree, National Board Certification, and full NC licensure in assigned courses. Each teacher assigned to courses in each core department at each of the three traditional BLCS high schools received a composite quality score based on their credentials. Each credential was assigned a point value as described below.

- Experience
 - Less than one year experience = -2 quality points
 - 1-3 years of experience = 5 quality points
 - 4-10 years of experience = 4 quality points
 - More than 10 years of experience = 2 quality points
- Advanced degree
 - Master's degree = 1 quality point
 - Doctoral degree = 2 quality points
- NBCT = 5 quality points
- Full licensure = 5 quality points

After each teacher was assigned a quality score, the racial demographics of the student enrollment for each class taught by each teacher was analyzed to determine if the access to the highest quality teachers enjoyed by historically privileged white students was equitable for historically marginalized African American and Hispanic students.

The following school sections were intentionally ordered from smallest school to largest (Kali River High School, Artist Point High School, and Liberty Square High School respectively), based on the sizes of the student enrollments and the corresponding sizes of the teaching staffs. The next section focuses on Kali River High School, the smallest of the three traditional BLCS high schools.

Kali River High School

As of September 26, 2016, Kali River High School (KRHS) was the smallest of the three traditional BLCS high schools with an enrollment of 401 students. A breakdown of enrollment by race and by grade is listed in Table 4.3, along with district and state enrollment data for comparison. Approximately 38% of 2016-2017 KRHS students received free or reduced price lunch (an indicator of student poverty), the second largest in the district among traditional high schools with a little more than half of the percentage as the second highest school, APHS (72%). In comparison, the 2016-2017 district average was 56% and the 2012-2013 state average—the most recent reported—was 56.74% (NCES, 2016).

Table 4.3 Kali River High School: 2016-2017 Racial Enrollment Summary

<i>Grade Level</i>	<i>Total Enrollment</i>	<i>White</i>	<i>African American</i>	<i>Hispanic/Latino</i>
9 th grade	103	77 (74.8%)	10 (9.7%)	12 (11.7%)
10 th grade	100	70 (70.0%)	14 (14.0%)	12 (12.0%)
11 th grade	99	74 (74.7%)	14 (14.1%)	8 (8.1%)
12 th grade	99	85 (85.9%)	10 (10.1%)	4 (4.0%)
Total enrollment-School	401	306 (76.3%)	48 (12.0%)	36 (9.0%)
Total enrollment-district	2,627	1,399 (53.0%)	346 (13.0%)	748 (29.0%)
% Enrollment-state (2015-16)		49.5	25.7	16.5

There are 45 staff members at KRHS. That includes 30 certified faculty members, 3 of which (approximately 10%) are staff of color (two African American, one Hispanic)—which is

less than half of the combined percentage of African American and Hispanic students (23.7%). The principal and the only school counselor—who are essentially the only staff members responsible for the construction of the KRHS master schedule and processing schedule changes—are both white.

Qualitative Findings: KRHS

KRHS stakeholders interviewed for this study were the school principal, the school counselor, and the Social Studies Department Chair (who is also white). To ensure anonymity, the following identifiers were used and coincided with the school initials and position of each interview participant: KRPrincipal, KRCounselor, and KRTeacher. The interview participants were asked the series of questions that are encapsulated in the interview protocol (see Appendix C for a copy of the interview protocol). Key themes uncovered through stakeholder interviews are noted in Table 4.4. Interview data and select items from the 2016 TWC survey (as detailed in Table 4.2) as well as other school-specific documents and data sets are detailed throughout the next several sections.

Table 4.4 Key Themes from KRHS Stakeholder Interviews

<i>Interview participants:</i>	Principal, Counselor, Social Studies Teacher/Department Chair (all white)
<i>Key themes/notes from interviews:</i>	<ul style="list-style-type: none">• Some elements of the scheduling processes (policy info and forms found online, scheduling interactions occurring in the summer) may provide advantage to more privileged students• Schedule construction occurring mostly in the spring disadvantages new teachers hired in the summer• ALL processes related to assigning teachers to students are reportedly handled directly by the principal (although the counselor is a key advisor)• Closing the achievement gap and related matters of student equity were not mentioned as primary or secondary considerations for scheduling nor was the racial achievement gap included in any of the goals on the KRHS School Improvement Plan• Principal Scheduling Philosophy: lower enrollment for standard classes, higher enrollment for Honors/AP classes• Small sizes of core departments (3-4 teachers apiece) mitigate parent/student requests for preferred teachers

Historical Precedent and Power Dynamics in Scheduling

KRHS was consistently described by its principal and counselor as a top-down school community with regard to decision making. KRPrincipal asserted that his tenure there has garnered him some capital of his own within his school district, describing his status thusly: “I’m the [district’s] longest serving principal at one school so with that comes a little bit of, you know...I don’t know if it’s clout or respect...” The clout is needed because he reported that at all times he leads his school in the manner that *he* believes is best with no apologies and claimed that he is “always 100%” supported by district officials when parents complain to them about his decision making regarding their child’s schedule. As a potential sign of displeasure with his

leadership style or perhaps even a sign of rebellion, respondents on TWC item 10.3 rated “School Leadership” tied for third out of eight possible choices for which teaching condition most affects one’s willingness to continue teaching at KRHS (14% agreement, which was significantly lower than district and state averages of 25% and 29% respectively).

While KRPrincipal maintains firm and sole control over the construction of the master schedule, he collects at least a modicum of input from other key entities within the school community. KRCounselor and the KRHS School Improvement Team Chair meet with KRPrincipal to review students’ course selection tallies each spring and to generate numbers of sections for each course. “I determine...course needs based on a philosophy of low enrollment [in] standard; high enrollment [in] Honors. So your Honors classes are going to have 30; your standard will have 18...[but] it’s not a hard cap,” suggested KRPrincipal. Department chairs are then tasked with facilitating department discussions related to teaching preferences and with submitting a proposal for teacher assignments to KRPrincipal.

When asked how teacher quality factors into his teacher assignment decisions, KRPrincipal actually quantified his style of personnel management: “[I]n my school because of its size, it’s who are my bottom three [teachers] this year who are going to improve. And the assistant principal and I meet in the summer; look over performance information as the data is released from the state.... look back at last year’s [lesson] plans. Attendance... all of the things that make up an effective employee, and then we help them move up or move out.” KRPrincipal said he does not meet resistance at the district level for his “move up or move out” approach because again, he has accumulated his own level of capital after his lengthy tenure and because he has relevant prior experience in another area of school leadership: “I was [an HR] director in another school district [for four years], so that kind of helps, too.”

Oddly, KRPrincipal mentioned his assistant principal very little during his interview. An African American female, the assistant principal was virtually a non-presence in the construction of the master schedule and has not been empowered to change student schedules—a role played only by KRPrincipal and by KRCounselor—despite the fact that she had been an administrator at KRHS for five years and had prior experience as a high school principal on her resume. “I shouldn’t leave her out; but the Assistant Principal... Well, she’s learning how the process works,” KRPrincipal responded when asked about his assistant principal’s role in teacher assignment and scheduling.

KRPrincipal does however rely much more substantively on his counselor with all schedule-related processes. According to KRCounselor, “[KRPrincipal] gives me a lot of input, actually... He really does, especially when we are trying to get a master schedule to work.” The answers to interview questions given by the principal and counselor portrayed a strong collaborative partnership between them, one noticeably absent between KRPrincipal and the other school administrator. When asked about the lack of involvement of the assistant principal with student schedule changes, KRCounselor responded:

It’s usually [just the principal and] me, yes. We keep records also of people making schedule changes and stuff. And that way we know if someone’s going back and forth between us and we can keep that from happening... And we make sure that we talk very clearly before we actually do the schedule change process about ‘...These are the guidelines that we’re going to follow with this.’ So that way he and I are both on the same page.

Unlike at most traditional high schools, KRPrincipal only allows KRCounselor to process student schedule change requests during the summer. Once school begins, any and all schedule change requests must go through him. KRPrincipal and KRCounselor both used consistent terminology to describe the only two categories of schedule changes: “wanna” and “gotta,” as in “I *wanna* change” versus “I *gotta* have a change.” If there is room in a desired class, “wannas”

are liberally granted in the summer but after school begins, only “gottas” are granted as described by KRCounselor. “When school starts, any “I wannas”, they don’t happen. If [a change request is granted after school has started], we’ve made a major schedule mess-up where you didn’t get History for some reason and you need History; then yes, you can do that. Or if you want to bump up from a Standard to an Honors, absolutely. But we’re pretty strict.” The role and influence held by teachers regarding their assignments and student schedules is detailed in the following section.

The Influence of Teacher Capital in Teacher Assignment and Scheduling

One of the more prominent dynamics of the KRHS school culture that was readily obvious from the interview with KRPrincipal completed for this study is the reported lack of influence held over him by teacher capital, at least with issues of teacher assignment and scheduling. When asked to name the different considerations that drive the construction of the master schedule, KRPrincipal named student choice/need as the first and foremost consideration followed by balancing the workload among teachers. “[T]he strongest teachers in the department [should] work with the weakest students; not exclusively, but as part of that [“share-the-wealth”] balance. And teacher preference is third. And it’s *really* third.” He continued: “The dictum is: you cannot pad your schedule. You must share the wealth. So if you’re going to teach AP English III, you’re also going to teach Foundations of English. I mean just look at opposite ends of the spectrum. Mix it up.” KRPrincipal talked about how he eschews preferential treatment for veteran teachers most vehemently: “The philosophy of ‘seniority rules’...is really so entrenched in the culture of Secondary Ed in this country. It’s every year, I have to reemphasize ‘We do not schedule this way.’ And I don’t want to force it upon them. I want them to pick the classes that they want to teach.”

As previously mentioned, once KRPrincipal and KRCounselor review student course requests, department chairs are then asked to facilitate meetings with teachers in their departments to generate a proposal matching teachers with classes and sections. If he finds evidence of inequity in class loads (e.g., a teacher with all advanced classes and a departmental colleague with all standard level classes) for teachers in the proposals delivered by a department chair, he meets with that chair to discuss it. If the chair claims that the proposal reflects departmental consensus and harmony, he is very direct in his response:

I would meet just with the department head and I would say, ‘Our philosophy is share the wealth. Everybody works with a variety of students. That way we avoid the whole problems involved in elitism and elitist behaviors at school. [Y]our schedule, in my opinion, is padded. You have loaded yourself with all the cream classes. We need to make a change...[Y]ou already know after 14 years of working with me that I’m not going to do that; so what’s your other proposal?’...

KRPrincipal suggested that he is so resolute with his “share the wealth” philosophy, that he would rather lose a department chair or a teacher to attrition than bend to the influence of capital: “[S]ometimes [I receive] tears; resentment. But ultimately I would lose a department head before I would change that philosophy. I would have somebody resign. And I would be okay with that because they’re just not going to fit into the culture of the school.”

KRPrincipal added that “specializing” is not allowable either (i.e., one teacher having all Civics classes, one having all American History classes, etc.) because in such a system, a teacher might end up with all juniors or all freshmen, providing an imbalance as freshmen classes are generally deemed to be less preferable and requiring of more work. KRCounselor backed up the principal’s claim about course or grade-level specialization:

My principal looks through [the master schedule] to make sure that there’s even balance so that not everybody is teaching all upper-level students, and so that everybody has a bright spot in their schedule, too. Because he wants it to be fair balance among the teaching staff. They’re very flexible. No one teacher wants to work with just a grade level either. The departments work very well together in

making sure there's balance among the grade levels when they are asking to teach different classes.

The culture of harmony and fairness that the counselor conveyed in her interview responses is somewhat contradictory of the hardline leadership style that KRPrincipal described throughout his interview. KRCounselor continued: "I've worked at other high schools [at which you were assigned certain classes] according to where you are on the totem pole. It's not like that here. At this [school, the teachers are] very honest and very open... everybody is really teaching what they want to. My principal really respects [teacher] wishes and really works hard to make sure that that happens. It's very rare that somebody's teaching something that they don't ask to teach... He's very respectful about what the teachers request."

KRPrincipal elaborated on the culprits in his school most likely to ply the seniority standard when proposing teaching assignments: "Honestly it's usually English and Social Studies are the most entrenched in that tradition." The KRHS Social Studies department chair, KRTeacher, graduated from KRHS and has taught there for the last 17 years. Like some of the responses of KRCounselor, KRTeacher's interview responses contradicted KRPrincipal's claim that he prohibits specialization and indicated that specialization does in fact occur in her department:

[W]e in our department are somewhat specialized... for example, I do mainly American [History] I and I do AP US History. And then we have somebody who kind of specializes in American II. We have one World History teacher and one Civics teacher. [I]f there [are six sections needed of] World History, and I have a teacher that can teach six sessions of it...she's going to get all of it.

Throughout her interview, KRTeacher used herself as an example when discussing teacher assignment and preferences, stating that the significant majority of her work has been in American History and AP U.S. History. When queried about how to fill a vacancy in a department that specializes—like whether they choose the best possible candidate even if he or

she is a specialist in a content area other than the one that was vacated—KRTeacher replied “...[W]e have been so lucky that it just seems that when we have an opening... [t]he right candidate fits...that spot... We mention it in the interview process: ‘This is what the schedule will be.’” The only two TWC survey items used in this study that relate to new teacher support and workload (items 11.1c and 11.7) cannot provide insight to whether new KRHS teachers are actually content with their assignments because the sample size was too small to register a result.

One possible sign of the influence of teacher capital might reside within the responses to TWC item 6.2g which measures satisfaction with the amount of involvement teachers have in selecting new teachers. At 68% agreement, KRHS teachers registered the largest percentage for high schools in their district and almost doubled the state average of 36%. Another possible sign of the influence of teacher capital on KRPrincipal can be found with substandard teachers who wear other hats in the school community outside of the classroom. “[W]here I will struggle is with a teacher who coaches three sports; and coaches them pretty well; drives a bus; does all this other drudgery stuff that nobody else wants to do and they’re mediocre in the classroom. So unfortunately, schools do need [to hang onto those teachers] sometimes.” Rather than work those teachers out of his school through evaluation or other methods, he said he works to support their growth and professional development.

All three interview participants were consistent in describing the basic lack of teacher-initiated schedule changes unless it is a level change (from a standard level to an honors level course, for example) about which all parties are in agreement. According to KRPrincipal, teachers are not allowed to initiate changes to other teachers based on behavior or academic concerns either: “Because I don’t allow parents and students to teacher shop, I can’t let teachers [target students for removal from their classes].” The influence of parent capital on scheduling is discussed in the next section.

The Influence of Parent Capital in Teacher Assignment and Scheduling

Akin to the reportedly palpable lack of effect that teacher capital has with KRPrincipal, he claimed that parent capital holds about the same amount of influence (virtually none)—even with those parents that have influence over other aspects of his work.

I am hyper-sensitive to fairness and equity... I have district office kids in my school. And in fact, this year, one of those came to me to change to get [their child] out of an AP class, and I had just denied two other requests for the same reason which is “I didn’t do the summer reading” ...I pay for things. You know, there’s a cost... [the favor that I might need later] doesn’t come through.

Although the TWC is not specifically focused on student scheduling matters and teacher assignment practices, the 74% agreement by respondents (the lowest in the district) for item 4.1a—the focus of which is the role parents play as influential decision makers at the school—does affirm the responses collected during the KRHS stakeholder interviews about the lack of tangible parent influence.

In their responses to interview questions, both KRCounselor and KRTeacher minimized the amount of advocacy by parents with regard to jockeying for preferred teachers or scheduling advantages. “For scheduling the classes, I don’t really have a lot of parents really do a lot of complaints or wishes about the schedule stuff,” suggested KRCounselor. When asked about the phenomenon of parents and students who seek preferable teacher assignments, all three KRHS interview participants repeatedly mentioned the unique nature of their school’s size. With only 401 students and with four teachers each comprising the English, Math, and Social Studies departments and with only *three* teachers in Science, “teacher shopping” is not really feasible. Even if school culture allowed for it, there are essentially not multiple options for students and parents. Not only is there a maximum of 1-2 teachers teaching a given course in a given year, chances are students will likely have the same teacher more than once during their high school experience whether the teacher/student relationship is positive or not. Asked to describe

strategies used by parents to influence their student's assignment to preferred teachers, KRTeacher replied "I've never seen it... This is a different world here... I just don't think it occurs, honestly. I've been here long enough to know." The unique circumstances germane to the size of the school ostensibly force students to acclimate to their assigned teachers.

Replying to a question about the demographics of "typical" parents who are more involved in school matters, KRCounselor offered this description which seemed to correlate race with educational achievement: "[We're] mostly a white school, so it'd be more Caucasian parents than anybody else really. If you're looking at a different demographic, it would not be your parents that usually have a lot of college background. It would be parents who have a less...a lower level of formal education really, honestly." KRTeacher was also specific with her description of the involved KRHS parent: "I would say it's my AP students' parents. I typically see more of that involvement from [parents of] my higher-level learners." When pressed about reasons why parents of black and brown students are perceived to be less involved with school matters, KRTeacher offered little clarity but seemed to answer as if the basis for the question was related to behavioral or academic concerns: "I would say they're involved. I think we have tremendous parental support as a whole. I mean we just couldn't ask for more. [M]ost of the time if you contact the parent, whatever the issue is, it's going to change." When asked to describe the school's outreach to various parent populations and the types of parents who are typically most involved in school matters, KRCounselor said "This is a very community-supported school; and we try to make it be an open-door policy; and we really try to reach out to the community. So I think that, honestly, most populations really feel comfortable coming in." Her claim was shared by the majority of TWC respondents to item 4.1c for which 96% of KHRS respondents agreed that the school effectively encourages parent involvement—the highest percentage for that item in the district.

The stakeholders interviewed for this study each related how KRHS actually does seem to experience a rather unique type of advocacy from its parent community more consistently than “teacher shopping” or pushing children into advanced classes that may be above the students’ ability level. “I don’t see parents coming here and advocating for a higher class... It’s more of, ‘I don’t want my student in that Honors class. I don’t know that they can handle that’... So instead of the parent really having that confidence in the child, I think sometimes they think their child might have acted a little quickly in making [a particular course selection],” suggested KRTeacher. KRCounselor reported an experience that exemplified this type of seemingly “reverse” parent advocacy:

I enrolled a student who was home-schooled for his 9th grade year. The parents were, like, nuclear scientists, you know? Had done all these really big, huge things, and all she could do was just sit there and tell me how sorry her son was, and wouldn’t do this and wouldn’t do that. Son never spoke. And when I’m doing the tour of the school, I on purpose left mother in my office because I wanted to hear him talk. I wanted to get a feel of where he was at, and also let him know, you know, “I know Mom has said this. Let’s see how it goes.” And, you know, “I think you can bump it up a little and try an Honors class this next semester or even next year.” You know, “Let me know if you want to do that.” Because I wanted him to know that I’m not going to think about him as being, you know, a sorry person like mother is describing. I thought that was an unfair first impression that she was trying to give of her son to me.

There may be recurrences of this type of phenomenon in part due to KRPrincipal’s leadership style. He reported that he will frequently use test data to make enrollment decisions for students that are different than what they might have selected in an effort to achieve in his mind a more equitable higher enrollment in advanced courses and lower enrollment in standard-level courses.

[S]ometimes I have lower enrollment in an Honors class. Then [KRCounselor] and I work on the kids who are taking the standard and try to bump them up... Like in the summer I might go through the performance data from the middle schools and identify eighth graders who really should have taken Honors classes and send a letter home that says, “Congratulations! You qualify!” Well, they qualify just because I said they do... And most of them put that up on the refrigerator and get to work reading the summer book... Some [parents] call and say, “How dare you change my child’s schedule?” but not very many.

When asked to describe the demographics and make-up of his advanced classes—especially when one considers his draft-style enrollment into them—KRPrincipal replied thusly:

Following [the primary scheduling consideration of student requests] would be, “Are we challenging every student?” So what do our honors enrollments look like? What do the demographics look like in our Honors class? And it’s kind of a given that we have... There’s an underrepresentation of African-Americans. I honestly, truthfully don’t know if that’s the case... We’re 80% Caucasian, so I just make the assumption. So that way I don’t have to justify or back off from that. But I will actively recruit Latino and African-American students for advanced classes.

He continued to say that fear and doubt over their ability to handle the workload are the typical responses he receives when drafting minority students into advanced classes and that about “half the time” do such students take up the challenge. “[W]e typically go through the parents, and the parents convince the kid,” he stated. Considering his intentional style of tackling the trend of under-represented populations in advanced classes, how successful have KRPrincipal and his team been at supporting the roughly 21% of black and brown students enrolled at their school? The next section details how or if the racial achievement gap and student equity concerns factor into the teacher assignment and scheduling processes at KRHS.

The Influence of the Achievement Gap and Equity in Teacher Assignment and Scheduling

KRHS has had an achievement gap between its more privileged white students and its more historically marginalized black and brown students. The 4-year cohort graduation rate for KRHS within the three racial subgroups germane to this study was as follows: white 92.2%, African American 87.5%, and Hispanic 66.7%. According to data found on the NC Department of Public Instruction website, the difference in percent proficient for racial subgroups on the 2015-2016 state End-of-Course (EOC) exams at KRHS is shown in Table 4.5. While brown and black students at KRHS underperformed white peers in every EOC subject, most glaring in terms of the EOC data is the fact that Hispanic students at KRHS were proficient on the Math I EOC at

a rate almost *three-quarters less* than the state average and the average of KRHS African American students proficient on the Math I exam was only a little more than half of the state average.

Table 4.5 KRHS Students Percent Proficient on 2016 EOC Performance by Subgroup

<u>Subgroup</u>	<u>Biology</u>	<u>English II</u>	<u>Math I</u>
State average	55.5	58.8	60.5
KRHS white	58.9	57.7	55.2
KRHS black	50.0	54.5	33.3
KRHS Hispanic	45.5	50.0	15.4

Also found on the NC DPI website was data evidencing a gap in ACT performance between racial subgroups at KRHS. The average of all NC high schools for students meeting the University of North Carolina system’s minimum ACT composite score was 59.9%. KRHS had too few Hispanic students that completed the ACT in 2016 to provide data but 81.2% of the school’s white students met the UNC minimum score while only 50% of African American students met the standard.

Despite substantial gaps in achievement on EOC exams between racial subgroups at KRHS and a combined 21% black/brown student enrollment, the terms “achievement gap” and “equity” were wholly absent from the 2016-2017 KRHS School Improvement Plan, as were the identifiers “African American,” “Hispanic,” “Latino,” “Caucasian,” “white,” “black,” and “brown.” None of the three SIP goals were specific to the achievement of historically marginalized black and brown students. Consistent with the apparent lower priority status assumed by the racial achievement gap at KRHS, the only two TWC items specific to it (8.2h and 8.3h) earned the lowest marks in the district from KRHS respondents. Only 34% of respondents claimed that they covet more professional development (PD) aimed at closing the achievement gap and only 25% of respondents claimed to have completed substantive PD focused on the achievement gap over the previous two years. Both items related to the

achievement gap were the only two used for this study and displayed in Table 4.2 for which KRHS earned affirmative responses lower than the state averages of 50% and 27% respectively.

As shown in Table 4.6, none of the stakeholders interviewed for this study mentioned the racial achievement gap or student equity (as a racial dynamic) as primary or even secondary or ancillary considerations in scheduling either. If the intentional drafting of black and brown students into advanced courses was a strategy designed to close the gap, KRPrincipal was not explicit about it. He was, however, explicit about his district's substantive support for growing and nurturing classes for advanced students and his logic for requesting special consideration for funding them:

Table 4.6 KRHS Interview Participants' References to Terms/Concepts Germane to Racial Equity

<i>Term/concept</i>	<i>Interview participant: KRPrincipal</i>	<i>Interview participant: KRCounselor</i>	<i>Interview participant: KRTeacher</i>	<i>Total number of references by stakeholders</i>
Honors classes	13	8	9	30
AP classes	11	10	7	28
Standard classes	7	2	2	11
White	1	4	0	5
Black/African American	3	1	0	4
AVID	1	0	2	3
Hispanic/Latino	1	1	0	2
Equity	1	0	0	1
ESL	0	0	0	0
Minority	0	0	0	0
Achievement gap	0	0	0	0

And kind of the standard rule is if it's a brand new AP course, it makes [it into the master schedule] unless there's just two kids in it. But if it's five students, it'll make and we'll give it a year to grow. If the next year it registers four or five again, it won't make... [T]he district has been extremely generous with teacher allotments for this small school... With a small school you've got to have a basic offering or kids will transfer to other places, and then you have this downward spiral you can't get out of. So yes, they have . . . They have certainly supported my desire to have a strong academic program; couldn't do it without them.

All of the qualitative evidence collected for this study seem to indicate that the achievement gap and matters of racial equity for students were not priorities for KRHS educators, at least not significant ones. The next section provides an analysis of the audit of the KRHS master schedule.

Quantitative Findings: KRHS

For 2016-2017, Kali River High School's student body of 401 students was approximately 76.3% white, 12% African American, and 9% Hispanic. KRHS students were assigned to a total of 15 teachers in core subjects—four each in English, Math, and Social Studies and three in Science. According to the school's master schedule, outside of the obligatory standard and honors level course offerings for each subject, KRHS offered two AP English courses, two AP math courses, and one AP social studies course taught by classroom teachers (others were offered online at KRHS). This section details access for KRHS students to teacher quality, department by department, in the following order: English, Math, Science, and Social Studies.

As detailed in the preceding chapter and in this chapter's introduction, teacher quality for this study was signified by four predetermined, research-based quality indicators: years of experience, completion of an advanced degree, National Board Certification, and full NC licensure in assigned courses. Each teacher assigned to courses in each core department at each of the three traditional BLCS high schools received a composite quality score based on their credentials. Each credential was assigned a point value. At KRHS, the composite scores range

from a low of 3 to a high of 14. Except for a few outliers (teachers with scores of 14, 13, and 3), all scores for KRHS teachers fell between 7 and 10. The department with the tightest spread was the KRHS English department which is detailed in the next section.

It should be noted that percentages for enrollment contained in tables within this section do not equal 100% because for this study, equity was measured between students from the historically privileged population (white) and students from historically marginalized backgrounds (African American and Hispanic). Students from other races and ethnicities were not included in this research study.

It should also be noted that when quantitative findings are presented in this section, the use of the term “greater odds” with regards to access to teacher quality for students from specific racial/ethnic populations is not meant to convey randomness as that which would occur when gambling or playing roulette. Equity outcomes from teacher assignments are not accidental and result from the *intentional* decisions of principals and scheduling agents—even if those agents are not conscious of the eventual impacts of their decisions on student equity. The term’s use is also intentional as a simple means of conveying inequity between particular student groups.

KRHS English

Teacher quality in the KRHS English department was fairly balanced overall, with two of its four teachers receiving quality scores of 9 points and the other two receiving scores of 8 points. Table 4.7 shows the four KRHS English teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in the teachers’ assigned classes for 2016-2017. Enrollment percentages per teacher that were above the school’s overall enrollment for a given ethnicity are shown in bold print.

Table 4.7 KRHS English Department Teacher Quality Scores and Student Demographics

<i>KRHS English teacher quality score</i>	<i>White student enrollment (overall KRHS enrollment: 76.3%)</i>	<i>Black student enrollment (overall KRHS enrollment: 12.0%)</i>	<i>Hispanic student enrollment (overall KRHS enrollment: 9.0%)</i>
KREnglishTeacher9.1	74.1	12.2	9.4
KREnglishTeacher9.2	79.8	11.9	8.3
KREnglishTeacher8.1	74.5	11.8	9.8
KREnglishTeacher8.2	77.9	9.6	9.6

In terms of experience, two KRHS English teachers had taught for 4-10 years and two had taught for over ten years. The two most experienced English teachers both had Master's degrees but neither of the two with 4-10 years' experience had an advanced degree. None of the four English teachers had National Board Certification but all four were fully licensed.

There was not a glaring discrepancy within the KRHS English department in terms of overall equity. One of the two higher scoring teachers (each with quality scores of 9 points) was assigned to teach a percentage of white students that was greater than the percentage of white students enrolled in the school overall and was concurrently assigned percentages of black and Hispanic students that were lower than the percentages of black and Hispanic students enrolled in the school overall. However, the second teacher with the same quality score showed the opposite trend—a percentage of white students that was lower than the school's overall percentage of white student enrollment, with percentages of black and Hispanic students that were higher than school's overall percentages. A similar balance was shown with the assignments of the two teachers with slightly lower quality scores of 8 points. None of the English teacher assignments were grossly inequitable however, in terms of their 2016-2017 assignments when viewed comprehensively.

The two teachers with scores of 8 were also the two assigned to teach the two AP English courses—AP Language (11th grade) and AP Literature (12th grade) which is a positive sign for equity because as research shows (Boyd et al., 2008; Clotfelter et al., 2006; Cohen-Vogel et al.,

2013; Feng, 2010; Finley, 1984; Kalogrides et al., 2012; Kalogrides & Loeb, 2013; NBER, 2006; NCDPI, 2008; Neild & Balfanz, 2006; Neild & Farley-Ripple, 2008; Neild et al., 2008; Roderick & Camburn, 1999), teachers possessing indicators of higher quality are the ones typically assigned to teach the most advanced classes with the most historically privileged students. However, the same two teachers with lower quality scores were assigned to teach the only two sections of standard English I, which historically is the most challenging in terms of behavior and achievement. This is not a sign of equity to be sure but it is a sign that KRPrincipal was true to his scheduling philosophy—he assigned the two teachers with the historically least challenging AP classes to teach the most typically challenging standard freshman English classes.

There were four English courses on the KRHS master schedule for which there was a choice in which teacher a student could be assigned: the aforementioned English I (standard), English I Honors, English II Honors, and English III (standard). All other levels of all other English courses were assigned to only one teacher apiece so equity of access was assured, for better or worse. With the choice between standard English I teachers, their credentials and quality scores were identical so access to similar measures of quality for all students was assured. For each of the other three cases in which there was a choice in teacher assignment, there was at least one teacher with a score of 8 and at least one with a score of 9. While there were relatively minor signs of inequity found with each of those three courses, if one considers the close range in quality scores (all four English teachers scoring between 8 and 9 points), access to teacher quality was relatively equitable for KRHS English students from historically marginalized populations when compared to white classmates.

KRHS Math

The spread in quality scores was much wider for the KRHS Math department than it was for the English department, with its four teachers receiving scores of 13, 9, 8, and 3 quality points. The Math department also contained the only novice core teacher at KRHS. Table 4.8 shows the four KRHS Math teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in the teachers' assigned classes for 2016-2017. Enrollment percentages per teacher that were above the school's overall enrollment for a given ethnicity are shown in bold print.

Table 4.8 KRHS Math Department Teacher Quality Scores and Student Demographics

<i>KRHS math teacher quality score</i>	<i>White student enrollment (overall KRHS enrollment: 76.3%)</i>	<i>Black student enrollment (overall KRHS enrollment: 12.0%)</i>	<i>Hispanic student enrollment (overall KRHS enrollment: 9.0%)</i>
KRMathTeacher13	84.8	8.6	4.8
KRMathTeacher9	70.9	12.6	12.6
KRMathTeacher8	72.4	13.0	10.6
KRMathTeacher3	74.8	13.0	10.4

All four KRHS Math teachers were fully licensed but only one—the teacher shown above with 13 quality points—had National Board Certification. She was also one of two teachers with more than 10 years of experience while a third teacher had between 4-10 years of experience and the fourth was the novice teacher mentioned above. The two most experienced Math teachers were the only two with advanced degrees as well.

At the teacher level, inequity was evident at first glance within the assignments of KRHS Math teachers. The only novice core teacher at KRHS (with a quality score of 3—the lowest quality score of any KRHS core teacher, regardless of subject) with less than a year of experience was assigned one section apiece of standard Math III and Honors Math III but the remainder of her course assignments were all Math I—usually, almost exclusively filled with freshmen and less successful Math students. In contrast, the Math teacher with the highest

quality score (13 points—tied for the second highest score of all 15 KRHS core teachers, regardless of subject) and over 10 years’ experience was assigned one section apiece of Math I and standard Math III but the remainder of her course assignments were all advanced classes—two sections of Pre-Calculus and one section apiece of Calculus and AP Calculus AB, generally, almost exclusively comprised of upperclassmen and higher achieving Math students.

The novice math teacher was assigned two sections of Math I while the second highest scoring math teacher (with 9 quality points) was assigned one section, the enrollment details of which are shown in Table 4.9. One of the two Math I sections assigned to the novice teacher

Table 4.9 KRHS Math I Teacher Quality Scores and Student Demographics

<i>KRHS Math I teacher quality score</i>	<i>White student enrollment (overall KRHS enrollment: 76.3%)</i>	<i>Black student enrollment (overall KRHS enrollment: 12.0%)</i>	<i>Hispanic student enrollment (overall KRHS enrollment: 9.0%)</i>
KRMathTeacher9	60	10	15
KRMathTeacher3	85	10	5
KRMathTeacher3	54.2	25	16.7

contained an enrollment of African American students that was more than twice the size the percentage of African American student enrollment for the whole school as well as the highest enrollment of Hispanic students in Math I (7.7 percentage points higher than the school’s total Hispanic enrollment). The novice teacher and her veteran colleague who scored 13 quality points were each assigned one section of standard Math III, the enrollment details of which are shown in Table 4.10. The lowest scoring Math teacher had an African American enrollment in Math III

Table 4.10 KRHS Math III Teacher Quality Scores and Student Demographics

<i>KRHS Math III teacher quality score</i>	<i>White student enrollment (overall KRHS enrollment: 76.3%)</i>	<i>Black student enrollment (overall KRHS enrollment: 12.0%)</i>	<i>Hispanic student enrollment (overall KRHS enrollment: 9.0%)</i>
KRMathTeacher13	70.8	16.7	8.3
KRMathTeacher3	68.4	21.1	5.3

that was 4.4 percentage points higher than that of the highest scoring Math teacher while the highest scoring teacher had a Hispanic enrollment that was 3 percentage points higher than the novice teacher. The novice teacher’s section of Honors Math III also contained a slightly greater percentage of African American students than the section taught by her colleague with a quality score of 9. The data provided here proved that African American students at KRHS in Math I, Math III, and Honors Math III—as well as Hispanic students in Math I—had higher odds than their more privileged white peers of being assigned the Math teacher with the lowest quality score.

KRHS Science

The KRHS Science department was the school’s smallest department with only three teachers. At the teacher level, it was a relatively balanced department in terms of assignments to levels and courses. Each teacher was assigned at least two standard level classes and at least three Honors or AP level courses. Table 4.11 shows the four KRHS Science teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in the teachers’ assigned classes for 2016-2017. Enrollment percentages per teacher that were above the school’s overall enrollment for a given ethnicity are shown in bold print. The Science teachers’ quality scores were more complicated than those in

Table 4.11 KRHS Science Department Teacher Quality Scores and Student Demographics

<i>KRHS science teacher quality score</i>	<i>White student enrollment (overall KRHS enrollment: 76.3%)</i>	<i>Black student enrollment (overall KRHS enrollment: 12.0%)</i>	<i>Hispanic student enrollment (overall KRHS enrollment: 9.0%)</i>
KRScienceTeacher14	70.2	13.8	12.8
KRScienceTeacher9	74.6	10.8	10.8
KRScienceTeacher7	84.2	8.6	5.0

other KRHS departments, as can often be the case at most high schools due to the specialized nature of Science licensure. It is not uncommon for a high school Science teacher in North

Carolina to be licensed in only Chemistry, only Biology, or only Earth/Environmental Science—or perhaps even a combination of two areas—but not be certified for *General Science*, the license that allows a teacher to teach any high school Science subject. One of the KRHS Science teachers was licensed to teach Biology which accounted for five of his six assigned sections—but by his own report, he was not licensed to teach Physical Science, his sixth class. If this teacher was licensed to teach his one section of Physical Science, KRHS would boast 100% licensure within its core departments. This particular teacher's quality score for his five Biology classes was 14—the highest in his department, with his colleagues' scores of 9 and 7, as well as the highest quality score in the school. However, his quality score (without licensure) for his Physical Science students was 9 which was still tied for the highest score in his department. Two of the teachers had 4-10 years of experience while the third had more than 10 years' experience. None of the teachers had an advanced degree while only the teacher with a score of 14 had National Board Certification.

In terms of student equity, again due to the specialized nature of high school Science as well as to the fact that there were only three teachers in this department, there were very few examples of inequitable access for black and brown students when compared to white students. In terms of Earth Science or Honors Earth Science, there was only one teacher (AP Environmental Science—which fulfills the same graduation requirement as Earth—was only offered online at KRHS). For standard Biology, standard Chemistry, or Honors Chemistry, there was only one teacher per course to which students could be assigned. There are two options for Physical Science yet both had the same quality score (9 points).

The only real KRHS Science course with the opportunity for inequity to occur was Honors Biology. The highest scoring core teacher in the school (regardless of subject, with 14

points) was assigned two sections and a third section was assigned to a colleague with a score of 7 points, the enrollment details of which are shown in Table 4.12.

Table 4.12 KRHS Honors Biology Teacher Quality Scores and Student Demographics

<i>KRHS Honors Biology teacher quality score</i>	<i>White student enrollment (overall KRHS enrollment: 76.3%)</i>	<i>Black student enrollment (overall KRHS enrollment: 12.0%)</i>	<i>Hispanic student enrollment (overall KRHS enrollment: 9.0%)</i>
KRScienceTeacher14 (Section 1)	87.5	4.2	8.3
KRScienceTeacher14 (Section 2)	68	12	12
KRScienceTeacher7	63.6	18.2	9.1

It is clear from this data that African American students in Honors Biology had greater odds to be assigned an Honors Biology teacher with a lower quality score than white classmates.

KRHS Social Studies

The four teachers that comprise the KRHS Social Studies department received quality scores of 13, 10, 8, and 7—with department chair and interview participant, KRTeacher, receiving the lowest score of 7. Table 4.13 shows the four KRHS Social Studies teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in the teachers' assigned classes for 2016-2017. Enrollment percentages per teacher that were above the school's overall enrollment for a given ethnicity are shown in bold print. Three of four KRHS Social Studies teachers had more than 10 years of

Table 4.13 KRHS Social Studies Department Teacher Quality Scores and Student Demographics

<i>KRHS social studies teacher quality score</i>	<i>White student enrollment (overall KRHS enrollment: 76.3%)</i>	<i>Black student enrollment (overall KRHS enrollment: 12.0%)</i>	<i>Hispanic student enrollment (overall KRHS enrollment: 9.0%)</i>
KRSocialTeacher13	81.4	11.9	6.8
KRSocialTeacher10	76.6	9.2	9.9
KRSocialTeacher8	73.3	14.1	9.6
KRSocialTeacher7	76.3	12.5	7.5

experience and the fourth fell in the range of 4-10 years' experience. All four teachers were fully licensed but only one had National Board Certification. Three of the four teachers also had a Master's degree.

At the teacher level, there were in fact several examples of inequity. Five of the six classes assigned to the teacher with 8 quality points were either at the 9th or 10th grade level, three of which were standard-level as well. The Social Studies teacher with 13 quality points (second highest in the school, regardless of subject) was assigned only to classes with 11th and 12th grade students, three of which were standard and three of which were Honors. The department chair, KRTeacher (also an interview participant for this study who was identified by her principal as an active agent in the school's teacher assignment and scheduling processes), was also assigned to classes with only 11th and 12th grade students. In addition, she was assigned the only AP Social Studies class offered at KRHS as well as an Honors American History I class.

Regarding student equity, there were four courses—World History, American History I, Honors American History I, and Honors American History II—for which there was a choice to which teacher a student could be assigned. All other levels of all other Social Studies courses were assigned to only one teacher apiece so equity of access was assured, for better or worse. With World History—a 9th grade, standard-level course—the same inherent behavioral and academic challenges exist as mentioned previously with standard English I and Math I. Of the two options, the teacher with the lower quality score (8 points) had an enrollment of African American students 10.4 percentage points higher than that of the other teacher who had a score of 10 quality points. There were two teacher options for American History I, a standard course comprised mostly of 11th grade students. One was the second highest scoring teacher in the school with 13 quality points and the other was the lowest scoring teacher in her department with 7 quality points. While the enrollment for the section assigned to the highest scoring teacher was

15% Hispanic as compared to 0% for the section assigned to the lowest scoring teacher, the African American enrollment was the reverse. The class taught by the teacher with 13 points was 10% African American compared to 18.2% African American for the teacher with 7 quality points. The same two teachers were assigned for the Honors level of American History I, the enrollment details of which are shown in Table 4.14.

Table 4.14 KRHS American History I Teacher Quality Scores and Student Demographics

<i>KRHS Honors American History I teacher quality score</i>	<i>White student enrollment (overall KRHS enrollment: 76.3%)</i>	<i>Black student enrollment (overall KRHS enrollment: 12.0%)</i>	<i>Hispanic student enrollment (overall KRHS enrollment: 9.0%)</i>
KRSocialTeacher13	82.1	10.7	7.1
KRSocialTeacher13	78.6	14.3	7.1
KRSocialTeacher7	68	12	12

The highest scoring teacher was one of two options for Honors American History II as well. The other teacher of this course had a score of 8 quality points. The details for the student enrollments of their two sections of Honors American History II are shown in Table 4.15. It is

Table 4.15 KRHS Honors American History II Teacher Quality Scores and Student Demographics

<i>KRHS Honors American History II teacher quality score</i>	<i>White student enrollment (overall KRHS enrollment: 76.3%)</i>	<i>Black student enrollment (overall KRHS enrollment: 12.0%)</i>	<i>Hispanic student enrollment (overall KRHS enrollment: 9.0%)</i>
KRSocialTeacher13	85.7	10.7	3.6
KRSocialTeacher8	86.7	6.7	6.7

clear from this data that Hispanic students in Honors American History I and Honors American History II had greater odds to be assigned a teacher with a lower quality score than white or African American classmates.

KRHS Quantitative Summary

Table 4.16 shows the 15 core teachers at KRHS listed in descending order of teacher quality score with the total percentages of white, African American, and Hispanic students enrolled in the teachers' assigned classes for 2016-2017. Percentages that are above the school's overall enrollment for a given ethnicity are shown in bold print.

Table 4.16 KRHS Combined Core Teacher Quality Scores and Student Demographics

<i>KRHS teachers, identified by subject and listed by descending quality score</i>	<i>White combined course enrollment per teacher (overall KRHS enrollment: 76.3%)</i>	<i>Black combined course enrollment per teacher (overall KRHS enrollment: 12.0%)</i>	<i>Hispanic combined course enrollment per teacher (overall KRHS enrollment: 9.0%)</i>
KRScienceTeacher14	70.2	13.8	12.8
KRMathTeacher13	84.8	8.6	4.8
KRSocialTeacher13	81.4	11.9	6.8
KRSocialTeacher10	76.6	9.2	9.9
KREnglishTeacher9.1	74.1	12.2	9.4
KREnglishTeacher9.2	79.8	11.9	8.3
KRMathTeacher9	70.9	12.6	12.6
KRScienceTeacher9	74.6	10.8	10.8
KREnglishTeacher8.1	74.5	11.8	9.8
KREnglishTeacher8.2	77.9	9.6	9.6
KRMathTeacher8	72.4	13.0	10.6
KRSocialTeacher8	73.3	14.1	9.6
KRScienceTeacher7	84.2	8.6	5.0
KRSocialTeacher7	76.3	12.5	7.5
KRMathTeacher3	74.8	13.0	10.4

Whether it is by design as a product of KRPrincipal's "share the wealth" teacher assignment philosophy, by virtue of the small size of each department, by happenstance, or by a combination of the these factors, there were many examples of relative equity of access to teachers of higher quality for students from historically marginalized students to be found on the KRHS master schedule. Most of the classes offered in the English and Science departments were in fact generally emblematic of student equity. In fact, there was no one department with

significantly higher scores than another. The four departments all had an average range in teacher quality scores between 8.25 and 10, as detailed in Table 4.17.

Table 4.17 KRHS Average Teacher Quality Scores Per Department

<u>KRHS core department</u>	<u>Average teacher quality score</u>
English	8.5
Math	8.25
Science	10
Social Studies	9.5

There were however several examples of inequity as well:

1. African American students in Math I, Math III, Honors Math III, Honors Biology, World History, and American History I had greater odds of being assigned to a teacher with a lower quality score than did their peers from the historically privileged majority population enrolled in the same courses.
2. Hispanic students in Math I, Honors American History I, and Honors American History II had greater odds of being assigned to a teacher with a lower quality score than did their peers from the historically privileged majority population enrolled in the same courses.
3. Ninth grade students in English I, Honors English I, and Math I had greater odds of being assigned to a teacher with the lowest quality score in their respective departments than did upperclassmen—and in the case of Math I, freshmen had greater odds of being assigned to a teacher with the lowest quality score *in the school* than did upperclassmen.
4. Teachers with lower quality scores in the Math and Social Studies departments were not assigned nearly as equitably as those in the English and Science departments (with arguably the most challenging core teaching assignment in the

school going to the teacher with the lowest quality score and the least amount of experience).

The next section contains a school-level, cross-case analysis for Kali River High School, detailing the alignment of both the qualitative and quantitative findings.

Cross-Case Analysis: KRHS

In his interview, KRPrincipal emphatically emphasized several key tenets of his teacher assignment and master scheduling philosophies including but not limited to the following:

1. Teachers will “share the wealth” with regard to teaching grade levels, standard, Honors, and AP classes and will not pad their schedules.
2. Teachers will not “specialize” in certain courses or grade levels.
3. Teachers with seniority (a form of capital) and parents do not receive special treatment or consideration with regard to scheduling and assignment matters.

Quantitatively, the audit of the 2016-2017 KRHS master schedule and course enrollment data did not fully support KRPrincipal’s statements that all teachers “share the wealth” and that veteran teachers did not hold capital with him in scheduling matters. There were teachers with higher quality scores—especially in Math and Social Studies—that were generally assigned more advanced classes and/or classes with only upperclassmen. For example, the second-highest scoring teacher in the school, a Social Studies teacher, was assigned to courses that were comprised of 11th and 12th grade students. Regarding preferential treatment for veteran teachers, the Social Studies department chair—who may have had a lower quality score than her colleagues but had spent over ten years at KRHS—was assigned classes with only 11th and 12th grade students and was assigned the only AP Social Studies course on the master schedule.

Conversely, the same two departments had examples of teachers with lower quality scores assigned to a majority of standard and/or freshman-level classes. The only novice teacher

in the school (with 3 quality points, tied for the lowest scoring teacher in the district) was assigned five standard classes, four of which were Math I. The lowest scoring teacher in Social Studies that did not have the title of “department chair” was assigned 9th and 10th graders for five of six classes—three of which were standard level.

KRPrincipal mentioned his preference for and prioritization of lower enrollment caps for freshman and/or standard-level classes and higher enrollment caps for Honors/AP classes and classes primarily serving upperclassmen. Table 4.18 details the average enrollment sizes of a selection of KRHS courses.

Table 4.18 KRHS Average Class Enrollments- Sample

<i>KRHS course</i>	<i>Average enrollment per section</i>
English I	21
Honors English I	20
English II	20.5
Honors English II	18.3
English III	20
Honors English III	16
AP English Language	21.5
English IV	17.5
Honors English IV	17
AP English Literature	14

For three core KRHS departments, the “smaller standard/larger advanced” class size philosophy espoused by KRPrincipal was consistently manifested. However, there was one departmental outlier. At every grade level of English at KRHS except for one, the most advanced students enjoyed the smallest average class sizes. The exception was English III, in which the highest average class size was at the AP level, although having noted that, the average class size for Honors English III was much smaller than that for standard English III. It should be noted again though that every other core KRHS department besides English evidenced smaller average class sizes for the historically neediest students.

There was no mention in any interviews with KRHS stakeholders of the terms “achievement gap” or “equity.” Those terms were also not encapsulated in the KRHS School Improvement Plan. Honors and AP classes were mentioned a combined 58 times by interview participants when discussing teacher assignment and scheduling matters while standard classes were mentioned a total of 11 times. White students were referenced five total times in interviews, more than African American or Hispanic students. ESL classes were never mentioned by stakeholders during interviews. As such, it is difficult to compare qualitative and quantitative findings for scheduling and assignment concerns directly related to scheduling and teacher assignment equity for black and brown students as very little qualitative data germane to such students was presented for analysis.

How did other BLCS schools compare with Kali River High School in terms of equity for students and teachers? The next section will detail the teacher assignment and scheduling practices at Artist Point High School, the second largest high school in the district and the only traditional BLCS high school with a “majority-minority” student body.

Artist Point High School

As of September 26, 2016, Artist Point High School (APHS) was the second largest of the three traditional BLCS high schools with an enrollment of 836 students. A breakdown of enrollment by race and by grade is listed in Table 4.19, along with district and state enrollment data for comparison. Approximately 72% of APHS students in 2016-2017 received free or reduced-price lunch (an indicator of student poverty), the highest in the district among traditional high schools with almost twice the percentage as the second highest school, KRHS (38%). In comparison, the 2016-2017 district average was 56% and the 2012-2013 state average—the most recent reported—was 56.74% (NCES, 2016).

Table 4.19 Artist Point High School: 2016-2017 Racial Enrollment Summary

<i>Grade Level</i>	<i>Total Enrollment</i>	<i>White</i>	<i>African American</i>	<i>Hispanic/Latino</i>
9 th grade	269	58 (21.6%)	34 (12.6%)	162 (60.2%)
10 th grade	216	55 (25.2%)	28 (13.0%)	121 (56.0%)
11 th grade	201	47 (23.4%)	30 (14.9%)	115 (57.2%)
12 th grade	150	39 (26.0%)	24 (16.0%)	80 (53.3%)
Total enrollment-School	836	199 (23.8%)	116 (13.9%)	478 (57.2%)
Total enrollment-district	2,627	1,399 (53.0%)	346 (13.0%)	748 (29.0%)
% Enrollment-state (2015-16)		49.5	25.7	16.5

There were 102 staff members at APHS in 2016-2017. That includes 72 certified faculty members, 15 of which (approximately 21%) were Hispanic or African American—which was less than a third of the combined percentage of Hispanic or African American students (76.2%). The principal and both school counselors—who, according to the principal, are most responsible for the construction of the APHS master schedule, processing all student schedule changes, and vetting teacher, parent and student requests regarding scheduling—are all white.

Qualitative Findings: APHS

APHS stakeholders interviewed for this study were the school principal and both school counselors. To ensure anonymity, the following identifiers were used and coincide with the school initials and position of each interview participant: APPrincipal, APCounselor1, and APCounselor2. The interview participants were asked the series of questions that are encapsulated in the interview protocol (see Appendix C for a copy of the interview protocol). Key themes uncovered through stakeholder interviews are noted in Table 4.20. Interview data and select items from the 2016 TWC survey (as detailed in Table 4.2) as well as other school-specific documents and data sets will be detailed through the next several sections.

Table 4.20 Key Themes from APHS Stakeholder Interviews

<i>Interview participants:</i>	Principal, both Counselors (all white)
<i>Key themes/notes from interviews:</i>	<ul style="list-style-type: none">• Some elements of the scheduling processes (policy info and forms found online, scheduling interactions occurring in the summer) may provide advantage to more privileged students• Schedule construction occurring mostly in the spring disadvantages new teachers hired in the summer• All work related to the construction of the master schedule and the assignment of teachers to classes is completed by the principal; almost all individual student schedule change requests (and related parent communications) are handled by the lead counselor• Closing the achievement gap and related matters of student equity were not explicitly mentioned as primary or secondary considerations for scheduling despite the racial achievement gap being encapsulated in one of the goals on the APHS School Improvement Plan• Principal Scheduling Philosophy: lower enrollment for standard classes, higher enrollment for Honors/AP classes

Historical Precedent and Power Dynamics in Scheduling

At the time of his interview, APPrincipal was in his second year and—at least in his first year—his staff supported him at a high level on the 2016 TWC. On TWC item 10.3, respondents rated “School Leadership” the highest out of eight possible choices for which teaching condition most affects one’s willingness to continue teaching at APHS (37% agreement, which was higher than district and state averages of 25% and 29% respectively). While APPrincipal maintains almost exclusive authority over constructing the master schedule now, it’s a definite paradigm shift in terms of the APHS teacher assignment and master schedule processes. APCounselor1, who was in her thirteenth year at APHS, formerly had been granted almost sole authority over

teacher assignment and creating the master schedule by the previous two principals. She reported that prior to the arrival of APPrincipal, teachers had a great deal of influence or even control over the classes they were assigned: “For a while it was always what the teachers wanted as far as the course offerings...there were times when, because a teacher didn’t want to teach a course or said that they were not going to teach a course, we would have to eliminate that class to give them what they wanted.”

Even though she no longer constructs the master schedule or assigns teachers, APCounselor1 still has significant influence over the assignment of teachers to students because—despite the presence of a second counselor—APCounselor1 processes almost all individual APHS student schedule change requests exclusively. Even for the students on her caseload, APCounselor2 defers to APCounselor1 to process most schedule changes for individual students due to the wishes of APPrincipal. “[T]he nice thing about it by having very few hands in it, you’re less likely to have too many mistakes,” APPrincipal suggested. This means that APPrincipal and APCounselor1 ostensibly held almost exclusive authority over the assignment of APHS teachers to students and of APHS students to teachers for 2016-2017. The influence of teachers over their own assignments to students and courses, as well as over student schedule changes, is detailed in the next section.

The Influence of Teacher Capital in Teacher Assignment and Scheduling

For item 10.6 on the 2016 TWC, teachers were asked to agree or disagree with the statement “Overall, my school is a good place to work and learn.” The APHS faculty responded with 98% agreement which was the highest among the three traditional BLCS high schools as well as a significant 11% higher than the state average. On TWC item 11.7 (“Overall, the additional support I received as a new teacher has been important in my decision to continue teaching at this school.”), the newest teachers to APHS displayed 100% uniformity by

responding with “Strongly Agree,” the highest such rate in the district and 26% above the state average. This section will offer qualitative data for how teacher preferences are factored into the scheduling and teacher assignment processes.

APPrincipal reported that he collected suggestions and requests from teachers about their assignments for 2016-2017 during the preceding spring but that ultimately the assignment decisions were his and his alone. He used a paper form that each teacher completed and submitted with answers to prompts for whether or not a teacher would or wouldn’t return to APHS for 2016-2017, first and least favorite choices for planning periods, number of different courses or levels taught in the same day, and preferences for courses and/or levels (ranked 1-4). APPrincipal might have made the assignment decisions independently but how much might he have been swayed by the capital held by his teaching staff? TWC survey items 6.1a-6.1e, 6.2g, and 6.5 all relate to teacher leadership and teacher influence over school matters. APHS respondents rated their influence and leadership opportunities quite highly on these items in 2016. In fact, there was unanimous 100% agreement among respondents to item 6.1d: “Teachers are encouraged to participate in school leadership roles.” On TWC item 10.3, when asked which teaching condition most affects one’s willingness to continue teaching at APHS, “Teacher Leadership” ranked second only behind “School Leadership” out of eight possible choices (with 14% agreement, higher than district and state averages of 25% and 29% for the same item). While the focus of these survey items was certainly not solely on scheduling matters or teacher assignments, there was an obvious degree of satisfaction among the teaching staff with regard to their influence on school decision making and leadership opportunities in general.

APPrincipal said that the primary consideration driving the creation of the APHS master schedule was student choice closely followed by teacher preferences. While he contended that teacher preferences were only considerations and that student needs were the primary driving

factors in assigning teachers, there was definitely contrary evidence from his interview that teacher preferences took precedence in some cases. APPrincipal admitted that the school culture of teacher preference driving the construction of the master schedule was not totally a remnant of the past:

I try not to go do the thing where if you've taught 20-some years, you are the AP teacher; you know, where you always teach the 12th graders. I try to avoid that. But again, this is only my second year . . . it's hard to change that culture immediately. I do have probably two teachers who've been here more than 25 years who are teaching only seniors. I don't like it that way. And they're strong teachers, so I prefer they have a good mixture of kids. That's a culture I could not change immediately in my mind. But everybody else, I go based on what I see as their strengths with how they work with kids...

The APHS counselors also each suggested that teacher preference was still a palpable influence in the construction of the master schedule. "[He] tried to give them what they wanted when he developed the schedule...Because the way [he] did it, everyone seems much happier. They had a say..." reported APCounselor1. "[T]he Math Department is sort of hierarchical where the teacher that's been here the longest gets the more accelerated classes so they don't have to deal with as many discipline issues regardless of who's the most competent math teachers."

APCounselor2 also affirmed that teacher preference was still a significant factor in scheduling through an extension of praise for her principal: "I think he was good about, for the most part...adhering to what the teachers had asked for as much as he could. He is all about supporting the faculty."

APHS teachers also have a measure of influence over individual schedule changes, a process (as previously reported) that APPrincipal had empowered APCounselor1 to handle with almost exclusive autonomy. APCounselor1 stated that she had begun to consistently reroute to APPrincipal any teachers suggesting students be moved out of their classes. APCounselor1 reported that APPrincipal would change student schedules based on teacher reports: "I'll have a

teacher come and say... ‘This is their grade. They didn’t do summer reading. They have bitten off more than they can chew. If we keep the student in this class, they are going to fail. We need to look at something else.’ And so with [APPrincipal’s] approval, everything [is] adjusted.”

Teachers were not the only school stakeholders that held a substantive role in the scheduling of students. APHS parents and their strategies and attempts to leverage capital with the principal and counselors to gain preferable teacher assignments are detailed in the next section.

The Influence of Parent Capital in Teacher Assignment and Scheduling

On TWC items 4.1c and 4.1e, an overwhelming majority of respondents (94-95%) agreed or strongly agreed that APHS parents are highly informed about school events and that their involvement is highly encouraged by the school. However, item 4.1a which relates specifically to the *influence* held by APHS parents in decision making received a more tepid response with 77% agreement. APCounselor1 lamented her common experiences with parent influence as it pertained to student schedule changes:

My helicopter pilot parents love to come in and make sure that their child has certain teachers and certain classes at certain times of the day – especially my parents who have children that play sports. They want to make sure that they have...an easy class fourth block so they can leave. And this tends to be from my parents of females: if they’re playing Fall Tennis, then they want to make sure that their heavier classes are in the second semester and not as many in the fall. And then they get upset when . . . They’re like, “Well, can you just not change this class and put [those AP classes] in the spring instead of having them in the fall?”

A “helicopter parent” is a slang term in education used commonly to describe parents who hover incessantly over any and all matters related to the education of their children such as grades, college planning, or scheduling matters. The three interview participants exhibited unanimous agreement when describing the APHS parents who attempted to influence teacher assignment and scheduling matters: they are almost always white, usually female, almost never Hispanic or African American, and usually very involved at APHS in general and also more specifically in

their child's education. APCounselor1 described APHS helicopter parents thusly: "White females...Those are my moms that [are] here all the time, and they typically have had another child come through the system. I have not had very many Hispanic parents or African-American parents come and do anything." APPrincipal and APCounselor2 each gave very similar descriptions. Despite an enrollment of just under 24%, white students' parents were consistently much more highly involved and attempted to ply their influence with counselors and the principal when compared to the parents of black and brown students who make up over 71% of the APHS student body.

Officially, APHS students can change their schedules with a parent signature on a written paper request form within a designated window of time between the summer and the first several days of school, provided the student has met any prerequisites and that there is room in a class. There are several specific criteria indicated on the form, at least one of which must be met in order for the schedule change to be considered. The change criteria are not ambiguous and leave little room for interpretation such as: missing a course needed to graduate, incomplete schedule, scheduled for the same course twice, or a course sequencing issue. However, there also definitely have been unofficial reasons consistently used by APHS parents in attempts to engineer an assignment to a preferred class section or to a preferred teacher such as the tennis parent described above by APCounselor1. While APPrincipal maintained that parents do not get much traction in their advocacy for preferred teacher assignments, as previously mentioned, he conceded that APCounselor1 almost exclusively processes all student schedule changes and therefore receives more frequent appeals from parents than he does. APCounselor1 is a 12-month counselor which means she is the only counselor in the office over the summer meeting with students and parents regarding schedule changes and she has been by her own reports more pliable than he is likely aware: "[T]hey...email me or call me before their child gets here the

summer before their ninth grade starts and say, ‘Alright, I’m coming. Be prepared.’ I do like that heads up.” Later in the interview, APCounselor1 described an experience with a white female student in which the counselor herself initiated an advantageous schedule change for the student who was reported by the teacher to be exhibiting bad study habits:

[W]hen I was able to get [the student] later in the day, I said, “...you need to let me know what’s going on. Today’s the last day [to change schedules] and it doesn’t sound like I need to keep you in [the advanced math class]. We’re probably going to have to [change your schedule] so you can get the Essentials of College Math and be more successful and graduate.” [W]e talked and she eventually came out and shared some things that was going on in her personal life. And I’ve known the family for a long time, so that may have been why she felt comfortable talking to me. And so we adjusted everything to get her in the class where she would be more successful at.

APCounselor2 processes significantly fewer schedule changes for students than APCounselor1 but suggested that she too will work to find creative scheduling solutions for parents and students who self-advocate—the vast majority of which have been white by the interview participants’ own reports—even if the request is to change out of a less preferred teacher’s class which APPrincipal had said is not allowable:

If a parent wants a student to come out because of a teacher, that’s hard. For me personally, that’s harder to deal with... So yeah, the first week of school, a parent called me and said that her daughter had had this English teacher and that she had four hours of homework a night. And her daughter was playing sports, and her English was fourth block, and a lot of times they were going to leave early for sports. So what I tried to do – instead of focusing on [changing] the teacher, I focused more on, “Okay, let’s move her English class because it’s fourth block and she’s going to miss a lot of English.”

In the case of this particular schedule change, the end results were more optimal for the student than the parent had even sought. The student had a more advantageous class time for English as well as a different teacher as originally requested. With white students comprising only 23.8% of student enrollment and black and brown students comprising over 71% of total enrollment, an achievement gap between white and minority students still exists at APHS. The next section

details how or if the racial achievement gap and student equity concerns factor into the teacher assignment and scheduling processes at APHS.

The Influence of the Achievement Gap and Equity in Teacher Assignment and Scheduling

APHS has had an achievement gap between its more privileged white students and its more historically marginalized black and brown students. The 4-year cohort graduation rate for APHS within the three racial subgroups germane to this study was as follows: white 92.1%, Hispanic 84.2%, and African American 78.6%. According to the 2016-2017 APHS School Improvement Plan, the difference between APHS and the state average for the same subgroups on the 2015-2016 state End-of-Course exams is shown in Table 4.21. The SIP also reported a

Table 4.21 Difference Between APHS and State Average on 2016 EOC Performance by Subgroup

<u>Subgroup</u>	<u>Biology</u>	<u>English II</u>	<u>Math I</u>
State average	-2.5	-3.3	+6.7
APHS white	-8.5	+1.1	-2.9
APHS black	-20.3	-16.7	-4.8
APHS Hispanic	-2.5	-3.3	+6.7

racial achievement gap in performance between student subgroups on the ACT as well. While each subgroup showed growth on the ACT from 2015 to 2016, the gap remained. White students' average score grew from 20.2 in 2015 to 20.9 in 2016. Hispanic average scores grew from 15.9 to 17.1. African American average student scores grew from 14.6 to 16.2.

According to respondents from APHS on the 2016 TWC, the racial achievement gap was not an area of professional development necessitating much attention nor was it one that had been given much attention over the previous two years. For the large majority of survey items shown in table 4.1, APHS teachers were in at least 90% agreement (and much higher in the majority of cases) and yet responses for the two items most specific to closing the achievement gap (items 8.2h and 8.3h) displayed the least amount of uniformity. Only 37% of respondents reported that they received professional development (PD) on closing the achievement gap

within the last two years and only 48% of respondents believed that they needed PD on closing the gap in order to be more effective. Oddly contrary to these percentages, 82% of TWC respondents agreed that PD actually enhances teachers' ability to meet diverse student learning needs (TWC item 8.11). With a very large Hispanic and ESL population at APHS, one could surmise that “diverse student learning needs” might mean PD aimed at ESL or perhaps even EC instruction instead of PD aimed at enhancing the learning of racially diverse students. More cynically, the responses to item 8.11 could be interpreted that APHS teachers believed that targeted PD is actually valuable toward closing the achievement gap but they just haven’t particularly needed the training or had any interest in it. Regardless—and despite its mention as a School Priority Goal on the 2016-2017 APHS School Improvement Plan (SIP) or a student enrollment for 2016-2017 that was over 70% black and brown—there seemed little interest in undertaking training directly aimed at closing the gap.

Consistent with the potential existence of apathy toward addressing the racial achievement gap through professional development as reported on the TWC, none of the three interview participants mentioned the achievement gap or racial equity as primary considerations or even secondary influences driving the APHS teacher assignment, master scheduling, or schedule change processes during their interviews. Interestingly however, as shown in Table 4.22, the needs of predominantly white, privileged students in Advanced Placement classes were mentioned as specific considerations in APHS teacher assignment by the principal more than once during his interview:

[T]eacher effectiveness, of course, has a lot of power [over teacher assignment] – especially with the AP [classes]. You know I had to [consider] AP as well; not *especially* the AP, but the AP as well. Because you also want to have your strong teachers teaching those classes too – especially if these kids are trying to get college credit; make sure they’re prepared for college. So there’s that Catch 22 where you want the AP teacher also possibly be the one who has to teach the . . . you know, the Standard students.

For better or worse, there did appear to be at least a modicum of consideration for teacher preferences with regard to teaching ESL students. With a student population that was over 57% Hispanic at APHS, such consideration could have proven pivotal to the overall achievement of the school. APPrincipal explained “I tell [teachers] on this [teacher schedule preferences] form they need to write anything they want me to consider [such as] ‘It would be good if I had inclusion in the morning with [a particular inclusion co-teacher].’ Or, ‘Don’t give me any ESL kids first period.’ It doesn’t mean I’m going to do it; but again, this is their chance to write...everything down.” APCounselor1 described the advocacy of the school’s ESL department chair for teachers perceived as less effective to be assigned non-ESL classes: “[I]n some situations the ESL Chair will...say, ‘These teachers do not need to teach my ESL students. They’re not implementing best practices. They’re not willing to modify instruction.’ I know that [APPrincipal] listens to [the] ESL teachers because they’re in the classrooms seeing which teaching style tends to work best for English Language Learners.”

Despite no specific mention in stakeholder interviews of student equity or the racial achievement gap as factors driving or even influencing teacher assignment or scheduling processes (as shown in Table 4.22), inequity at least in the form of an achievement gap has existed at APHS. APPrincipal and his counselors were consistent in saying that “student needs” were primary factors driving these processes. If a gap in achievement between racial subgroups exists, “student needs” could reasonably be interpreted to include equitable access to classes taught by APHS teachers possessing indicators of quality as supported by scholarly research.

Table 4.22 APHS Interview Participants’ References to Terms/Concepts Germane to Racial Equity

<i>Term/concept</i>	<i>Interview participant: APPrincipal</i>	<i>Interview participant: APCounselor1</i>	<i>Interview participant: APCounselor2</i>	<i>Total number of references by stakeholders</i>
AP classes	20	11	3	34
ESL	10	15	1	26
Honors classes	13	4	8	25
Hispanic/Latino	12	2	1	15
AVID	6	4	2	12
White	7	2	1	10
Black/African American	8	1	0	9
Minority	5	0	0	5
Standard classes	2	0	1	3
Equity	0	0	0	0
Achievement gap	0	0	0	0

The next section provides an analysis of the audit of the APHS master schedule.

Quantitative Findings: APHS

Demographically, Artist Point High School has been an outlier in its district as the only “majority-minority” high school. The APHS student body of 836 students in 2016-2017 was 57.2% Hispanic, 13.9% African American, and only 23.8% white. APHS students were assigned to a total of 27 teachers in core subjects—seven each in English, Math, and Social Studies and six in Science. According to the school’s master schedule, outside of the obligatory standard and honors level course offerings for each subject, APHS offered two AP courses apiece in English and Math and one AP course apiece in Science and Social Studies that were assigned to classroom teachers (others were offered online at APHS). This section will detail access for APHS students to teacher quality, department by department, in the following order: English, Math, Science, and Social Studies.

As detailed in the preceding chapter and in this chapter’s introduction, teacher quality for this study was signified by four predetermined, research-based quality indicators: years of

experience, completion of an advanced degree, National Board Certification, and full NC licensure in assigned courses. Each teacher assigned to courses in each core department at each of the three traditional BLCS high schools received a composite quality score based on their credentials. Each credential was assigned a point value. At APHS, the composite scores ranged from a low of 3 to a high of 14. Except for a few outliers (one teacher apiece with scores of 14, 13, 6, 5, and 3), over 80% of the APHS teachers in core departments earned quality scores of between 7 and 12 quality points. The APHS English department is detailed in the next section.

It should be noted that percentages for enrollment contained in tables within this section do not equal 100% because for this study, equity was measured between students from the historically privileged population (white) and students from historically marginalized backgrounds (African American and Hispanic). Students from other races and ethnicities were not included in this research study.

It should also be noted that when quantitative findings are presented in this section, the use of the term “greater odds” with regards to access to teacher quality for students from specific racial/ethnic populations is not meant to convey randomness as that which would occur when gambling or playing roulette. Equity outcomes from teacher assignments are not accidental and result from the *intentional* decisions of principals and scheduling agents—even if those agents are not conscious of the eventual impacts of their decisions on student equity. The term’s use is also intentional as a simple means of conveying inequity between particular student groups.

APHS English

The quality scores for the seven APHS English teachers ranged from a low of 8 to a high of 12. Table 4.23 shows the seven APHS English teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in

the teachers' assigned classes for 2016-2017. Enrollment percentages per teacher that were above the school's overall enrollment for a given ethnicity are shown in bold print.

Five APHS English teachers had taught for between 4-10 years while the other two had over 10 years' experience. Five of the seven English teachers had Master's degrees. All seven were fully licensed but only one—the highest scoring teacher in the department—had National Board Certification.

As shown in Table 4.23, four of the seven APHS English teachers had the same quality score (10 points) and a fifth teacher was only one point from that score with 9 points. As such,

Table 4.23 APHS English Department Teacher Quality Scores and Student Demographics

<i>APHS English teacher quality score</i>	<i>White students- percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students- percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students- percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSEnglishTeacher12	22.9	12.1	57.9
APHSEnglishTeacher10.1	20.7	14.8	59.3
APHSEnglishTeacher10.2	29.1	5.1	62
APHSEnglishTeacher10.3	14.1	14.8	64.8
APHSEnglishTeacher10.4	12.4	15.5	66.7
APHSEnglishTeacher9	18.8	12	65.4
APHSEnglishTeacher8	19.9	13.5	62.2

equity with access to teacher quality was relatively assured with many English classes at APHS (Honors English I, Honors English II, standard English III) because all of the sections were assigned to teachers from this pool of five teachers with the same or very similar quality scores. There were also two courses for which there was only one teacher assigned (Honors English III and AP English Language) so students of any race or ethnicity that enrolled in these courses had equitable access to teacher quality by default. The case for equity in teacher assignment within the APHS English department could best be proven or disproven with most of the remaining courses such as standard-level sections of English I, English II, and English IV as well as Honors

English IV and AP Literature for which there was the widest possible spread in teacher quality scores with each course.

The standard level of English I was the lowest possible level of English taught in a traditional high school and was typically filled with the most academically and behaviorally challenging students. At APHS, there were eight sections of English I assigned to three teachers with quality scores of 9, 10, and 12 quality points respectively. The details for the student enrollments of these eight sections of English I are shown in Table 4.24.

Table 4.24 APHS English I Teacher Quality Scores and Student Demographics

<i>APHS English I teacher quality score</i>	<i>White students-percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students-percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students-percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSEnglishITeacher12	23.1	23.1	30.8
APHSEnglishITeacher12	9.1	9.1	81.8
APHSEnglishITeacher10.3	30	10	40
APHSEnglishITeacher10.3	8.3	12.5	70.8
APHSEnglishITeacher10.3	0	0	92.9
APHSEnglishITeacher9	8.3	12.5	79.2
APHSEnglishITeacher9	12	24	64
APHSEnglishITeacher9	7.7	19.2	73.1

Two of the sections of English one shown in the table above were ESL Inclusion sections (the second section for APHSEnglishTeacher12 and the third section for APHSEnglishTeacher10.3) which is why the percentage of Hispanic students was so high for each. The section taught by the highest scoring teacher in the English department had a lower percentage of Hispanic students than that assigned to the lower scoring teacher. The three sections assigned to the lowest scoring teacher possible had three of the five highest percentages of African American students. Three of the four English I sections with the highest percentages of white students—including the two highest—were assigned to the two higher scoring teachers. It is clear from this data that students from the historically privileged white population had greater odds of access to a higher quality English I teacher than did students from historically marginalized populations.

English II is an EOC course. Including two ESL sections almost exclusively assigned to Hispanic students, there were seven total sections, the enrollment details for which are in Table 4.25. As demonstrated by this data, teacher assignment in standard English II was relatively

Table 4.25 APHS English II Teacher Quality Scores and Student Demographics

<i>APHS English II teacher quality score</i>	<i>White students-percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students-percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students-percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSEnglishIITeacher10.1	23.5	17.6	47.1
APHSEnglishIITeacher10.1	0	26.7	66.7
APHSEnglishIITeacher10.1	10	0	90
APHSEnglishIITeacher10.1	0	0	100
APHSEnglishIITeacher10.2	11.5	15.4	69.2
APHSEnglishIITeacher8	4.8	14.3	81
APHSEnglishIITeacher8	18.5	14.8	55.6

equitable. Five of seven sections were assigned to teachers with the second highest scores in the department (10 quality points). Two of those five sections were dedicated ESL sections with the highest percentages of Hispanic students. The three sections with the highest percentages of African American students were also assigned to the higher scoring teachers while the two sections with the *lowest* percentages of African American students (not including the two ESL sections) were assigned to the lower scoring teacher.

There were seven possible sections of 12th grade English to which five teachers were assigned, including three sections of standard, two sections of Honors, and two sections of AP. The highest scoring teacher in the department (12 points) was assigned one section of AP English Literature and the lowest scoring teacher in the department was assigned to two sections of standard English IV and one section of Honors. The enrollment details of every level of English IV (standard, Honors, and AP) is included in Table 4.26.

The data shows that African American students in AP English Literature had greater odds of being assigned to the highest quality teacher possible. White and Hispanic AP students had

Table 4.26 APHS 12th Grade English Teacher Quality Scores and Student Demographics

<i>APHS 12th grade English teacher quality score (standard, Honors, and AP)</i>	<i>White students-percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students-percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students-percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSAPLitTeacher12	19.2	19.2	46.2
APHSAPLitTeacher10.2	40.9	4.5	54.5
APHSHonEngIVTeacher10.1	27.6	13.8	55.2
APHSHonEngIVTeacher8	20	26.7	50
APHSEngIVTeacher10.1	10.7	33.3	50
APHSEngIVTeacher8	20	13.3	66.7
APHSEngIVTeacher8	33.3	11.1	55.6

lower odds of being assigned to the higher quality AP teacher. The highest percentage of Hispanic students in any section of 12th grade English regardless of level was assigned to the lowest scoring teacher possible (8 quality points) who happened to also teach the ESL section of English IV. The two highest percentages of African American students in any section of 12th grade English were not assigned to the highest scoring teacher possible either. Three of the five highest percentages of white students in any section of 12th grade English were assigned to the higher scoring teachers. In general, the data shows inequity in access to teacher quality for black and brown students in 12th grade English at APHS.

At the teacher level, there were signs of equity and balance among teacher assignments. The highest scoring teacher in the department was assigned sections of both standard English I as well as AP English Literature. The lowest scoring teacher in the department was assigned to a range of grades and levels as well: standard English II and IV, Honors English IV, and AP English Language. Every English teacher in the department was assigned to at least one section of standard English and at least one section of Honors and/or AP English. There was one exception to that. One teacher (10 quality points) was assigned only standard English III however she was also a French Language teacher assigned to Honors-level French classes.

Equity for the APHS Math department—which collectively displayed a much smaller spread in quality scores than English—is detailed in the next section.

APHS Math

Among the seven APHS Math teachers, teacher quality scores ranged only from 7 to 8 points. Five of the seven teachers had quality scores of 7 points and the remaining two teachers had scores of 8 points. The APHS Math department tied the KRHS English department as the two departments in this study with the tightest range of quality scores. Table 4.27 shows the seven APHS Math teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in the teachers' assigned classes for 2016-2017. Enrollment percentages per teacher that were above the school's overall enrollment for a given ethnicity are shown in bold print.

Table 4.27 APHS Math Department Teacher Quality Scores and Student Demographics

<i>APHS Math teacher quality score</i>	<i>White students-percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students-percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students-percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSMathTeacher8.1	32.2	15.7	47.1
APHSMathTeacher8.2	26	13.8	56.9
APHSMathTeacher7.1	19.6	10.5	62.2
APHSMathTeacher7.2	12.7	15.3	66.9
APHSMathTeacher7.3	20.4	13	60.2
APHSMathTeacher7.4	29	10.3	55.9
APHSMathTeacher7.5	9.9	18	68.5

Akin to the closeness of their quality score range, the credentials of the teachers in the APHS Math department were also very similar. In terms of experience, all seven APHS Math teachers had taught for over ten years making the 2016-2017 APHS Math department the most experienced core high school department in Bay Lake County Schools. Only two of them had Master's degrees. All seven were fully licensed and none of them had National Board Certification.

As teacher quality was quantified in this study, there was virtually no opportunity for inequity with access to Math teacher quality for African American and Hispanic students at APHS as each of the seven Math teachers had either 7 or 8 quality points. It could be argued that there were some signs of inequity because two of the three largest percentages of white students were assigned to the higher scoring teachers (8 points) while two of the three highest percentages of African American students and the *four* highest percentages of Hispanic students were assigned to the lower scoring teachers (7 points) but with such similar scores based on such similar credentials, teacher quality as defined in this study was fairly consistent, for better or worse, throughout the APHS Math department.

How was equity evidenced at the teacher level in the Math department? Five of the seven teachers were assigned to a mix of at least one standard class and at least one Honors and/or AP level class. The same five teachers each had a mix of grade levels as well. The two remaining teachers however—and both were two of the lower scoring teachers (7 points apiece)—were assigned much tougher classes. Both were assigned a mix of standard Math I and Math support electives for weaker Math students in the ESL or EC programs. Whether these teachers preferred these classes or not is unknown but as research presented in Chapter 2 has shown (Boyd et al., 2008; Clotfelter et al., 2006; Cohen-Vogel et al., 2013; Feng, 2010; Finley, 1984; Kalogrides et al., 2012; Kalogrides & Loeb, 2013; NBER, 2006; NCDPI, 2008; Neild & Balfanz, 2006; Neild & Farley-Ripple, 2008; Neild et al., 2008; Roderick & Camburn, 1999), teachers possessing indicators of higher quality are the ones typically assigned to teach the most advanced classes with the most historically privileged students. Both teachers had over 10 years of total experience apiece but one of the two was in her first year at APHS and may have had no capital on which she could pull to have affected her assignment. Equity and balance as evidenced in the smallest core department at APHS—the Science department—is detailed in the next section.

APHS Science

There was a wide spread in teacher quality within the smallest core department at APHS—the Science department, the six scores for which ranged from a low of 6 quality points to a high of 13 quality points. Table 4.28 shows the six APHS Science teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in the teachers’ assigned classes for 2016-2017. Enrollment percentages per teacher that were above the school’s overall enrollment for a given ethnicity are shown in bold print.

Table 4.28 APHS Science Department Teacher Quality Scores and Student Demographics

<i>APHS Science teacher quality score</i>	<i>White students-percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students-percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students-percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSScienceTeacher13	30.3	9.1	58.3
APHSScienceTeacher12	32.6	5.4	56.6
APHSScienceTeacher9	8.1	15.4	71.3
APHSScienceTeacher8	18.4	11.6	63.9
APHSScienceTeacher7	23.2	11.6	60.9
APHSScienceTeacher6	17.9	22.8	53.7

In terms of experience, one APHS Science teacher had taught for 1-3 years, one had taught for 4-10 years, and the remaining four had taught for over ten years. Three APHS Science teachers had Master’s degrees. Six of the seven teachers were fully licensed and two of them had National Board Certification.

Students completing courses within the APHS Science department had only one teacher to which they possibly could be assigned for several courses (Honors Earth Science, Physical Science, Chemistry, Honors Chemistry, Honors Physics, AP Biology, and Anatomy), a dynamic which assured a measure of equity in that every student choosing the course would receive instruction from a teacher of the same quality, for better or worse. There were three courses

however for which there were multiple teacher options: Earth Science, Biology, and Honors Biology.

The enrollment details of the Earth Science sections assigned to four different teachers with varying quality scores are provided in Table 4.29. The two sections of Earth Science assigned to APHSEarthTeacher9 were not identified on the school’s master schedule specifically as ESL classes and yet there were no white or African American students enrolled in them and

Table 4.29 APHS Earth Science Teacher Quality Scores and Student Demographics

<i>APHS Earth Science teacher quality score</i>	<i>White students-percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students-percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students-percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSEarthTeacher9	0	0	97.4
APHSEarthTeacher8	15.6	20	57.8
APHSEarthTeacher7	12.7	21.1	63.4
APHSEarthTeacher6	12	20	52

they were almost exclusively comprised of Hispanic students. The data shows that Hispanic students completing Earth Science had greater odds of being assigned a teacher of the highest possible quality than did white or African American students.

APHS students enrolled in Biology—an EOC course—had three different teachers assigned to nine total sections of standard and Honors Biology. The enrollment details for the five sections of standard Biology taught by two different teachers are provided in Table 4.30.

Table 4.30 APHS Biology Teacher Quality Scores and Student Demographics

<i>APHS Biology teacher quality score</i>	<i>White students- percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students- percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students- percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSBioTeacher12	10.7	3.6	85.7
APHSBioTeacher9	12.5	20.8	54.2
APHSBioTeacher9	4.8	19	61.9
APHSBioTeacher9	18.5	18.5	63
APHSBioTeacher9	8	28	64

APBioTeacher12 was assigned to one section of standard Biology and APBioTeacher9 was assigned to four sections and as such, there was a measure of inequity by default. All students only had a 20% chance to be assigned to the higher scoring teacher (12 points). The data shows that Hispanic students in standard Biology had greater success being assigned to the higher quality Biology teacher than did African American or white peers. The enrollment details for the four sections of Honors Biology assigned to two different teachers are provided in Table 4.31.

Table 4.31 APHS Honors Biology Teacher Quality Scores and Student Demographics

<i>APHS Honors Biology teacher quality score</i>	<i>White students- percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students- percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students- percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSHonBioTeacher12	47.4	5.3	42.1
APHSHonBioTeacher12	66.7	4.8	23.8
APHSHonBioTeacher12	32	8	56
APHSHonBioTeacher8	13.8	3.4	75.9

The data shows inequity for Hispanic students in Honors Biology. The highest percentage of Hispanic students was assigned to the one section of the lower scoring teacher (8 quality points) while the three highest percentages of both white students and African American students were assigned to the three sections assigned to the higher scoring teacher (12 points). It should be noted that the converse trend occurred with standard Biology. The same teacher with 12 points had both the section of standard Biology with the highest percentage of Hispanic students as well as the sections of Honors Biology with the lowest percentages of Hispanic students.

At the teacher level, there were signs of inequity and balance in teacher assignments as well. The highest scoring Science teacher and overall second-highest scoring teacher in the school (13 quality points) was assigned to Chemistry, Honors Chemistry and an advanced Science elective (Anatomy)—courses filled mostly with upperclassmen and academically stronger students. The second highest-scoring Science teacher (12 quality points) was assigned only classes in one area of Science—Biology—and had sections of standard, Honors, and AP. The lowest scoring Science teacher (6 quality points) was in fact assigned to one section of Honors Physics, an advanced Science elective for mostly 11th and 12th grade students, but also to one section of Earth Science and four sections of Physical Science, both of which would contain the historically weakest Science students possible. The second-lowest scoring Science teacher (7 quality points) was assigned three sections apiece of Earth Science and Honors Earth Science which again consistently contain the weakest students possible largely from historically marginalized populations. Another Science teacher (9 quality points) was assigned only standard Earth Science and standard Biology classes. Social Studies, the APHS department containing the highest and lowest scoring teachers in the school, is detailed next.

APHS Social Studies

The seven-teacher Social Studies department at APHS offered the widest range of teacher quality with a low score of 3 quality points—which was the lowest scoring APHS teacher overall and tied with a KRHS Math teacher as the lowest scoring teacher in this study—to a high of 14 quality points—which was also the overall highest scoring teacher in the school. Table 4.32 shows the seven APHS Social Studies teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in the teachers’

Table 4.32 APHS Social Studies Department Teacher Quality Scores and Student Demographics

<i>APHS Social Studies teacher quality score</i>	<i>White students-percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students-percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students-percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSSocialTeacher14	8.8	5.1	80.5
APHSSocialTeacher10	17.8	10.5	65.8
APHSSocialTeacher9	23.9	17.6	51.4
APHSSocialTeacher8	22.9	18.6	52.5
APHSSocialTeacher7	29.6	19	47.2
APHSSocialTeacher5	23.6	12.2	57.7
APHSSocialTeacher3	17.5	1.9	78.6

assigned classes for 2016-2017. Enrollment percentages per teacher that are above the school's overall enrollment for a given ethnicity are shown in bold print.

One APHS Social Studies teacher—the lowest scoring teacher at APHS—was in her first year of teaching and was the only true novice teacher in a core APHS department. Another Social Studies teacher had taught for 1-3 years, three had taught for 4-10 years, and two had taught for over 10 years. Two APHS Social Studies teachers had Master's degrees. Six of the seven were fully licensed and one APHS Social Studies teacher had National Board Certification.

At the teacher level, there were substantial signs of inequity and imbalance. The highest scoring teacher at APHS overall (14 quality points) was assigned one section apiece of standard World History and standard American History I along with four sections of various levels of AVID—a worthwhile program to support minority student success and college planning, but an elective program nonetheless. The second-highest scoring teacher in the department (10 quality points) was assigned a mix of Civics, Honors Civics, Honors American History I, and AVID II—assignments that included three Honors sections and required no interaction with freshmen. Another teacher with 8 quality points was assigned a mix of American History I, Honors American History I, and AP US History—a schedule that was comprised of only 11th grade

students and all variations of the same “prep” (school scheduling term meaning “courses/levels to which they’re assigned”).

Conversely, the lowest scoring teacher in the department and in the school (3 quality points, tied for lowest in the district), and also a teacher in her first year of experience, was assigned *five* different preps of the six total sections to which she was assigned. The second-lowest scoring Social Studies teacher (5 quality points) was assigned a mix of standard and Honors World History, a freshman level course containing historically the most behaviorally challenged students transitioning to high school.

Regarding equity with access to teacher quality for black and brown APHS Social Studies students, there were four courses that offered the widest range of teacher quality: standard World History, Civics, Honors Civics, and standard American History I. The enrollment details for the seven sections of World History are provided in Table 4.33.

Table 4.33 APHS World History Teacher Quality Scores and Student Demographics

<i>APHS World History teacher quality score</i>	<i>White students-percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students-percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students-percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSWorldTeacher14	0	0	100
APHSWorldTeacher9	15.4	26.9	53.8
APHSWorldTeacher9	15.4	23.1	50
APHSWorldTeacher5	9.5	33.3	57.1
APHSWorldTeacher5	11.1	22.2	61.1
APHSWorldTeacher5	20	5	60
APHSWorldTeacher3	0	0	100

The World History sections assigned to both the highest and lowest scoring teachers in the department were ESL sections each with 100% Hispanic enrollment. ESL students in World History had 50/50 odds of being assigned to either the highest or lowest scoring teachers in the school. The three highest percentages of non-ESL Hispanic World History students were assigned to the lower scoring teacher while the two highest percentages of white students were

assigned to the highest possible, non-ESL World History teacher. African American students were somewhat evenly distributed between the two World History teachers in the middle of the spread.

Civics is the required Social Studies course, most often completed during 10th grade in North Carolina. At APHS, there were 11 total sections—including six standard and five Honors levels—assigned to three teachers, all of which were assigned at least one section of standard and at least one section of Honors. The enrollment details of the 11 sections taught by the three teachers are in Table 4.34 (percentages for sections are combined per teacher and level).

Table 4.34 APHS Civics Teacher Quality Scores and Student Demographics-Standard/Honors

<i>APHS Civics teacher quality score (standard and Honors)</i>	<i>White students-percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students-percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students-percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSHonCivTeacher10	29.8	8.5	57.4
APHSCivTeacher10	15.2	21.7	54.3
APHSHonCivTeacher9	46.7	6.7	40
APHSCivTeacher9	11.1	20	62.2
APHSHonCivTeacher3	17.4	4.3	78.3
APHSCivTeacher3	0	0	100

The data shows that there was inequity with access to teacher quality for Hispanic students in both standard and Honors levels of Civics. The two higher scoring teachers (10 and 9 quality points respectively) had larger percentages of white students in their standard and Honors sections than the lowest scoring teacher in the department/school (3 quality points) whose standard section was the ESL-sheltered section. In other words, the lowest quality teacher as defined by this research study was charged with teaching some of the neediest learners—students from an historically marginalized population whose proficiency with reading, writing, and understanding the English language was the weakest. Even the percentage of Hispanic students assigned to her non-ESL Honors section was the largest assigned to the three Honors teachers by

a wide margin. Like white students, African American students in Civics had greater odds of being assigned to the higher scoring teachers in both Honors and Standard levels with the highest percentages of African American students assigned to the highest-scoring teacher possible in both standard and Honors, and the second-highest percentages assigned to the second highest-scoring teacher possible, and so forth.

American History I (at either standard or Honors level) is the Social Studies course most often taken by 11th grade students who do not choose to take AP U.S. History. Students enrolled in the standard level of American History I at APHS had two options for teachers including the highest-scoring teacher in the department and in the school (14 quality points). The enrollment details of the four sections of American History I are detailed in Table 4.35.

Table 4.35 APHS American History I Teacher Quality Scores and Student Demographics

<i>APHS American History I teacher quality score</i>	<i>White students-percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students-percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students-percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSAmHisITeacher14	0	11.5	80.8
APHSAmHisITeacher8	14.3	0	85.7
APHSAmHisITeacher8	23.5	41.2	35.3
APHSAmHisITeacher8	26.9	46.2	15.4

The section of American History I assigned to the highest scoring teacher in the school was an ESL-inclusion class, as was one of the sections taught by the lower scoring teacher (8 quality points). There was one sign of equity with access to quality for minority students in American History I in that the higher scoring teacher had no white students assigned to her—only minority students. That said, the two highest percentages of African American students in any given section were assigned to the lower scoring teacher as was the highest percentage of Hispanic students. Equity and balance within teacher assignment and scheduling at the school level is summarized in the following section.

APHS Quantitative Summary

Table 4.36 shows the 27 core teachers at APHS listed in descending order of teacher quality score with the total percentages of white, African American, and Hispanic students enrolled in the teachers' assigned classes for 2016-2017. Percentages that were above the school's overall enrollment for a given ethnicity are shown in bold print.

Table 4.36 APHS Combined Core Teacher Quality Scores and Student Demographics

<i>APHS teachers, identified by subject and listed by descending quality score</i>	<i>White students-percent enrolled (overall APHS enrollment: 23.8%)</i>	<i>Black students-percent enrolled (overall APHS enrollment: 13.9%)</i>	<i>Hispanic students-percent enrolled (overall APHS enrollment: 57.2%)</i>
APHSSocialTeacher14	8.8	5.1	80.5
APHSScienceTeacher13	30.3	9.1	58.3
APHSEnglishTeacher12	22.9	12.1	57.9
APHSScienceTeacher12	32.6	5.4	56.6
APHSEnglishTeacher10.1	20.7	14.8	59.3
APHSEnglishTeacher10.2	29.1	5.1	62
APHSEnglishTeacher10.3	14.1	14.8	64.8
APHSEnglishTeacher10.4	12.4	15.5	66.7
APHSSocialTeacher10	17.8	10.5	65.8
APHSEnglishTeacher9	18.8	12	65.4
APHSScienceTeacher9	8.1	15.4	71.3
APHSSocialTeacher9	23.9	17.6	51.4
APHSEnglishTeacher8	19.9	13.5	62.2
APHSMathTeacher8.1	32.2	15.7	47.1
APHSMathTeacher8.2	26	13.8	56.9
APHSScienceTeacher8	18.4	11.6	63.9
APHSSocialTeacher8	22.9	18.6	52.5
APHSMathTeacher7.1	19.6	10.5	62.2
APHSMathTeacher7.2	12.7	15.3	66.9
APHSMathTeacher7.3	20.4	13	60.2
APHSMathTeacher7.4	29	10.3	55.9
APHSMathTeacher7.5	9.9	18	68.5
APHSScienceTeacher7	23.2	11.6	60.9
APHSSocialTeacher7	29.6	19	47.2
APHSScienceTeacher6	17.9	22.8	53.7
APHSSocialTeacher5	23.6	12.2	57.7
APHSSocialTeacher3	17.5	1.9	78.6

The spread in average teacher quality scores by department was greater for APHS than the spreads for KRHS (8.25 to 10) and LSHS (8 to 10.3). The four departments all had an average range in teacher quality scores between 7.3 and 9.9, as detailed in Table 4.37.

Table 4.37 APHS Average Teacher Quality Scores Per Department

<u>APHS core department</u>	<u>Average teacher quality score</u>
English	9.9
Math	7.3
Science	9.2
Social Studies	8

In his interview detailed in the previous section, APPrincipal alluded to the need to strategically assign effective teachers not only to standard and ESL classes but also to prioritize effectiveness in advanced classes. In terms of teacher quality, he seemed to have achieved measures of equity with access to quality for students from historically marginalized populations in advanced level classes such as: Honors English I-III, AP English Language, essentially all advanced Math courses, Honors Earth Science, Honors Chemistry, Honors Physics, Anatomy, AP Biology, Honors American History II, and AP U.S. History. Relative equity was evidenced in standard classes as well (although perhaps not in as many as at the advanced level): English III, essentially all standard Math classes, Physical Science, Chemistry, and American History I-II. At the teacher level, the teacher assignments in the APHS English department seemed the most balanced. Having said that, *most* teachers in every department were assigned a relatively diverse mix of standard and Honors level courses as well as courses comprised mainly of freshmen and those mainly taken by upperclassmen. There were however several signs of inequity as well:

1. African American students had lesser odds of being assigned a teacher of the highest possible quality in the toughest levels of English and Science—English I,

Earth Science, and Biology—than did their white peers. The same inequity was evidenced for African American students in Honors English IV as well.

2. Hispanic students had lesser odds of being assigned a teacher of the highest possible quality in the toughest levels of English and Social Studies—English I and World History—than did their white peers. The same inequity was evidenced for Hispanic students in English IV, AP English Literature, Honors Biology, Civics, and Honors Civics as well.
3. Teachers with the lowest quality scores in the Science and Social Studies departments (as well as two particular teachers in the Math department) were not assigned nearly as equitably as those in the English department and most teachers in the Math department.

Cross-Case Analysis: APHS

An analysis of qualitative data revealed several persistent and relevant themes germane to the teacher assignment and scheduling practices at APHS:

1. There is only one agent apiece directly responsible for assigning teachers to classes via construction of the master schedule and —APPrincipal—and for processing most individual student schedule changes as well as responding to parent advocacy for scheduling requests—APCounselor1.
2. Teacher preference is a “close second” to student choices as primary considerations affecting the construction of the master schedule.
3. Minimization of the influence of parent capital over assignment and scheduling decisions is more of a general preference for APPrincipal and the counselors than it is an absolute practice.

4. Teachers are markedly more satisfied than colleagues at other BLCS high schools with several key areas that are measured by the Teacher Working Conditions Survey including school leadership, supports for new teachers, and their conception of APHS as a good place to work and learn.

Unlike KRPrincipal, all three interview participants attested that APPrincipal not only hasn't eschewed teacher preferences for their own assignments, he has collected them and strongly considered them when creating the master schedule. Such pliability and openness may have contributed to the high marks of teacher satisfaction on the TWC. With that being considered, the majority of APHS teachers—especially (although not exclusively) in English and Math—were assigned a somewhat balanced class mix of skill levels and grade levels. While APPrincipal may have allowed teacher preferences to influence his decision making, he still created a master schedule with substantive signs of equity and balance. One example is that the highest scoring English teachers were assigned sections of the most challenging classes—standard English I—while the lowest scoring teacher was not assigned to those classes. The highest and lowest scoring English teachers were each assigned standard classes as well as AP classes. The Math department was comprised of teachers with similar credentials and teachers with very similar quality scores. Similar to English, the Math department teachers were mostly assigned an equitable schedule of standard and advanced level classes.

APPrincipal mentioned his preference for and prioritization of lower enrollment caps for freshman and/or standard-level classes and higher enrollment caps for Honors/AP classes and classes primarily serving upperclassmen. Table 4.38 details the average enrollment sizes of a selection of APHS courses.

There were only a few examples of average APHS class sizes for advanced courses being lower than those classes containing the historically neediest students but the examples were

substantive. Average class sizes for standard-level sections of Math I, Math II, and Math III were each greater than AP Statistics and *significantly* greater than AP Calculus AB, the two most advanced math courses offered at APHS. In fact, the average size of a standard Math I class at APHS—a course that often contains the youngest and weakest Math students in a given high school—was the largest size of those listed in Table 4.38. Standard-levels of Earth Science, Biology, Civics, and American History II had larger average class sizes than their Honors counterparts. Similar to Math, the lowest average enrollment for any of the five possible APHS

Table 4.38 APHS Average Class Enrollments—Sample

<u>APHS course</u>	<u>Average enrollment per section</u>
Math I	23.9
Math II	19.8
Math III	23
AP Statistics	20
AP Calculus AB	8
Earth Science	26.4
Honors Earth Science	22.3
Biology	25.4
Honors Biology	23.5
Civics	25.5
Honors Civics	23
American History I	21.75
Honors American History I	28
American History II	23
Honors American History II	24
AP US History	16

American History courses was at the AP level.

As was the case with KRHS, none of the APHS interview participants mentioned the achievement gap or student equity as considerations for changing student schedules, assigning teachers, or constructing the master schedule—despite the racial achievement gap being encapsulated as a priority goal on the School Improvement Plan. Therefore, any comparison of qualitative and quantitative findings specifically related to those issues would be based on

inference and conjecture. Honors and AP classes were mentioned a combined 59 times by interview participants when discussing teacher assignment and scheduling matters while standard classes were mentioned a total of 3 times. There was a substantive amount of emphasis in interview responses related to ESL students and classes which might be expected with a Hispanic student enrollment of over 57%. However, despite APCounselor1's reference to the advocacy of the ESL department chair when it comes to assigning quality teachers to those students, as detailed above, the lowest scoring teacher in the school and the only true novice teacher in any core department had assignments signifying significant responsibility for ESL classes. Also detailed above, Hispanic students—despite comprising the majority of the school's student enrollment—had lesser odds than their white peers of being assigned teachers of the highest possible quality in several classes critical to graduation such as English I, English IV, World History, and Civics.

How did the scheduling equity for minority students and the fairness for teachers with their assignments at Liberty Square High School compare with the equity and fairness found at KRHS and at APHS? The next section will detail the teacher assignment and scheduling practices at LSHS, the largest high school in the district.

Liberty Square High School

As of September 26, 2016, Liberty Square High School (LSHS), the largest of the three traditional BLCS high schools, had an enrollment of 1,390 students. A breakdown of enrollment by race and by grade is listed in Table 4.39, along with district and state enrollment data for comparison. Approximately 29% of 2016-2017 students at LSHS received free or reduced price lunch (an indicator of student poverty), the lowest in the district among traditional high schools. In comparison, the district average is 56% and the 2012-2013 state average—the most recent reported—was 56.74% (NCES, 2016).

There were 126 staff members at LSHS. That included 91 certified faculty members, 12 of which (approximately 13%) were staff of color—which was only a little more than one-third of the combined percentages of African American and Hispanic students (35.7%). The principal, assistant principal, and lead counselor most responsible for the construction of the school’s master schedule and other teacher assignment processes are all white.

Table 4.39 Liberty Square High School: 2016-2017 Racial Enrollment Summary

<i>Grade Level</i>	<i>Total Enrollment</i>	<i>White</i>	<i>African American</i>	<i>Hispanic/Latino</i>
9 th grade	373	232 (62.2%)	40 (10.7%)	76 (20.4%)
10 th grade	357	219 (61.3%)	55 (15.4%)	58 (16.2%)
11 th grade	351	232 (66.1%)	46 (13.1%)	61 (17.4%)
12 th grade	309	211 (68.3%)	41 (13.3%)	39 (12.6%)
Total enrollment-School	1,390	894 (64.3%)	182 (13.1%)	234 (16.8%)
Total enrollment-district	2,627	1,399 (53.0%)	346 (13.0%)	748 (29.0%)
% Enrollment-state (2015-16)		49.5	25.7	16.5

Qualitative Findings: LSHS

LSHS stakeholders interviewed for this study were the school principal, one of the assistant principals, and the lead counselor. To ensure anonymity, the following identifiers were used and coincided with the school initials and position of each interview participant:

LSPrincipal for the school principal, LSAssistant for the assistant principal, and LSCounselor for the lead counselor. The interview participants were asked the series of questions that are encapsulated in the interview protocol (see Appendix C for a copy of the interview protocol). Key themes uncovered through stakeholder interviews are noted in Table 4.40. Interview data and select items from the 2016 TWC survey (as detailed in Table 4.2) as well as other school-specific documents and data sets will be detailed through the next several sections.

Table 4.40: Key Themes from LSHS Stakeholder Interviews

<i>Interview participants:</i>	Principal, Assistant Principal, Lead Counselor (all white)
<i>Key themes/notes from interviews:</i>	<ul style="list-style-type: none">• Some elements of the scheduling processes (policy info and forms found online, scheduling interactions occurring in the summer) may provide advantage to more privileged students• Schedule construction occurring mostly in the spring disadvantages new teachers hired in the summer• Closing the achievement gap and related matters of student equity were not mentioned as primary or secondary considerations for scheduling nor was the racial achievement gap included in any of the goals on the LSHS School Improvement Plan• The needs of Band and AP students, and students in tested subjects, were mentioned most frequently as primary considerations for scheduling• The principal and one assistant principal construct the master schedule with little involvement of counselors• Principal Scheduling Philosophy: lower enrollment for standard and freshman classes, higher enrollment for Honors and AP classes and classes for older students• Teachers—especially Department Chairs—hold a significant amount of influence over their own assignments

Historical Precedent and Power Dynamics in Scheduling

Unlike the other two BLCS high schools participating in this study, the processes for assigning teachers to students via the master schedule's construction at LSHS were less overtly principal-driven and were described as more collaborative and more democratic by the stakeholders interviewed for this study. LSPrincipal relied quite heavily on LSAssistant as a collaborative partner and also allowed quite a bit more teacher input—especially from

department chairs—than what was reportedly allowed at KRHS and APHS. LSPrincipal described the collaboration this way:

[S]o the big collaborators will be myself, [LSAssistant] and the counselors. But once we have [the student course selection numbers], we actually give things to the teachers. We give the teachers the numbers and say, “Look these over and tell us what you want” ...[A]nd each department chair is responsible for looking at things; bringing things up to us that might be problematic; things we need to look at. We use that feedback to make adjustments.

Though there were four administrators total—LSPrincipal and three assistant principals including LSAssistant—only LSPrincipal and LSAssistant on the administrative team play any sort of role in teacher assignment, master schedule construction, or vetting and processing student schedule changes according to LSPrincipal. LSAssistant also named herself, LSPrincipal, LSCounselor, and the department chairs as key agents involved with construction of the master schedule. While LSCounselor may have been an active agent in processing student schedule changes—if not the lead agent—and tending to parent and teacher concerns regarding individual student schedule concerns, she contradicted her administrators. LSCounselor reported that she was largely out of the loop with master schedule construction when asked if she was a participant: “Yeah, not so much. I’ve done it before. I did it at my previous school that I worked at...I would love for them to let me be, but yeah...” She continued by attesting that the significant majority of the schedule construction was handled solely by LSPrincipal and LSAssistant.

When asked what considerations drove the construction of the master schedule, LSPrincipal, like his counterparts at KRHS and APHS, was quick to name “student requests” as the primary factor. However, he gave a very unique answer as a secondary influence with master schedule construction: “When you look at Band, it really does seem odd, but that definitely drives a lot because now all of a sudden the AP courses are crammed into your first three

courses; our first three periods of the day...The schedule is always driven...First semester, it's going to be the Band piece." Only after emphasizing the need to balance Band—the enrollment of which is 76.7% white, 8% African American, and 8.6% Hispanic—on the master schedule with the AP classes in which Band students tended to enroll did LSPrincipal mention certain other special populations and subgroups that typically contain more fragile, at-risk learners as scheduling considerations: EC students, ESL students, and freshmen.

Both LSPrincipal and LSAssistant spoke at length during their interviews about preferring lower enrollment caps for freshman and standard level classes (which tend to have much higher numbers of EC and ESL students enrolled, and are generally perceived to be more difficult in terms of behavior management) and higher caps for honors and AP classes as well as classes with more upperclassmen enrolled. LSPrincipal described his class size philosophy thusly:

[We] kind of philosophically apply what our beliefs are in terms of what's best in a master schedule—example being an introductory English I course for a freshman who's coming in. It's a tough transition year. We really don't need to have that loaded down with 35 kids. If we can keep that in the low twenties, that's what we shoot for. If you have an Honors English I, different story. Tough transition year, but those students have shown to be capable of handling the work. So the bigger class isn't a big deal.

LSAssistant was consistent with LSPrincipal in her responses by promoting this style of sizing classes when constructing a high school master schedule:

[M]y thought is that your AP kids are your most capable...They can work independently. They're going to do what you ask of them...[L]arger class sizes are more manageable in an AP class. So ideally, the lower level students need the most support...[We] have kind of a format for our caps such that the freshman core classes are what get the lowest cap. So, like, our Math I cap is 24. Our World History cap is 26. Earth Science – that cap is 26...So it's kind of, like, by grade level and by Standard, Honors, they progressively increase. So freshmen standard classes have the lowest caps; and then, you know, senior Honors and AP classes have the highest caps. And generally, our kind of max cap for a regular classroom course is 32.

Regardless of the context of the particular statement, AP classes and Honors classes were referenced a combined 97 times by the three participants during their responses to interview questions about considerations affecting teacher assignments via master schedule construction which might actually signify the prioritization of the needs of students in advanced classes over those in lower level classes. Standard-level classes were mentioned a combined 19 times, but only once by the principal. The racial achievement gap was not mentioned once by any of the participants, yet the needs of the students in Band—which again is a program the student enrollment of which was over 76% white—were referenced a combined eight times as a consideration influencing the construction of the master schedule, including seven times by LSPrincipal. AVID, a college preparatory elective historically frequented by black and brown students, was mentioned during interviews half as many times as Band.

All three stakeholders mentioned a specific factor that had recently resulted in smaller classes for AP students and larger classes for standard level classes (again, the classes that typically contain the neediest learners): the schedule change policy. When students submit course selections, a master schedule is created in the spring based on those numbers. Despite the principal's assertion that they create the schedule with higher caps for AP classes and lower caps for standard classes, students sign up for AP classes very often in an effort to be more competitive for college applications which are typically completed and submitted in the fall. Seniors are often admitted to college prior to the beginning of the spring semester and quite suddenly interest in the spring AP courses they had previously selected might drop. Neither KRHS nor APHS allow students to drop AP classes once they have selected them. LSHS allows students to drop AP classes, a decision which can result in imbalance with the master schedule. "This year for the particular drop/add period, the beginning of the school year, they can change

anything. We leave it open...They can drop AP. They can drop Honors. It's not always been the practice here, but that's what is being done right now," explained LSCounselor. She continued:

This year we had an extremely high number of students drop AP courses, which I warned that would probably happen because I'd worked with these kids for three years, especially [with] the seniors because they have all these lofty goals in their head when we're doing registration and then when the reality of it sinks in; and "senioritis," of course, starts about July. And so we're actually looking at making it where if you sign up for an AP class, you're *in* [the] AP class.

LSAssistant related an anecdote about the effect of AP classes on the LSHS master schedule:

[T]his year, our AP Literature...cap is at 30 and we have, like, 38 kids signed up for AP Literature. And that's kind of...an annoying number because it's like okay, well you offer one section and have...eight kids not get into AP Literature; which that does meet the graduation requirement for English IV. Or you create two sections which is going to be...two sections of under 20; which you hate to have...AP numbers that small...[T]his year we got into some trouble with that...[T]he department decided to devote two sections to AP English Literature...[W]e had, like, 38 kids...We've been growing, so we had a lot of transfer students...coming in, you know? We had a lot of AP kids coming in. So we thought, "Okay. Well if anything, it'll likely...maybe go up a few or stay the same." Well new kids coming in apparently didn't want that course, and some of our old kids ended up dropping that course. So now we're down to, like, 32 kids in two sections of AP Language and you're like, "Ugh!" That kills us.

Participants were asked during interviews how indicators of teacher effectiveness factored into teacher assignment decisions. LSPrincipal listed EVAAS data, data from administrative observations, and AP test scores. He also mentioned student evaluations are used at LSHS: "[T]alking with the kids is fabulous. We have students...evaluate our teachers...And we use that information to sit down and say, 'Look, here's what's going really well so far...This is your biggest area where for our kids here, this is where you need to focus.'" Regarding the use of teacher quality indicators to make assignment decisions, LSCounselor offered: "I definitely think experience plays a role, especially with the Honors classes or AP classes. And I think [administrators] take experience into [consideration] based on maybe testing results or something

like that. Where maybe if one teacher has been extremely successful, you know, don't fix what's not broken."

LSAssistant suggested that even teachers whose students earn low test scores should still be given influence over their teaching assignments. "...[Y]ou want people to be happy with what they're teaching...Realizing that [a preferred teaching assignment is] not going to be a good fit based on their scores...it's still [important to have] that conversation and kind of [make] the teacher a part of the process..." There was a definite theme with these interviews that was much less evident with those conducted at KRHS and APHS. The influence, preferences, and capital of teachers play much more significant roles in the teacher assignment and scheduling processes at LSHS, as detailed in the next section.

The Influence of Teacher Capital in Teacher Assignment and Scheduling

There is a strong precedent for LSHS teachers to have had a substantive voice in the master schedule construction; in fact, school leaders liberally allowed for it. "The teachers kind of say. 'Yeah, we're going to teach this many sections of this, this many sections of this [and] this many sections of this,'" described LSCounselor. But what if the preferences and priorities of the teachers are not wholly charitable? "[O]ur AP Lit teacher, like, she's adamant that she has to have small class sizes. And even though it's an AP course, she's adamant about that," explained LSAssistant. And while both administrators interviewed for this study repeatedly claimed to eschew small class sizes for Honors and AP courses in deference to smaller standard-level classes, as described previously, that teacher's two sections of AP Literature still currently average only 16 students apiece. LSAssistant described a conversation with the Science department chair in which administrators did actually enforce their scheduling philosophy:

[W]e had our science department chair...I think we had 36 kids sign up for Physics and she had targeted two sections for Physics...But that meant, like...our [standard] Earth Science would have been over the cap, so we had to go back to her and say, “I know you want every kid to be able to get Physics that signed up for it, but the reality is, you know, kids have already met...kids that are taking physics have already met the graduation requirement with Chemistry most likely.” And you know, “They can take Physics their junior or senior year.” So we have some juniors that signed up for Physics, so they’re just going to have to wait until next and try again.

There are several logistical duties and decisions with teacher assignments via master schedule construction in which LSHS teachers—especially department chairs—have tangible influence. LSPrincipal described his relationship with his department chairs thusly: “We don’t have much turnover, so the teachers who are on the leadership [team] have been around awhile...[T]hey understand kind of the give and take, because there’s not...We don’t have an adversarial relationship at all.” Supporting the idea that LSHS teachers have a much bigger hand in the decision making than what was reported at the other two schools in this study, LSAssistant described what happens with the assignment of teachers to sections once student course selection numbers have been organized:

[O]nce we get the numbers back to the departments, they kind of finalize...how many sections they want...Then when it comes back to administration, we kind of review again what they’re saying. Does that match with the numbers and does that match with our, you know, philosophy of scheduling? And then...[w]ithin their departments they decide who’s going to teach what...

When asked if she and LSPrincipal were content with allowing such liberal autonomy to the department chairs, LSAssistant replied: “I’d say, yeah, 95% of the time what the departments recommend stays; but, I mean, we have to tweak things here and there...Most teachers want to continue teaching what they’ve been teaching, so I mean it’s worked well...” She continued by saying that teacher preferences were the prime consideration affecting their assignments to courses: “[T]heir preferences are a big part of it, and their strengths. We want to put them in a course that, you know, they’re passionate about; [that] they want to be teaching.”

The three interview participants from LSHS gave several examples of experienced teachers and department chairs acting perhaps contrary to what is in the best interests of at-risk students and colleagues with less experience or effectiveness while at the same time describing how liberally those teachers and department chairs are trusted to ostensibly dictate to the scheduling team what they plan to teach the following year. LSCounselor revealed her perception of the reality of scheduling collaboration within one department:

I think for the most part...the departments are very democratic and they give opportunities to new teachers. And they do a good job of mentoring and those kinds of pieces. We do have one department that I think is not as democratic and we'll just leave it just like that. I think it's more of...I don't want to say "favoritism" because that's not...the true word. [Seniority] and maybe who they like and don't like? It's really...I mean it really is. The particular department I'm thinking of has some people in it that the rest of the group doesn't get along with, and so those...There's two that I can think of kind of get the short end of the stick where everyone else kind of gets to teach what they want...

The amount of input and influence afforded to the department chairs at LSHS was significant as was the trust placed in them by both the administrative team and the teachers within their departments. "Now you hope, in terms of the democratic process, those departments have voted for those people to represent them. And everyone knows, kind of, the duties of what those are," LSPrincipal reflected. LSAssistant however related an example of how department chairs did not necessarily always act as transparently and democratically as the administrative team might have hoped:

I heard after the [schedule was finalized] that we had one teacher that had requested to teach an Honors course and the department chair didn't put her down for that, and I was like, "Oh." And...this teacher was a good teacher, but I think...the department chair thought that, "Oh, well that teacher does better with standard [classes] so I want to just leave her with standard." It was kind of a, "Hmm, I'm surprised." Like, that department chair really should've went back and had a conversation with that teacher of, "I know you wanted to teach this, but just to let you know..." because it was kind of like after the fact the teacher was like, "Oh, well I asked for that, but I guess it didn't happen." And then, like, that department chair never had a conversation with the teacher of why it didn't happen. So I think that would've been a common courtesy to have that talk.

LSAssistant related more than one example of a department chair who was entrusted with facilitating a democratic process but made an autonomous decision that the department chair thought was best regardless of the wishes of a teacher within the department. With the tradition of department chair empowerment in place at LSHS, this sort of autonomous decision making was not only happening but was ostensibly endorsed by the principal. He related his feelings on the appropriate role and duties of a department chair within the teacher assignment process:

As a department chair, you can say, “Alright, we want this teacher to do this one and over here.” So they have always that authority. And, you know, they do that in collaboration with us as well. Some department chairs, I mean, we’ve been teachers, right? We know in our department who’s really good...I know very well who’s strong in my department and who’s not strong in my department; or what they’re...if they’re not strong in a particular...and what is their strength. So knowing that as department chair gives me an upper hand. Having an administrator coming in and just validating that makes a big difference...And within the department they know how things go; which teachers are very good and passionate about what they do. And what better thing than to have a passionate teacher in front of a group of kids.

Despite the principal’s rationale, the responses that new LSHS teachers gave for TWC item 11.1c suggested that perhaps equity among and within departments is not believed to be adequate. Only 33% of respondents agreed that they had received a reduced workload as a new teacher (as opposed to 62% of new teacher respondents at Artist Point High School). The prompt for item 11.9 asked new teachers to rate their agreement with the statement: “Overall, the additional support I received as a new teacher has been important in my decision to continue teaching at this school.” Only 72% of LSHS respondents agreed with this statement (compared to 100% of new teacher respondents at APHS and the 74% state average) while 27% of LSHS respondents *strongly* disagreed with it. Of course, responses to these survey items were not necessarily specific to teacher assignment or scheduling processes however they potentially illuminated a disparity between the comfort and privilege felt by higher quality, more veteran teachers at LSHS and their less experienced or less credentialed colleagues. LSCounselor spoke

of this disparity when asked what types of class assignments were given to teachers that were newer to LSHS or perhaps not as effective: “Probably freshmen; freshmen level. Standard courses. Yeah. Things that are not EOC-related. I mean I understand the reasoning. I can’t say I always agree, but I do understand the reasoning.” A statement made by LSPrincipal during his interview supported the notion that teachers with seniority at LSHS did receive additional consideration for their desired assignments: “Some people feel like they own a particular curriculum. And if they do it really well, we’ve got no problems [with that].” But how has the enabling of such teacher privilege affected the students who need quality instruction the most? LSPrincipal related an anecdote illuminating his school’s methods for supporting or growing a less effective teacher, and it’s not by assigning the teacher to privileged students in AP classes:

Actually, when I came here, there was a situation where they gave... They set up, basically, this teacher to fully fail, right? Something had happened the year before. Teacher had come halfway through the year; wasn’t particularly strong. I come here in October and I’m looking at this... I’m asking, “Hey, what’s going on in this class?” And it’s, “Well, you haven’t heard the story.” They tell me the story of what happened the previous year. I said, “Okay. So why are those kids with that teacher because that is not a good... That is a total disaster.” And it was. I mean it played out that way for the entire semester. They were kids who needed a lot of attention; who tended to be disruptive. If I wasn’t a teacher who could command the classroom by getting to know each of the kids so the kids would respect and they’d understand there were guidelines... they would just run amok, and that’s what was happening. So when that happens, the teacher’s trying to teach. The kids aren’t listening. The kids are just completely... basically given the opportunity to be disrespectful with minimal consequence. Kids are getting thrown out of class all the time. That’s a mess. I understand what the idea may have been, and that was: “We’ll make that teacher miserable and they’ll leave.” Great if you’re talking about the adult. Not great if you’re talking about the child. And in those classes, we’re talking about one adult and we’re talking about 90 kids. So for me, 90 far outweighs the one, so we’ve got to find some way to work with that teacher. And that teacher still is here today and complete turnaround. And all it took was sitting down and saying, “Look... these are the pieces you do very well. When you’re in a classroom and you turn your back, that’s bad. You can’t ever turn your back” ... In this instance, the teacher, I mean, knew that probably things weren’t going well. So when we approached it and had those discussions, you know, if that teacher wants to stay, they’re going to do everything they can.

LSPrincipal also admitted that he used the department chair in such situations to support the growth of a weaker teacher. He explained:

[W]e also talk to the department chair and...we don't go into the personnel conversations, but we do say, "Notice [this teacher's] struggling with this Bio stuff. Do you think you can have a teacher sit down with him once a week and just share with them some of the labs that he's been doing and how they do that?" And in my experience at every grade level, that has been very well-received. And when it's not been well-received, that teacher goes because they're not willing to change.

The decision to empower a department chair—in a school culture already rife with privilege and deference to teacher seniority—to support a colleague with significant performance concerns begs at least two questions. Wasn't the department chair who was allowed to decide the teacher assignments at least partially responsible for placing that teacher in the untenable situation to begin with? If so, should the department chair be entrusted as being part of the solution with a damaged teacher if there was already a prior willingness to place the teacher with students possessing less capital and exhibiting greater academic and behavioral challenges?

With as much input as teachers and department leaders have had on their own assignments and the collective master schedule, one might think the faculty would feel satisfied with their influence and autonomy. The TWC contains several items germane to teacher leadership and influence. Items 6.1c, 6.1d, and 6.1e directly relate to teacher influence and decision making power. Item 6.1d measured respondent agreement regarding the amount of encouragement teachers received for assuming school leadership roles. While 92% agreement may seem high, it was still the lowest in the school district which averaged 96.3% for 6.1d. Item 6.1c is "Teachers are relied upon to make decisions about educational issues." At 81% agreement, the satisfaction felt by LSHS respondents for the trust bestowed upon them in school decision making was lowest in the district and was below state average (83%). Finally, item 6.1e measures staff agreement with this statement: "The faculty has an effective process for making

group decisions to solve problems.” At 71% agreement, LSHS respondents were lowest of the three high schools in their district on this item. They rated their satisfaction with collaborative problem solving 20% lower than the school with the next highest percentage in their district and rate 5% lower than the state average for this item.

Capital may not just have been exclusively leveraged by LSHS teachers. When describing how her counseling department had recently changed their structure (how their student caseloads were comprised), she asserted “I am tired of working with the same students.” She described similar reasons why particular assignments were or were not preferred by teachers:

There are teachers who are more suited to teach upperclassmen. Or they feel that they’re more suited to teach upper classmen and not maybe freshmen...[a] very challenging group. We all know this...There are some teachers who don’t like a subject. We have teachers who would rather do this subject than this one because they like it better; or because it may just be they’re better at it. You know it might make more sense to them...I think desire or just personal preference working with certain groups.

Teachers and counselors were not the only school stakeholders with influence over scheduling processes. The influence of parent capital is discussed in the next section.

The Influence of Parent Capital in Teacher Assignment and Scheduling

TWC item 4.1a asks respondents to rate their agreement on this statement: “Parents/guardians are influential decision makers in this school.” At LSHS, 77% of respondents agreed with this statement which was tied for the highest percentage in the district and also 6% above state average.

In terms of response to parent advocacy with scheduling, LSCounselor mentioned that administrators and counselors were more consistent in their response to the influence of parent capital in previous years than they had been more recently: “I think I feel like it’s been a little less consistent in the past couple years. However, there was a time when it was extremely

consistent.” She posited a reason as to why parent capital had more influence at the current time than it previously had: “Well our school changed administration and that’s a big piece...Every principal’s different. Every principal has different philosophies, and I think it went from ‘This is the hard [and] fast rule’ to the gray.”

LSPrincipal described the prototypical LSHS parent who attempted to ply influence over scheduling matters and to whom their child was assigned in classes: “I think [our] parents who understand the education system, [we] see them a lot more.” He offered an anecdote to illuminate the parent dynamic at his school:

A parent once told me they’ve always gotten what they wanted because they’ve been the real squeaky wheel, and I said, “Well, I need you to know that you can be that squeaky wheel; but that kid over there who’s parent doesn’t make a peep squeaks super loud to me because the parent doesn’t make a peep. And because they’re not squeaking, I need to be the squeaker for them. So their voice is just as loud as yours even though there’s no one saying a thing.” And if you present it in a way that basically encapsulates that, then 90% of the time the parent understands that. The other 10% of the time, they don’t care. They’re going to be irrational...

LSCounselor was much more succinct with her description of the stereotypical LSHS “helicopter parents:”

Wealthy white. Nine times out of 10. I mean...we’re a predominantly white school, so when that happens it usually is my wealthy white. My Asian parents are very much like that [too]...but mainly wealthy white/Asian. Yeah, and it is what it is. They’re the ones that push the hardest. Absolutely.

She continued by describing the types of college preparatory benefits afforded students with involved parents. “I think some of our students’ parents are extremely involved; maybe sometimes too involved...Pushy is another word I’ll say...And they make decisions. [W]e’ve had kids...in AP classes or Honors classes who probably wouldn’t have been there had their parent not pushed them.” LSCounselor then described the strategies that some parents would employ to affect a change for their child’s schedule:

They'll call the teacher. They'll contact the teacher. We have a huge arts department, and the parents and the students will reach out to the arts teachers to say, "Hey we didn't get this class because they said it was full. Can you just put me in there?" ... The teachers have been doing a better job of saying, "Well, I'm sorry. Apparently, it's full. Maybe next year." That kind of thing. But there was a point where our teachers were kind of like, "Yeah, let me talk to the counselors. Let me see what I can do." Or the parents will be like, "Well, so-and-so told me..." And then you go and talk to the teacher and nothing was ever said...[T]hey'll try lots of tactics.

What strategies had LSHS employed in attempts to reach out more effectively to black and brown parents? When asked about school culture and the strategies used to welcome and partner with parents from historically marginalized populations, LSPrincipal talked about it somewhat from a human resources standpoint (names were changed for confidentiality reasons):

[L]ast year, Ms. Jones was here. This year, Ms. Stewart is here. They grew up in this area. Both assistant principals. Both black females, but grew up in [the county], so they know the families. They know the kids. They know all the situations. So it makes a huge, huge difference. For me, I was at all the schools that feed into here, so they know me. They kind of know how I operate... That makes a big difference. And one of the smaller pieces that makes a huge difference, especially with our Hispanic population who, historically for me and my experience working in the school systems, has been a huge hesitancy to come out and participate and volunteer, or just not sure what to do; and if they're not sure what to do, don't really want to come in... Especially for parents that are undocumented. They're terrified. So we've chipped away, chipped away, chipped away. When you leave, that woman out there- Ms. Hernandez? Huge impact. Huge. Hispanic family comes in, new or undocumented, or documented... the first person they go to. They're laughing. They're having great conversations... It makes an incredibly big difference because then they become familiar... That facilitates it over to us and we can get involved. And that relationship makes a big deal. And that's not to say that we have had incredibly high success reaching a really high percentage... of those parents, but we've gone out there. We've dropped presents off at homes. We do everything we can to get out there and reach, but we also know so many of these kids are in homes where the parents are working the second and third shift. So we go out, the parents aren't there. We know what the kids' situations are. And, you know, we try to work with different groups to do what we can to support them.

When asked to hypothesize potential reasons why African American and Hispanic parents were not more involved with the scheduling decisions of their students, LSCounselor offered:

I think it comes down to opportunity. I think it comes down to socio-economic success. We have African-American parents that are involved. However, they are few and far between. One thing that we need to encourage and that we're working on...is trying to get more of our minority students into...Honors and AP. Our equity is not where it should be with the number of students that we have in those.

To that end, LSAssistant and LSCounselor both mentioned that LSHS employs teacher recommendations during the course selection period each spring and that parents were allowed to sign a waiver to override a teacher's recommendation. "[W]e use our teachers to help gauge who should be in Honors and who shouldn't. And then of course we have the waivers that we can use for anybody who really wants to be in Honors and maybe doesn't meet the teachers' prerequisites," explained LSCounselor. To clarify, the state of North Carolina does not have prerequisites for Honors level. If a student has met a prerequisite for a given course and it's offered at either standard or Honors level, the choice is up to the student. The statement made by LSCounselor portrayed a level of official discretionary influence for teachers that may have substantively affected student equity and achievement if teachers had not been making course recommendations through a student equity lens.

The stakeholders all acknowledged that the parents who tended to be heavily involved in the scheduling decisions of their children were usually parents of privilege who were more likely to understand prerequisites, how to navigate systems, and with whom to self-advocate within the school to achieve a desired result. If a teacher was given a sanctioned opportunity to put in writing that a given student—in the teacher's opinion (however informed)—was not suited for success in advanced classes, white parents would have been the ones most likely to complete a waiver or question the judgement of a teacher and thus advocate for academic opportunities for their students. LSAssistant reported that the waiver process is all handled online which advantages parents who have the technological resources and systems-knowledge necessary to complete the process for their children. Plus, as described previously in Chapter 2, relationships

are key to the success of black and brown students. If a student internalizes that a teacher does not recommend the student for an advanced class, the student's confidence for undertaking a worthwhile challenge could easily be compromised. In short, giving teachers the authority to make recommendations that the state of North Carolina does not require prior to students enrolling in advanced level courses could actually perpetuate the under-representation of minority students in advanced classes, especially if the recommendations are made by teachers who do not routinely make decisions through an equity lens. LSCounselor—who was largely responsible for processing individual student schedule changes and was by her own admission a resource to the parents who were more involved in the academic success of their children—offered her opinions on the under-representation of minority students in Honors classes at LSHS:

[R]ecently in the last couple of years, we've had a lot more of the minority students taking Honors courses. It has not always been the case. A lot of them are just scared. And then once they get here and they see how it works, a lot of times they'll decide to go to Honors. Or our teachers will say, "Hey," you know, "you rocked this class. You should try the Honors level." And so I think our teachers do a good job of that. I think motivation is the other piece for some of our groups that just don't want to do the Honors level work. Yup.

LSCounselor went on to suggest that some parents may have had more influence with her than other parents might when requesting an assignment for their student to a preferred teacher depending on the quality of the reason provided for the request. She was asked how successful a parent would be with a request to be assigned to a specific teacher and responded thusly:

Probably not very successful unless you can present a pretty good argument. And what other people say is probably not a good argument. Because if they've had the teacher before maybe for a different subject, of course I'm going to take that into consideration. I'm going to look at the experiences. I'm...probably going to have a conversation with the teacher as well to see what their perception was...[but again,] unless they can present a really amazing case, it's usually denied.

Despite her earlier commentary about recent inconsistencies with the allowance of parent influence, LSCounselor described a type of “gray” reason for which she might have adjusted a student’s assignment to a different teacher if a parent requested a change:

I’ll give an example. We have an English teacher that’s very tough and has high expectations, and kids are scared of her because of what other people have said; not because they’ve gone in there and they’ve been in the class or anything like that; because of what other people have said. And there are some students who are not a good fit for her. And if we know them, we try our best not to do that. However, there are times where there may not be another option...[A student] that has a tendency to talk back or give attitude even slightly, they’re not going to be a good fit for her. Her expectations are that you come in, you sit down, you do your work and you learn, you leave. And so sometimes there are some students that we just know are not a good fit. Lazy students. You know, the student that’s going to do the bare minimum. She has expectations that you not do that in her class. And she doesn’t want that for you. And she’s actually very helpful if you’ll reach out. But sometimes [the] student that might have to [self-]advocate for a little bit more, they’re not always a good fit in there either. But I also have students who absolutely love her because she challenges them; because she has expectations; because they’re not distracted because there’s no distractions in this room. So there’s a lot of kids who really need that structure. It’s amazing for them.

Responses given by LSCounselor like the one above in which she described students of indeterminant race or ethnicity as lazy, lacking motivation, and scared raise questions regarding her impact on student achievement and equity at LSHS. The section below details the gaps in achievement experienced by students at LSHS and staff perceptions regarding their role with addressing the gaps.

The Influence of the Achievement Gap and Equity in Teacher Assignment and Scheduling

LSHS has had an achievement gap between its more privileged white students and its more historically marginalized black and brown students. The 4-year cohort graduation rate for LSHS within the three racial subgroups germane to this study was as follows: white 91.0%, African American 78.9%, and Hispanic 71.4%. According to data found on the NC Department

of Public Instruction website, the difference in percent proficient for racial subgroups on the 2015-2016 state End-of-Course (EOC) exams at LSHS is shown in Table 4.41.

Table 4.41 LSHS Students Percent Proficient on 2016 EOC Performance by Subgroup

<u>Subgroup</u>	<u>Biology</u>	<u>English II</u>	<u>Math I</u>
State average	55.5	58.8	60.5
LSHS white	68.3	73.0	69.1
LSHS black	34.6	37.7	34.2
LSHS Hispanic	26.2	34.2	32.9

Also found on the NC DPI website was data evidencing a gap in ACT performance between racial subgroups at LSHS. The average of all NC high schools for students meeting the University of North Carolina system’s minimum ACT composite score was 59.9%. An average of 82.5% of white LSHS met UNC’s minimum standard on the ACT while only 48.8% of African American students and 45.7% of Hispanic students met the minimum.

The items on the 2016 TWC most germane to closing the achievement gap are items 8.2h and 8.3h, which assess (respectively) whether or not respondents believe they need more professional development (PD) on closing the achievement gap and whether or not respondents have received 10 or more hours of PD on closing the achievement gap within the last two years. For item 8.3h, 32% of LSHS respondents—higher than the state average of 27% and second highest in the district—agreed that they had completed 10 or more hours of PD related to the achievement gap. Yet on item 8.2h, 56% of respondents agreed (the highest percentage in the district and higher than the state average of 50%) that they needed still *more* targeted PD for closing the achievement gap. Item 8.11 assesses respondents’ agreement for whether or not PD has the ability to enhance instruction toward meeting the needs of diverse learners. Only 64% of LSHS respondents agreed with this premise—lowest in the district by 18 percentage points and also 17 percentage points lower than the state average—which begs the question: Do LSHS educators lack faith that targeted training and dedicated time to collaborate on such a critical

topic would be a fruitful investment of their energies? Their 1% agreement to item 10.3, which assesses the value to respondents for various aspects of the working conditions in their particular school, suggested that teachers at LSHS did not put much stock either in PD in general or the quality of the PD provided by their school and district.

Despite the aforementioned indicators of a racial achievement gap at LSHS, the themes found within the responses of the three interview participants did not highlight the gap in any way. Table 4.42 shows the number of references that were made by interview participants to a concept, racial subgroup, or school program germane to this study in their responses to interview questions or that were used in examples to illuminate priorities and considerations for matching teachers with students through constructing the master schedule.

Table 4.42: LSHS Interview Participants' References to Terms/Concepts Germane to Racial Equity

<i>Term/concept</i>	<i>Interview participant: LSPrincipal</i>	<i>Interview participant: LSAssistant</i>	<i>Interview participant: LSCounselor</i>	<i>Total number of references by stakeholders</i>
AP classes	23	20	15	58
Honors classes	8	13	18	39
Standard classes	1	17	1	19
Band/Marching Band	7	1	0	8
Black/African American	2	0	5	7
White	0	0	6	6
AVID	4	0	0	4
Hispanic/Latino	2	0	1	3
ESL	2	0	1	3
Equity	2	0	1	3
Minority	0	0	0	0
Achievement gap	0	0	0	0

None of the three School Priority Goals contained in the 2016-2017 LSHS School

Improvement Plan (SIP) were specific to the achievement gap either. In fact, the gap was

actually and curiously mentioned under Areas of Notable *Achievement* in the SIP's

Student Performance Diagnostic:

...we saw an overall increase in black and Hispanic proficiencies on EOCs, with the Hispanic group showing some of the biggest growth of any subgroup. In addition, we also are seeing that our Hispanic subgroup performs at a smaller gap rate compared to white students in courses such as Math where language is not as great as a barrier. In Biology and English, however, that growth separation is removed, and this subgroup performs at a similar level to the black subgroup. Both subgroups continue to trail the white subgroup on Career and College Ready proficiency (63.6% compared to, 24.4% black, 27.6% Hispanic). In Grade Level Proficiency, this gap continues to exist (70.4 white compared to 34.6% black, 31.3% Hispanic). Again, the upside on this is that in each of these categories, EVAAS data reveals that while these proficiencies are low, these subgroups are meeting or exceeding expected growth...

The gap was also referenced briefly under Areas in Need of Improvement but *not* to emphasize it as a hindrance for students of color: "...the white subgroup has been decreasing in proficiency as the black and Hispanic groups have been increasing in assessment proficiencies." Considering the lack of priority assigned to the racial achievement gap by teachers in response to TWC prompts and by members of the School Improvement Team, it is understandable if not troubling that the achievement gap and racial equity with access to higher quality teachers were not mentioned as considerations when assigning teachers to students through master schedule construction.

One often researched and discussed aspect of racial segregation within schools is the under-representation of black and brown students in Honors and AP classes, a trend that was surely observable at LSHS according to KRCounselor:

Our minority populations are definitely underrepresented in our AP courses. I think not always in our Honors courses, but definitely in our AP courses. I think sometimes it's because they're not encouraged—I'll just be honest—by a number of stakeholders. Sometimes I don't think they have the resources. If you're looking at socio-economic, if you're looking at parental support, those kinds of pieces, I think they feel like they're not supported to do those types of things. And that's probably the two biggest. I think there's a social piece as well, especially for my African-American males. If we have African-American males taking AP classes, they're shunned by the rest of the African-American males in the school. So they end up being friends with the white kids which...you know, creates this divisive piece that we don't want to see... Yeah, so they almost ostracized this person because they want to go to college... Sometimes I think it's out of jealousy that someone's not pushing them that way. But the same time, if we try to push those kids, they push back. So you...try to find that balance between, "How can I encourage?" But you know, the fear is will they get in there and not do what they need to do and then fail, and then you have this whole cycle that keeps going...

LS Counselor continued by discussing a subsection of minority students—student athletes—and her thoughts on what should be done to support healthier academic decision making for them, and who was best equipped to offer that support:

There's definitely a group that are bright kids who try to put off this persona that they're not because they're a jock... And we have to do a better job of encouraging our athletes which are, you know, predominantly African-American; or our Hispanic population that plays soccer. I feel like we need to get our coaches on board a little more; putting pressure on them to perform well in the classroom. Because there have been times where we have students who can go play at college, but they don't have the grades. And that's something we have to get better at in that. I'm trying to work with the AD to do some more training with those coaches so that we can encourage those kids. Because sometimes if it comes from me, they won't do it. But if it comes from a coach, they're all over it. So trying to get, you know, all the stakeholders involved to push those students.

How imbalanced are the enrollments of Honors and AP classes? How equitable was the access to higher quality teachers for minority students? The next section provides an analysis of the audit of the LSHS master schedule.

Quantitative Findings: LSHS

Liberty Square High School's student body of 1,390 students was approximately 64.3% white, 13.1% African American, and 10.8% Hispanic. LSHS students were assigned to a total of 40 teachers in core subjects—eleven in English and ten each in Math, Science, and Social Studies. It was also the only traditional BLCS high school with 100% of its core teachers having full licensure per the state of North Carolina. According to the school's master schedule, outside of the obligatory standard and honors level course offerings for each subject, LSHS offered two AP English courses, three AP Math courses, two AP Science courses, and three AP Social Studies courses assigned to classroom teachers (others were offered online at LSHS). This section will detail access for LSHS students to teacher quality, department by department, in the following order: English, Math, Science, and Social Studies.

As detailed in the preceding chapter and in this chapter's introduction, teacher quality for this study was signified by four predetermined, research-based quality indicators: years of experience, completion of an advanced degree, National Board Certification, and full NC licensure in assigned courses. Each teacher assigned to courses in each core department at each of the three traditional BLCS high schools received a composite quality score based on their credentials. Each credential was assigned a point value. At LSHS, the composite scores ranged from a low of 5 to a high of 14. Except for a few outliers (five teachers with scores of 12 or higher and one teacher with a score of 5), 85% of the LSHS teacher quality scores fell between 7 and 11. The department with three of the school's five highest teacher quality scores was the LSHS English department which is detailed in the next section.

It should be noted that percentages for enrollment contained in tables within this section do not equal 100% because for this study, equity was measured between students from the historically privileged population (white) and students from historically marginalized

backgrounds (African American and Hispanic). Students from other races and ethnicities were not included in this research study.

It should also be noted that when quantitative findings are presented in this section, the use of the term “greater odds” with regards to access to teacher quality for students from specific racial/ethnic populations is not meant to convey randomness as that which would occur when gambling or playing roulette. Equity outcomes from teacher assignments are not accidental and result from the *intentional* decisions of principals and scheduling agents—even if those agents are not conscious of the eventual impacts of their decisions on student equity. The term’s use is also intentional as a simple means of conveying inequity between particular student groups.

LSHS English

Teacher quality within the largest core department at LSHS ranged from two teachers with 7 quality points to one teacher with 13 quality points (a score which tied for the 2nd highest score in the school). One of the two English teachers with a quality score of 7 was primarily assigned ESL-sheltered sections of English with predominantly Hispanic enrollments. While he was in fact assigned to teach English at LSHS, white and African American students were essentially blocked for assignment to his classes (along with other Hispanic students who were more proficient in English than identified ESL students). This teacher remained a viable subject for analysis but with such homogeneously grouped classes and such high numbers of Hispanic students assigned to them, his inclusion in the study added a unique element to the research. Table 4.43 shows the eleven LSHS English teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in the teachers’ assigned classes for 2016-2017. Enrollment percentages per teacher that were above the school’s overall enrollment for a given ethnicity are shown in bold print.

In terms of experience, one LSHS English teacher had taught for 1-3 years, five had taught for 4-10 years, and five had taught for over ten years. Three LSHS English teachers had Master's degrees. All eleven were fully licensed but only the three highest scoring teachers had National Board Certification.

Table 4.43 LSHS English Department Teacher Quality Scores and Student Demographics

<i>LSHS English teacher quality score</i>	<i>White students-percent enrolled (overall LSHS enrollment: 64.3%)</i>	<i>Black students-percent enrolled (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic students-percent enrolled (overall LSHS enrollment: 10.8%)</i>
LSEnglishTeacher13	73.2	11.5	8.3
LSEnglishTeacher12.1	74.6	10.1	8.7
LSEnglishTeacher12.2	78.7	6.2	6.7
LSEnglishTeacher10.1	58.2	15.3	18.8
LSEnglishTeacher10.2	67.2	11.8	16.1
LSEnglishTeacher9.1	58.9	20.6	15.6
LSEnglishTeacher9.2	66.5	13.7	13
LSEnglishTeacher9.3	55.7	20.4	19.2
LSEnglishTeacher9.4	68.8	12.2	12.2
LSEnglishTeacher7.1	0	0	100
LSEnglishTeacher7.2	68.7	17	10.4

There was only one English course on the LSHS master schedule for which there was no choice to whom a student would be assigned: AP English Literature, the highest possible level of 12th grade English. Both sections of this class were assigned to the highest scoring teacher (with 13 quality points) in the department. As a matter of fact, in terms of equity at the teacher level, this particular teacher was symbolic of substantive professional inequity. She was assigned to teach only seniors in two sections each of standard, Honors, and AP English. One of the two second highest scoring English teachers (with 12 points) was assigned only advanced level classes for upperclassmen—Honors English II (10th grade) and AP English Language (11th grade). The other teacher with 12 quality points was in fact assigned to three sections of standard English I—the only 9th grade classes and three of only five standard-level classes assigned to the three highest scoring English teachers at LSHS—including a section of EC-inclusion English I,

but her other three classes were Honors or AP-level. The three highest scoring English teachers were assigned the three lowest percentages of Hispanic students and African American students in the LSHS English department. Conversely, one of the two lowest scoring English teachers (with 7 quality points) was assigned only ESL-sheltered English classes with 100% Hispanic enrollment. The other teacher with 7 quality points was assigned two sections of standard English I and one section of standard English II. One of her standard English I sections and her English II class were actually EC-inclusion classes.

For standard English II—the only English course with an NC End-of-Course exam—there were four possible teachers to which students could be assigned including both of the two lowest scoring English teachers at KRHS (with 7 quality points). In a department with teacher quality scores as high as 13 points, there was not a teacher option for standard English II students with a quality score any higher than 9. For standard English III, there were three possible options for teachers with quality scores ranging from 7 to only 10. Conversely, there were three sections of AP Language and two sections of AP Literature at LSHS all assigned to the three highest scoring teachers in the LSHS English Department (with 12-13 quality points). Students in 11th grade AP English were assigned to a teacher with 12 quality points and all students in 12th grade AP English would automatically be taught by the highest scoring teacher in the department. For a closer look at the inequity in access to English teacher quality between standard and AP-level students at LSHS as well as the average student enrollments in each course by ethnicity, refer to Table 4.44.

The data contained in Table 4.44 is indicative of a lack of student equity. White students in AP English classes specifically had much greater odds of being assigned teachers with higher quality scores than did black and brown students in standard classes at every grade level. As data

provided in this section shows, white students in LSHS English classes *in general* had greater odds at being assigned teachers of higher quality than did African American and Hispanic

Table 4.44 Comparison of LSHS English Standard and AP Teacher Quality Scores and Student Demographics

<i>English course name</i>	<i>White students-average percent enrolled (overall LSHS enrollment: 64.3%)</i>	<i>Black students-average percent enrolled (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic students-average percent enrolled (overall LSHS enrollment: 10.8%)</i>	<i>Average teacher quality score</i>
English I-standard	55	16	23	9.7
English II-standard	49	22	23	10
English III-standard	54	18	23	9.1
English IV-standard	61	16	18	9.9
AP English Language	96	2	0	12
AP English Literature	63	8	8	13

students. The equity of access to teacher quality in LSHS Math classes for students from historically marginalized backgrounds is detailed in the following section.

LSHS Math

Teacher quality in the LSHS Math department was more tightly bunched than it was in the English department, with a range of scores only from 7 to 9 quality points. Table 4.45 shows the ten LSHS Math teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in the teachers' assigned classes for 2016-2017. Enrollment percentages per teacher that were above the school's overall enrollment for a given ethnicity are shown in bold print.

In terms of experience, all but three LSHS Math teachers had 10 or more years of experience. The remaining three had between 4-10 years of experience. None of the Math

teachers held National Board Certification but all were fully licensed. Two LSHS math teachers had Master's degrees while a third had a doctorate.

Table 4.45 LSHS Math Department Teacher Quality Scores and Student Demographics

<i>LSHS Math teacher quality score</i>	<i>White students-percent enrolled (overall LSHS enrollment: 64.3%)</i>	<i>Black students-percent enrolled (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic students-percent enrolled (overall LSHS enrollment: 10.8%)</i>
LSMathTeacher9.1	66	11.2	16
LSMathTeacher9.2	59.8	21.2	15.1
LSMathTeacher9.3	65.3	16.5	13.1
LSMathTeacher9.4	60	12.7	24.8
LSMathTeacher8.1	60.9	13.2	19
LSMathTeacher8.2	66.4	14.5	12.5
LSMathTeacher7.1	67.5	8.6	17.2
LSMathTeacher7.2	56.8	15.5	22.3
LSMathTeacher7.3	80.1	7.4	6.6
LSMathTeacher7.4	61	10.2	23.5

Perhaps due to the tighter nature of the quality scores, there were not any substantive examples of student inequity within the LSHS Math department. Every teacher in the department except for one of the lowest scoring teachers (with 7 quality points) had been assigned classes containing percentages of Hispanic students that were higher than the school's total Hispanic enrollment percentage, a sign of general equity of access to teacher quality. Exactly half of the teachers in the department—including four of the six highest scoring teachers—were assigned classes with percentages of African American students enrolled that exceeded the school's total African American enrollment percentage. The teacher with the highest overall percentage of white students as well as the lowest overall percentages of both African American and Hispanic students in the LSHS Math department was one of the four lowest scoring teachers at 7 quality points.

There were seven sections of standard-level Math I—the lowest possible level of Math taught in NC high schools—contained in the LSHS master schedule, the enrollment details of which are shown in Table 4.46. More than half of those sections were taught by two of the

Table 4.46 LSHS Math I Teacher Quality Scores and Student Demographics

<i>LSHS Math I teacher quality score</i>	<i>White students-percent enrolled (overall LSHS enrollment: 64.3%)</i>	<i>Black students-percent enrolled (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic students-percent enrolled (overall LSHS enrollment: 10.8%)</i>
LSMathTeacher9.1	50	7.7	42.3
LSMathTeacher9.1	56	28	12
LSMathTeacher9.4	50	12.5	33.3
LSMathTeacher9.4	46.2	15.4	34.6
LSMathTeacher8.2	46.2	23.1	15.4
LSMathTeacher8.2	48	24	28
LSMathTeacher8.2	59.3	14.8	18.5

highest scoring teachers and none of them were taught by any of the lowest scoring teachers. In fact, of the 27 sections of the lowest levels of Math taught at LSHS (the combined sections of Math I and Math II, standard and Honors levels of each), *only two* sections were assigned to a teacher with the lowest quality score (7 points). This was an obvious and strong sign of equity with access to teacher quality for students from historically marginalized backgrounds.

There were obvious signs of equity and fairness at the teacher level as well. For example, the teacher assigned to two sections of AP Calculus AB and one section of AP Calculus BC—the most challenging levels of math taught in NC high schools—was also assigned to three sections of standard Math I. His course enrollments are shown in Table 4.47.

Table 4.47 LSMathTeacher8.2 Student Demographics by Course and Section

<i>Course/section taught by LSMathTeacher8.2</i>	<i>White students-percent enrolled (overall LSHS enrollment: 64.3%)</i>	<i>Black students-percent enrolled (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic students-percent enrolled (overall LSHS enrollment: 10.8%)</i>
Math I	46.2	23.1	15.4
Math I	48	24	28
Math I	59.3	14.8	18.5
AP Calculus AB	89.5	0	5.3
AP Calculus AB	95	5	0
AP Calculus BC	83.3	0	8.3

Of the four LSHS departments included in this study, the Math department was the most equitable with student access and the most balanced in terms of range of teacher quality scores and colleagues “sharing the wealth” of challenge. The equity and balance of the department with the widest range of teacher quality scores—the LSHS Science department—is detailed in the next section.

LSHS Science

The LSHS Science department displayed the widest spread in quality among the four core departments with its ten teachers’ scores ranging from 5 quality points to 14 quality points which also happened to be the lowest and highest teacher quality scores for the school, regardless of subject. Table 4.48 shows the nine LSHS Science teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in the teachers’ assigned classes for 2016-2017. Enrollment percentages per teacher that were above the school’s overall enrollment for a given ethnicity are shown in bold print.

Table 4.48 LSHS Science Department Teacher Quality Scores and Student Demographics

<i>LSHS Science teacher quality score</i>	<i>White students-percent enrolled (overall LSHS enrollment: 64.3%)</i>	<i>Black students-percent enrolled (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic students-percent enrolled (overall LSHS enrollment: 10.8%)</i>
LSScienceTeacher14	83.9	3.6	2.7
LSScienceTeacher10	78.7	9.2	9.8
LSScienceTeacher9	55.4	15.9	20.4
LSScienceTeacher8.1	65.2	14	15.2
LSScienceTeacher8.2	76.5	8.2	10.4
LSScienceTeacher8.3	75.6	7.9	11.6
LSScienceTeacher7.1	41.3	29	23.2
LSScienceTeacher7.2	57.1	14.9	22.1
LSScienceTeacher5	67.8	12.8	11.7

The levels of experience held by the LSHS Science teachers was as wide-ranging as their quality scores. The Science department contained the only true novice teacher of the 40 LSHS teachers contained within the core departments. Two other teachers had 4-10 years of experience while the remaining six teachers had more than 10 years' experience each. All of the Science teachers were fully licensed. The highest scoring LSHS teacher in the study (14 points) was the only Science teacher with National Board Certification and one of two Science teachers with a doctorate. The lowest scoring Science teacher (5 points) also held a doctorate while four other Science teachers had Master's degrees.

There were signs of student inequity regarding access to the highest quality Science teachers possible. The two highest scoring teachers also had the department's highest percentages of white students in their classes with the correspondingly lowest numbers of Hispanic students in their classes, along with percentages of African American students significantly lower than the overall percentages enrolled in the school. A focused depiction of the enrollment percentages by student ethnicity of the two highest scoring Science teachers and the three lowest scoring Science teachers are shown in Table 4.49.

Table 4.49 Student Demographics of Highest and Lowest Scoring LSHS Science Teachers

<i>LSHS Science teacher quality score</i>	<i>White students-percent enrolled (overall LSHS enrollment: 64.3%)</i>	<i>Black students-percent enrolled (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic students-percent enrolled (overall LSHS enrollment: 10.8%)</i>
LSScienceTeacher14	83.9	3.6	2.7
LSScienceTeacher10	78.7	9.2	9.8
LSScienceTeacher7.1	41.3	29	23.2
LSScienceTeacher7.2	57.1	14.9	22.1
LSScienceTeacher5	67.8	12.8	11.7

There was also substantial and substantive inequity at the teacher level involving these same five teachers. The highest scoring teacher in the department/school was assigned one section of Honors Biology but her remaining schedule was filled with only highly advanced levels of science electives (Honors Physics and AP Biology) comprised exclusively of upperclassmen. The second highest scoring teacher in the department was assigned a slightly more diverse mix of students in Chemistry, Honors Chemistry, and AP Environmental Science but still teaches no freshmen and only one standard-level section of Chemistry out of six total classes. Conversely, the teacher with the lowest quality score (5 points) was assigned three sections apiece of standard Biology and Honors Biology which is a much more pressurized and scrutinized EOC course filled predominantly with freshmen and perhaps some sophomores. The two other lowest scoring Science teachers (7 points apiece) were assigned (respectively) six sections of standard Earth Science—the lowest level Science course offered in NC high schools—and four sections of standard Biology plus two sections of Honors Biology. In other words, the three lowest quality Science teachers based on the scoring formula used in this study between them were *exclusively* assigned classes filled with the youngest, blackest and brownest, and (historically) most behaviorally and academically challenging student groups possible including six sections of an EOC course, while the highest quality Science teachers—again, based on the scoring formula used in this study—were assigned the older, whitest, and

(historically) least behaviorally and academically challenging students possible under the least amount of results-oriented pressure.

As previously mentioned in the quantitative section regarding the KRHS Science department, it is not uncommon for a high school Science teacher in North Carolina to be licensed in only Chemistry, only Biology, or only Earth/Environmental Science—or perhaps even a combination of two areas—but not be certified for *General Science*, the license that allows a teacher to teach any high school Science subject. Each of the three lowest scoring LSHS Science teachers self-reported full licensure for the classes to which they were assigned for 2016-2017. However, it *is* possible that their licensure was not for General Science but was instead specific only to Biology or to Earth and Environmental Science which would substantially limit options for their assignments. Even considering this potential explanation for the imbalance of assignments within the LSHS Science department, teachers licensed only in Biology or in Earth and Environmental Science are still licensed to teach AP Biology and AP Environmental Science respectively, yet none of these three teachers were assigned to AP courses.

In every possible Science course—at the standard, Honors, and AP levels—that counts toward graduation, there were at least two teachers to which students might be assigned. Only the advanced Science electives (Anatomy, AP Biology, Honors Physics) assigned to higher scoring teachers offered full equity of access with only one possible teacher. As an EOC course, Biology and Honors Biology warranted more scrutiny for equity purposes, the enrollment details of which are shown in Tables 4.50 and 4.51.

Table 4.50 LSHS Honors Biology Teacher Quality Scores and Student Demographics by Section

<i>LSHS Honors Biology teacher quality score (by class section)</i>	<i>White students-percent enrolled (overall LSHS enrollment: 64.3%)</i>	<i>Black students-percent enrolled (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic students-percent enrolled (overall LSHS enrollment: 10.8%)</i>
LSHSHonBioTeacher14	89.7	6.9	0
LSHSHonBioTeacher8.3	81.8	9.1	4.5
LSHSHonBioTeacher8.3	81.8	0	9.1
LSHSHonBioTeacher7.1	28.6	35.7	32.1
LSHSHonBioTeacher5	88.5	3.8	7.7
LSHSHonBioTeacher5	82.8	0	3.4
LSHSHonBioTeacher5	82.8	3.4	0

As shown in Table 4.50, there were no Hispanic students enrolled in the one section of either level of Biology assigned to the teacher with the highest quality score in the school, who was assigned only the third highest percentage of African American students assigned to an Honors Biology teacher. The same teacher was assigned the highest percentage of white students assigned to an Honors Biology teacher.

As shown in Table 4.51, the significant majority of black and brown students assigned to standard Biology classes were assigned to the lowest scoring Science teachers in the school. Also, the highest percentage of Hispanic students assigned to a standard Biology teacher were assigned to the lowest scoring teacher in the department/school. The four highest percentages of African American students in standard Biology classes were assigned to the two lowest scoring

Table 4.51 LSHS Biology Teacher Quality Scores and Student Demographics by Section

<i>LSHS Biology teacher quality score (by class section)</i>	<i>White students- percent enrolled (overall LSHS enrollment: 64.3%)</i>	<i>Black students- percent enrolled (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic students- percent enrolled (overall LSHS enrollment: 10.8%)</i>
LSHSBiologyTeacher8.3	61.5	7.7	23.1
LSHSBiologyTeacher7.1	30.8	38.5	23.1
LSHSBiologyTeacher7.1	60	8	28
LSHSBiologyTeacher7.1	60	10	10
LSHSBiologyTeacher7.1	38.1	38.1	14.3
LSHSBiologyTeacher5	42.3	30.8	19.2
LSHSBiologyTeacher5	75	10	5
LSHSBiologyTeacher5	36	28	28

Science teachers as well. It is clear from this data that Hispanic and African American students in either level of Biology had significantly greater odds to be assigned a Biology teacher with a lower quality score than white classmates. The equity of access to teacher quality for black and brown students in LSHS Social Studies classes as well as the fairness and balance for teaching assignments among colleagues are detailed in the following section.

LSHS Social Studies

Quality scores for the nine-teacher LSHS Social Studies department ranged from 7 quality points to 13 quality points. Table 4.52 shows the nine LSHS Social Studies teachers listed in descending order of teacher quality score with the percentages of white, African American, and Hispanic students enrolled in the teachers' assigned classes for 2016-2017. Enrollment percentages per teacher that were above the school's overall enrollment for a given ethnicity are shown in bold print.

The experience levels of KRHS Social Studies teachers varied greatly but skewed toward longer teaching careers. There were two teachers with 1-3 years of experience, one teacher with 4-10 years' experience, and six teachers with more than 10 years of experience. All KRHS Social Studies teachers were fully licensed but only one teacher—the highest scoring teacher in

Table 4.52 LSHS Social Studies Teacher Quality Scores and Student Demographics

<i>LSHS Social Studies teacher quality score</i>	<i>White students-percent enrolled (overall LSHS enrollment: 64.3%)</i>	<i>Black students-percent enrolled (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic students-percent enrolled (overall LSHS enrollment: 10.8%)</i>
LSSocialTeacher13	57.4	14.8	20.8
LSSocialTeacher11.1	65.6	10.6	17.2
LSSocialTeacher11.2	58.4	15.5	22.4
LSSocialTeacher10	77	8.6	9.8
LSSocialTeacher8.1	61	15.3	17.5
LSSocialTeacher8.2	69	12.5	13
LSSocialTeacher7.1	76.5	8.2	10.4
LSSocialTeacher7.2	67.7	11.6	15.2
LSSocialTeacher7.3	56.8	16.4	21.9

the department and one of the three highest scoring teachers in the school—had National Board Certification. Six of the nine Social Studies teachers possessed Master’s degrees as well which tied the Science department for the most teachers with advanced degrees at LSHS.

At the teacher level, there was perhaps more equity and balance with Social Studies than perhaps any other LSHS department. All but two of the nine teachers had only two “preps” (school scheduling term meaning “courses/levels to which they’re assigned”). All but one of the nine teachers were assigned a blend of one or more standard-level classes and one or more Honors and/or AP-level classes. The ninth teacher was assigned to only Honors and AP classes. Four of the nine teachers were only assigned to standard and Honors-level sections of the same course. In short, there was the least amounts of favoritism, cronyism, or leveraged capital evident in the LSHS Social Studies schedule when compared with the other departments (or even the other BLCS schools for that matter).

Regarding minority student access to higher quality teachers, the LSHS Social Studies department did a more equitable job overall than the other three departments. As shown in Table 4.52, the highest scoring Social Studies teacher (with 13 quality points) was assigned classes the white enrollment of which was *lower* than the school’s overall percentage of white students and

the African American and Hispanic enrollments of which were each *higher* than the school's overall percentages of students from either minority student group. The student enrollments of the department's two second-highest scoring teachers (with 11 quality points apiece) also essentially mirrored those of the highest scoring teacher. On a more micro level, there were three teachers assigned to World History, the required 9th grade Social Studies course, the enrollment details of each are shown in Table 4.53. For LSSocialTeacher7.1, one of her sections of World History was an ESL-sheltered section which accounted for the overall higher percentage of

Table 4.53 LSHS World History Teacher Quality Score and Student Demographics

<i>LSHS World History teacher quality score</i>	<i>White student enrollment- combined (overall LSHS enrollment: 64.3%)</i>	<i>Black student enrollment- combined (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic student enrollment- combined (overall LSHS enrollment: 10.8%)</i>
LSSocialTeacher11.1	50	17.1	27.1
LSSocialTeacher7.1	42.9	17.1	32.9
LSSocialTeacher7.2	54.4	10.5	26.3

Hispanic students enrolled in her sections. However, the percentages of Hispanic and African American students taught by LSSocialTeacher11.1—the highest scoring teacher (with 11 quality points)—were both higher than the percentages taught by LSSocialTeacher7.2—the other lower scoring teacher (with 7 quality points).

There were two teachers assigned to Civics—traditionally the required Social Studies course taken in 10th grade—including the highest scoring teacher in the department (and second-highest scoring teacher in the school, with 13 quality points) who was assigned five sections of the standard-level course which accounted for the majority of his teaching assignments. The enrollment details for the two teachers are compared in Table 4.54. The higher scoring teacher was assigned fewer African American students by percentage than the lower scoring teacher but also fewer white students and significantly more Hispanic students. Overall, students from historically marginalized populations had greater odds of being assigned the highest quality

Table 4.54 LSHS Civics Teacher Quality Scores and Student Demographics

<i>LSHS Civics teacher quality score</i>	<i>White student enrollment- combined (overall LSHS enrollment: 64.3%)</i>	<i>Black student enrollment- combined (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic student enrollment- combined (overall LSHS enrollment: 10.8%)</i>
LSCivicsTeacher13	45.4	18.5	28.5
LSCivicsTeacher8.2	48.2	26.8	17.9

teacher in the department for standard-level Civics than students from the historically privileged population.

In summary, the LSHS Social Studies department displayed several hallmarks of equity at both the student level and teacher level. Students from historically marginalized populations had substantive access to teachers with the highest quality scores. Teachers within the department shared the challenging assignments in tangible ways. Equity and balance within teacher assignment and scheduling at the school level is summarized in the following section.

LSHS Quantitative Summary

Table 4.55 shows the 40 core teachers at LSHS listed in descending order of teacher quality score with the total percentages of white, African American, and Hispanic students enrolled in the teachers' assigned classes for 2016-2017. Percentages that are above the school's overall enrollment for a given ethnicity are shown in bold print.

The spread in average teacher quality scores by department was slightly greater than the spread for KRHS (8.25 to 10) but slightly more narrow than that of APHS (7.3 to 9.9). The four departments all had an average range in teacher quality scores between 8 and 10.3, as detailed in Table 4.56.

Even with school leaders allowing for much greater influence of teacher capital in the teacher assignment process, as indicated in the previous sections, there was still substantive evidence of equity in access to teachers of higher quality for students from historically marginalized backgrounds in Math and Social Studies classes at LSHS. However, that cannot be

Table 4.55 LSHS Combined Core Teacher Quality Scores and Student Demographics

<i>LSHS teachers, identified by subject and listed by descending quality score</i>	<i>White students- percent enrolled (overall LSHS enrollment: 64.3%)</i>	<i>Black students- percent enrolled (overall LSHS enrollment: 13.1%)</i>	<i>Hispanic students- percent enrolled (overall LSHS enrollment: 10.8%)</i>
LSScienceTeacher14	83.9	3.6	2.7
LSEnglishTeacher13	73.2	11.5	8.3
LSSocialTeacher13	57.4	14.8	20.8
LSEnglishTeacher12.1	74.6	10.1	8.7
LSEnglishTeacher12.2	78.7	6.2	6.7
LSSocialTeacher11.1	65.6	10.6	17.2
LSSocialTeacher11.2	58.4	15.5	22.4
LSEnglishTeacher10.1	58.2	15.3	18.8
LSEnglishTeacher10.2	67.2	11.8	16.1
LSScienceTeacher10	78.7	9.2	9.8
LSSocialTeacher10	77	8.6	9.8
LSEnglishTeacher9.1	58.9	20.6	15.6
LSEnglishTeacher9.2	66.5	13.7	13
LSEnglishTeacher9.3	55.7	20.4	19.2
LSEnglishTeacher9.4	68.8	12.2	12.2
LSMathTeacher9.1	66	11.2	16
LSMathTeacher9.2	59.8	21.2	15.1
LSMathTeacher9.3	65.3	16.5	13.1
LSMathTeacher9.4	60	12.7	24.8
LSScienceTeacher9	55.4	15.9	20.4
LSMathTeacher8.1	60.9	13.2	19
LSMathTeacher8.2	66.4	14.5	12.5
LSScienceTeacher8.1	65.2	14	15.2
LSScienceTeacher8.2	76.5	8.2	10.4
LSScienceTeacher8.3	75.6	7.9	11.6
LSSocialTeacher8.1	61	15.3	17.5
LSSocialTeacher8.2	69	12.5	13
LSEnglishTeacher7.1	0	0	100
LSEnglishTeacher7.2	68.7	17	10.4
LSMathTeacher7.1	67.5	8.6	17.2
LSMathTeacher7.2	56.8	15.5	22.3
LSMathTeacher7.3	80.1	7.4	6.6
LSMathTeacher7.4	61	10.2	23.5
LSScienceTeacher7.1	41.3	29	23.2
LSScienceTeacher7.2	57.1	14.9	22.1
LSSocialTeacher7.1	76.5	8.2	10.4
LSSocialTeacher7.2	67.7	11.6	15.2
LSSocialTeacher7.3	56.8	16.4	21.9
LSScienceTeacher5	67.8	12.8	11.7

Table 4.56 LSHS Average Teacher Quality Scores Per Department

<i>LSHS core department</i>	<i>Average teacher quality score</i>
English	10.3
Math	8
Science	8.4
Social Studies	9.1

said for other aspects of the teacher assignment and scheduling processes at LSHS. There were several examples of inequity as well:

1. African American students at LSHS in standard Biology—an EOC course—had greater odds of being assigned to a teacher with a lower quality score than did peers from the historically privileged majority population enrolled in the same course. African American LSHS students also lacked access at a significant level to the three English teachers and two Science teachers with the highest quality scores than did peers from the historically privileged and dominant white population.
2. Hispanic students at LSHS in *both* standard and Honors Biology—an EOC course—had greater odds of being assigned to a teacher with a lower quality score than did peers from the historically privileged majority population enrolled in the same classes. They had significantly greater odds of assignment to the three Science teachers with the lowest quality scores—including the overall lowest scoring teacher in the school—than did white peers. Hispanic LSHS students also lacked access at a significant level to the three English teachers and two Science teachers with the highest quality scores than did peers from the historically privileged and dominant white population.
3. In a department with the highest scoring teacher in the school (14 quality points) as well as with two other teachers with quality scores of 9 and 10 points

respectively, ninth grade students were assigned almost exclusively to Science teachers with lower quality scores. Eleven of the combined 15 sections of standard and Honors Biology (an EOC course taken mostly by freshmen) were assigned to the two lowest scoring teachers in the LSHS Science department—including a combined six of 15 sections assigned to the lowest scoring teacher in the school (5 quality points). Ninth grade students had no access whatsoever to two of the three highest scoring English teachers at LSHS or the two highest scoring Science teachers (except for one section of Honors Biology). The three lowest scoring Science teachers—including the lowest scoring teacher in the school—were each only assigned to courses (standard and Honors levels of both Earth Science and Biology) traditionally taken by ninth grade students.

4. Standard-level students were denied access entirely to two of the three highest scoring teachers in the English department and the highest scoring teacher in the Science department who is also the overall highest scoring teacher in the school (14 quality points).
5. Teachers with the lowest quality scores in the English and Science departments were not assigned nearly as equitably as those in the Math and Social Studies departments.

The next section contains a school-level, cross-case analysis for Liberty Square High School, detailing the alignment of both the qualitative and quantitative findings.

Cross-Case Analysis: LSHS

After interviews with LSHS stakeholders, reviews of the LSHS School Improvement Plan and TWC results, and an audit of the LSHS master schedule, it is evident that there is a lack of correspondence between what school leaders *said* they tried or wished to do with teacher

assignment practices and what they *actually did*. Key themes and observations from the qualitative data include but are not limited to:

1. The master schedule is constructed almost exclusively by LSPrincipal and LSAssistant.
2. LSHS teachers—especially department chairs— are allowed to use capital (they are ostensibly *asked* to use their capital) and have substantial influence over their assignments at a much greater level than counterparts at KRHS and APHS.
3. Interview participants related several examples of less-than-altruistic decision making by the teachers plying influence over their assignments and department chairs plying influence over the assignments of teachers in their departments.
4. The racial achievement gap is not a factor in the assignment of teachers to students or the construction of the master schedule but Band (with a white student enrollment of over 76%) is a significant factor.

Quantitatively it is relatively easy to determine which departments through their decision-making protocols were more student-centered and employed an equity lens when proposing teacher assignments for the 2016-2017 master schedule and which ones were more teacher-centered. Math and Social Studies each had a schedule that is much more indicative of shared responsibility for addressing the needs of students from historically marginalized backgrounds and of collegial support and fairness than the schedules used by the English and Science departments. More than half of the sections of standard Math I were assigned to the highest scoring Math teachers. The highest scoring Social Studies teacher and second-highest scoring teacher in the school was assigned five sections of standard Civics, was assigned percentages of black and brown students higher than the school's overall enrollment percentages of each, and was assigned a percentage of white students lower than the school's overall enrollment.

Despite the emphasis by LSPrincipal and LSAssistant that 9th grade students and students in standard-level classes need more support than upperclassmen and students in advanced classes, neither freshmen nor students in standard classes had equitable access to the highest quality English and Science teachers. The interview participants themselves shared a story of how AP English Literature students' liberal use of the school's schedule change policy resulted in substantially lower enrollment in AP English classes for seniors and higher enrollment in standard English classes. LSAssistant related that the AP English Literature teacher was usually "adamant" about smaller class sizes for AP and suggested that was not appropriate for standard level English students, yet the AP teacher still received her preference *with* the awareness of her administrators that it was happening. The principal also shared a story of a less-than-altruistic Science department assignment from the previous year: assigning a weaker teacher to a more challenging standard class as a method of trying to pressure the teacher to leave. With teacher-centered decisions of this sort made by teachers and department chairs with the full knowledge of school leaders, it begs the question "why would LSHS administrators continue to allow teachers the level of autonomy and influence that is currently allowed in teacher assignments?" Interestingly, for most TWC items related to teacher influence, empowerment, and group problem-solving and despite the substantive amount of teacher capital that's allowed and encouraged, LSHS respondents rated their satisfaction on such items with the lowest percentages in the district, in some cases significantly less than KRHS and APHS—schools with principals who are much more dictatorial in assigning teachers than that of LSHS.

Both LSPrincipal and LSAssistant mentioned their preferences for and prioritization of lower enrollment caps for freshman and/or standard-level classes and higher enrollment caps for Honors/AP classes and classes primarily serving upperclassmen. Table 4.57 details the average enrollment sizes of a selection of LSHS courses.

Table 4.57 LSHS Average Class Enrollments- Sample

<u>LSHS course</u>	<u>Average enrollment per section</u>
English III	30.5
Honors English III	23.2
AP English Language	17
English IV	31.3
Honors English IV	21.75
AP English Literature	12
Math I	27.3
Math II	26.25
Math III	20.6
AP Statistics	24.5
AP Calculus AB	19.5
AP Calculus BC	12
Earth Science	21.8
Honors Earth Science	23.4
Biology	22.3
Honors Biology	30.8
Physical Science	23.8
AP Biology	13.5
American History I	27.3
Honors American History I	28.7
American History II	29
Honors American History II	25.7
AP US History	24.7

The enrollment data show that there was at least a modicum of inequity within each core department at LSHS. For English III, English IV, Biology, and American History, the highest average class sizes were at the standard-level and the lowest average class sizes were at the AP-level—a trend to which both administrators alluded during their interviews with regards to English. As shown in Table 4.57, the differentials in average class sizes for the English and Biology classes were especially substantial. Similarly, as was evidenced in the average Math class enrollments at APHS, standard Math class sizes at LSHS that likely contained the weakest, neediest Math students in the school were *substantially* larger on average than the most advanced math classes.

None of the stakeholders interviewed for this study mentioned the racial achievement gap once as a consideration in scheduling teachers and students. While it was in fact mentioned as an Area of Improvement in the SIP, its mention was only in reference to a decline in performance by *white* students during the concurrent ascent of African American and Hispanic student performance. The audit of the master schedule supports the idea that the achievement gap was not considered when assigning teachers either. With a few course-specific exceptions noted in the previous section, neither African American students nor Hispanic students enjoyed access to the highest quality teachers in English or Science as did their white peers. The next section is a district-level cross-case synopsis of the findings of this research study.

Bay Lake County Schools: A Cross-Case Analysis

How does the data collected for this research study support the case for equity of access to teachers of the highest quality for students from historically marginalized backgrounds for Bay Lake County Schools, as a district? There were several commonalities found between the three traditional BLCS high schools through analysis of both qualitative and quantitative data including but not limited to those provided in Table 4.58.

Each BLCS administrator interviewed for this study mentioned a general preference for and prioritization of lower enrollments in standard and/or freshman-level classes at the expense of higher enrollments in Honors/AP classes and/or classes comprised of upperclassmen, yet each school—especially LSHS—evidenced an enrollment trend with several courses contrary to their stated philosophies. There were also several *differences* found between the three traditional BLCS high schools through analysis of both qualitative and quantitative data including but not limited to those provided in Table 4.59.

Table 4.58 Teacher Assignment and Scheduling Similarities Among BLCS High Schools

<i>Qualitative similarities</i>	<i>Quantitative similarities</i>
<ul style="list-style-type: none">• Most items on each school’s TWC earned responses of agreement/satisfaction that averaged higher than state averages.• Each principal nominated at least one counselor to be interviewed as a key agent in the scheduling process despite no direct involvement by counselors in its construction at any school.• Some elements of the scheduling processes (policy info and forms found online, scheduling interactions occurring in the summer) may provide advantage to more privileged students.• Schedule construction occurring mostly in the spring disadvantages new teachers hired in the summer.• Closing the achievement gap and student equity were not mentioned as considerations for scheduling by any of the nine interview participants although the needs of AP and Honors students were mentioned frequently.• Principals expressed preferences for lower enrollment in standard classes at the expense of advanced classes.• Each school’s stakeholders denied the influence of parent capital with scheduling matters but admitted that white parents attempted to advantage their students more often than African American or Hispanic parents.	<ul style="list-style-type: none">• Each school had only one true novice teacher in a core department on its master schedule and the majority of the rest of the teachers had four or more years of experience.• Each school has an achievement gap between white students and their black and brown peers.• Evidence of equity as well as inequity at both the student and teacher levels was found in the audits of each school’s master schedule.• Besides racial inequity, ninth grade and standard students were at some level of disadvantage with teacher assignment practices at each school.• Each school had at least three teachers who possessed National Board Certification.• Each school had several teachers overall within core departments who held at least one advanced degree.• Each school’s enrollment in several standard-level and/or freshman-level courses was higher on average than the enrollment in more advanced level courses

Table 4.60 details the quality scores and enrollment percentages for the three highest scoring teachers and three lowest scoring teachers included in this study—each of whom happened to be the only novice teacher at each school. Percentages that were above the district’s overall enrollment for a given ethnicity are shown in bold print.

Table 4.59 Teacher Assignment and Scheduling Differences Between BLCS High Schools

<i>Qualitative differences</i>	<i>Quantitative differences</i>
<ul style="list-style-type: none"> • The amount of capital used by teachers to influence their assignments and scheduling differed greatly per school as reported by interview participants (with the least amount of capital influence in the district reported by KRHS stakeholders and the largest amount of capital influence reported by LSHS stakeholders). • The student schedule change process differed slightly per school, as did the protocol for teachers expressing their preferences for assignments. • The leadership style reportedly used by each principal with matters germane to teacher assignment differed greatly. • APHS had one priority goal on its SIP germane to the racial achievement gap. LSHS mentioned the achievement gap as an Area of Improvement on its SIP. KRHS did not mention the achievement gap anywhere in its SIP. • The needs of ESL students were prominent throughout the interviews with stakeholders of the majority-Hispanic APHS. The scheduling needs of Band students were heavily emphasized by the principal of LSHS. 	<ul style="list-style-type: none"> • The size of each school's student body was quite unique, ranging from 401 students at KRHS to 1,390 students at LSHS. • The racial/ethnic average of each school's student body was quite unique (KRHS white: 76.3%, KRHS black/brown: 21%, APHS white: 23.8%, APHS black/brown: 71.1%, LSHS white: 64.3%, LSHS black/brown: 29.9%). • Every department in each school had at least one teacher with an advanced degree except for the KRHS Science department. • APHS and LSHS had two and three teachers respectively with 1-3 years of experience—deemed the optimal amount of experience in prior research—while KRHS had no teacher with 1-3 years of experience. • Every LSHS teacher in a core department was fully licensed but one KRHS teacher and two APHS teachers in core departments were not.

Table 4.60 BLCS Highest/Lowest Teacher Quality Scores and Student Demographics

<i>BLCS teachers, identified by subject and listed by quality score (highest, lowest)</i>	<i>White students-percent enrolled (overall BLCS enrollment: 53%)</i>	<i>Black students-percent enrolled (overall BLCS enrollment: 13%)</i>	<i>Hispanic students-percent enrolled (overall BLCS enrollment: 29%)</i>
KRScienceTeacher14	70.2	13.8	12.8
APHSSocialTeacher14	8.8	5.1	80.5
LSScienceTeacher14	83.9	3.6	2.7
KRMathTeacher3	74.8	13.0	10.4
APHSSocialTeacher3	17.5	1.9	78.6
LSScienceTeacher5	67.8	12.8	11.7

As could be expected, each high school in this district exhibited quantifiable signs of both equity and inequity for students from historically marginalized populations in terms of their access to teachers of the highest quality. Depending on the department within each school, there were quantifiable signs of both equity and inequity for teachers of varying degrees of quality as well. The purpose of this research was not to identify a winner among the three BLCS high schools upon which the title of “equity champion” could be bestowed. Instead the researcher considered BLCS as a case study for the purposes of—as stated in Chapter 1—focusing a clearer lens on the role played by teacher assignment via the scheduling process in the persistence of the racial achievement gap and, perhaps more generally, illuminating the relationship between teacher-student assignment and high school student equity. The next section begins the concluding chapter to this research study in which this study’s research questions are answered, this study is situated within the broader context of literature germane to equity in teacher assignment and scheduling that already exists, and the importance of this research is crystalized.

CHAPTER V: CONCLUSION

Introduction

Scholarly research (Clotfelter et al., 2006; Feng, 2010; Kalogrides & Loeb, 2013; Lankford et al., 2002) reviewed for this study correlated a relationship between the achievement of students and the procedural assignment and scheduling of students to teachers with varying degrees of quality or qualifications. In some cases, research (Clotfelter et al., 2005; DOE, 2013; Kalogrides et al., 2012; NBER, 2006; NCEE, 2014) reported an actual causal link between student/teacher assignments and the racial achievement gap. While there are many factors that affect teacher quality—including but not limited to more subjective, intangible factors such as authentic desire to grow low-achieving students and motivation for working with students from diverse backgrounds—the researcher focused intentionally on four more tangible quality indicators: years of experience, licensure, and possession of advanced degrees and National Board Certification.

As stated in previous chapters, the purpose of this study was to illuminate a potential contributor to the racial achievement gap, one that was heretofore under-emphasized in existing scholarly research: the inequitable assignment of the highest quality teachers possible to high school students from historically privileged backgrounds—specifically white students—at the expense of students from historically marginalized backgrounds—specifically African American and Hispanic students.

This chapter will conclude this study by situating its findings into the context of existing research by first proffering answers to the research questions. Then considerations germane to

the equity of access for African American and Hispanic students to teacher quality will be provided, followed by a discussion of the appropriateness of classifying this study's findings as actual *examples* of the perpetuation of cultural reproduction. To conclude this chapter as well as this study, recommendations for school leaders will be posited and suggestions for further research on this topic will be made as well.

Revisiting the Research Questions

In this section, answers to the research questions will be proffered based on the research findings detailed in the previous chapter, beginning with the primary research question. As presented in the preceding chapters, there was a primary research question guiding this study:

From a leadership perspective, how are teachers assigned to students at the high school level (i.e., what criteria—formal and informal—are and are not considered, including issues of equity)?

The following sub-questions are germane to the research question and were subsequently addressed through the completion of this study as well:

- Are the racial achievement gap and equity for students from historically marginalized or at-risk populations considered *primary* considerations that drive or influence the construction of high school master schedules and if so, how?
- Do high school teachers wield social and/or cultural capital effectively to influence school principals to gain preferable course assignments and by default, to control the types of students to which they will be assigned to teach and if so, how is it manifested?
- How actively involved are the parents of students from historically privileged or dominant populations in determining the courses to which their children enroll and advocating with principals and counselors for the teachers to whom their

children are assigned than are the parents of students from historically marginalized or at-risk populations?

- How adequate and equitable is the access to preferable teacher assignments enjoyed by students from historically marginalized or at-risk populations when compared to students from the historically privileged, dominant population?

A potential limitation of this study was that the results of a study the parameters of which were limited to only high schools in one relatively small district in North Carolina cannot be guaranteed to be generalizable as accurate indicators throughout the United States or of assignment and scheduling practices at the elementary and middle grades. With that acknowledged, the findings of this study did reveal compelling trends that might actually be—or perhaps are even *likely* to be—applicable to other high schools and school districts.

In Bay Lake County Schools as reported by high school principals and other stakeholders, teachers were assigned to students via a seemingly formulaic process that:

- is replicated annually,
- begins each spring with students registering for classes and with teachers submitting assignment preferences to principals,
- and (mostly) concludes by the first day of school each August.

The three BLCS high school principals each stated that student course requests—which dictate the number of sections or classes allotted to a certain course—are the primary factors that drive the construction of the master schedule each year and ultimately, the assignment of teachers to students. However, that basic premise—that student needs and requests were paramount to the construction of each school’s master schedule—was essentially where the similarities between the three BLCS high school scheduling and teacher assignment processes ended and where the

ambiguities and more micro-cultural considerations for assigning teachers *within* each school were manifested, as will subsequently be detailed with the answers to the sub-questions.

While the three high schools in this study as well as the collective Bay Lake County Schools district are not necessarily representative of others across the United States, if the scheduling protocols and systems evidenced by the BLCS high schools *were* in fact emblematic of the types of protocols and systems utilized by all public high schools to assign teachers to students, then racial equity and related considerations such as the potential effects of a particular teacher's assignments on the racial achievement gap are *not* formal or primary considerations (or even informal or secondary considerations) that drive the scheduling process. Racial equity for students was not mentioned by any of the principals as a formal or informal consideration in assigning teachers nor was it mentioned by the other interview participants who were each identified as contributors or influences on scheduling at each school by the principals. The achievement gap itself was not mentioned once by any of the interview participants either, despite numerous interview questions specific to the considerations that affect the assignment of specific teachers to specific courses or grade levels at each school via the construction of each school's master schedule and individual student schedule changes. Neither racial equity nor the racial achievement gap were foci of Priority Goals on the School Improvement Plans for two of the three schools either, despite all three schools exhibiting a gap in achievement between white students and their black and brown peers.

However, the preferences of *teachers* have been—in varying degrees of reported significance—considerations for each of the principals when master schedules are being created. At all three schools, teacher preferences are collected by the principals each spring. The department chairs at KRHS provide KRPrincipal a tentative proposal for covering all sections and while he is much more hands-on than his counterparts at the other BLCS schools in molding

each teacher's assignments as well as in processing individual student schedule changes, his Social Studies department chair still wound up assigned to classes comprised of only 11th and 12th grade students as well as to the only AP course in her department. At APHS, individual teachers submit written "wish lists" for assignments and planning periods to APPrincipal. In his second year, he admitted to allowing two veteran APHS teachers to be assigned classes comprised only of seniors because he was unwilling to change the preexisting culture of teacher seniority at the risk of diplomatic repercussions. And at the school in which teachers have the most liberal amount of influence over their assignments, the department chairs at LSHS provide a plan for assigning teachers to LSPrincipal and LSAssistant that, based on the responses of LSHS interview participants, is *usually* not questioned or changed in any substantive way despite numerous examples of veteran teachers and/or department chairs displaying a lack of fairness and collegial altruism when submitting their preferences.

The influence of parents wielding capital is not quantifiable within the particular parameters of this research but qualitatively, every interview participant was queried at length about the influence of parents on the assignment of students to preferred teachers and/or teachers of perceived quality, and through their responses, every stakeholder acknowledged that white parents were almost always the ones that attempted to influence the teacher assignments of their students and that African American and Hispanic students rarely attempted it. Every stakeholder—except for one—also vehemently minimized the impact of attempted influence by parents on assignments to preferred teachers. LSCounselor suggested that previous administrations were less pliable to influential parents but that there was more "gray" in the reactions of her current principal.

The three principals portrayed themselves as equity champions with regard to parent influence and while they each may be fair and consistent in response to parent advocacy as a

matter of routine, counselors at the largest two BLCS high schools—APHS and LSHS—are the frontline for receipt of parent requests for student schedule changes. (As previously stated due in large part to the small size of his school, KRPrincipal is directly involved with every student schedule change request.) Counselors at APHS and LSHS conveyed a level of responsiveness and access to them with parents of students from the dominant white population that spoke of racial inequity. APCounselor1 and APCounselor2 both reported instances of parent advocacy over scheduling concerns that resulted in each of them actually giving some parents *more* preferential treatment than what was originally even sought. LSCounselor reported that parents didn't have much luck influencing her "unless they presented a really amazing case." The opportunity for *access* is a dynamic that is at the crux of this study in general. All interview participants—regardless of the actual lack of results reportedly earned—stated that parents from the historically dominant race were usually the only parents even attempting to ply capital to garner preferential teacher assignments for their students. Thus, white parents even being given the opportunity to present "a really amazing case" is indicative of an inequitable level of access.

The last sub-question asks: how adequate and equitable is the access to preferable teacher assignments enjoyed by students from historically marginalized or at-risk populations when compared to students from the historically privileged, dominant population? Each school included in this study evidenced successes of adequacy and equity with access to teacher quality and each school also exhibited concerns. Some departments were observably more equitable than others even within the same school and some schools were perhaps overall more equitable than other schools. This research endeavor was more necessary for focusing awareness on the underemphasized problem of inequitable teacher assignment and for reflecting the motivations and intentions—subconscious as well as overt—of school leaders and educators tasked with matching students to their teachers than it was for providing a definitive indictment or absolution

of high school scheduling practices. The high schools of Bay Lake County Schools are merely vehicles for communicating the potential impact on the racial achievement gap and on vertical equity—the “unequal treatment of unequals” (Toutkoushian & Michael, 2007)—made by teacher assignment practices. The next section provides a substantive yet non-exhaustive articulation of considerations germane to equity of access for students from historically marginalized backgrounds.

Considerations for Equity of Access

Educators tasked with constructing master schedules have control over several key aspects of the educational experiences of students including identifying which teachers will be assigned to specific courses. What is outside of the control of school leaders however are many student-level factors that have significant impact on students’ high school course selections. For example, there are several courses for which students may earn credit toward high school graduation while in middle school including but not limited to Math and World Language courses. Students from historically marginalized backgrounds frequently lack certain advantages at very early ages that are more often enjoyed by students of privilege including but not limited to the formation of early literacy skills, formal pre-schooling, and parent advocacy for inclusion in advanced classes. If a privileged student enters 9th grade having completed all prerequisite courses for Pre-calculus or having earned credit for French I in middle school and concurrently an African American student enters 9th grade having completed no high school courses in middle school and with identification for special education services, both students are already inherently influencing the racial dynamics found in the master schedule. The high school principal has had no control over the prior experiences of either child yet must make teacher assignments that are affected by the prior experiences of both students.

There is also an aspect of timing with the high school scheduling process that while perhaps an unavoidable matter of practicality is also somewhat disadvantageous to certain school stakeholders. Even though adjustments are made each summer, the meat of annual scheduling work for high schools must occur in the spring. It is a complicated endeavor that involves collecting course requests from students and assignment preferences from teachers, turning raw numbers of course requests into actual numbers of sections, and structuring all of this information into a master schedule that is more intricate a process than is assembling the most challenging jigsaw puzzle. BLCS stakeholders interviewed for this study related how teachers generally know their assignments for the following year before summer break. Counselors at all three schools stated that the window for individual student schedule changes—a process the details of which are mainly accessible online—occurs in the summer.

When considering equity with the scheduling process itself, the type of system described here presumes that all students interested in changing schedules have equitable online access from home to even enable informed decision making. There is also a presumption that all students have equitable access to personal transportation to visit school during the summer schedule change window in order to meet with counselors, to complete the requisite forms, and to self-advocate in general. The summer scheduling process presumes that all parents speak English and will have no difficulty linguistically navigating systems to advocate for the scheduling needs of their children. Finally, a spring timeline for assigning teachers disadvantages teachers hired over the summer. Teachers newest to a school have virtually no voice in their assignments as decisions for what they will teach are made by others, outside of their purview.

Another matter of potential inequity with timing is found with student schedule change deadlines. BLCS schools are on a block schedule which means that classes last only one semester apiece and that there is usually a concurrently tighter window for changing schedules.

When asked if teachers were allowed to recommend students be removed from their classes and assigned to other classes/teachers, stakeholders interviewed for this study stated that if there were early signs of struggle for a student in an Honors class, it may be common for teachers to advise the student to drop down to the less challenging standard class. Teachers operating under such tight time constraints may resort to a schedule change recommendation for an at-risk learner instead of investing time in more personalized methods of support such as scaffolding and tutoring. As detailed in Chapter 2, teachers of higher quality are typically those that are assigned to advanced-level classes so a change in schedule from Honors to standard-level class could also be tantamount to inequitable access to teacher quality for students from historically marginalized backgrounds. Completing master schedule construction in the spring and allowing for student schedule changes in the summer may be considered logistical necessities or best practices but regardless, there are inherent assumptions and inequities found within such a timeline. The next section will revisit Pierre Bourdieu's theory of cultural reproduction as it is evidenced through the findings of this study.

Cultural Reproduction and Equitable Teacher Assignment

As detailed in Chapter 2, cultural reproduction as conceptualized by Bourdieu (1985; 1986; 1991) is the cyclical perpetuation of inequity in institutional settings. Capital as a commodity is a primary component of cultural reproduction. Those who are dominated within the social space are similarly dominated in symbolic cultural reproduction. Cultural reproduction is characterized by habitus, a term used to characterize the hidden values, norms, and behaviors known, coveted, and prioritized by the dominant culture (Bourdieu, 1985; Bourdieu, 1989; Bourdieu, 1991; English & Bolton, 2015; Sullivan, 2002). Privilege in this framework is bequeathed from generation to generation in the form of cultural knowledge. The adoption and adherence to habitus within the dominant culture provides an immeasurable advantage in

educational settings over those lacking memberships in the dominant culture (English & Bolton, 2015; Sullivan, 2002). Access to opportunity is eased, systems are more effectively navigated, and advocacy from others within the dominant culture (especially parents) is practically a given, all of which can contribute to higher quantifiable achievement.

How are elements of cultural reproduction evidenced in the findings of this study? To begin with, every educator interviewed is white. Each principal was contacted and asked to identify at least two other staff members directly instrumental to the teacher assignment and master scheduling processes. Every school principal is a white male, the LSHS assistant principal is a white female, all four school counselors are white females, and the KRHS Social Studies department chair is a white female. There were assistant principals and counselors at BLCS high schools who are from historically marginalized backgrounds yet none of them were directly involved with 2016-2017 teacher assignments or creating the master schedules. There was no evidence that any of the educators are inherently racist or anything other than equity champions but that does not negate the fact that institutionalized racism can be unintentional and colorblind (Williams, 2012). Racism becomes institutionalized when the attitudes or values of the majority culture are incorporated into institutional policies and practices in such a way that works to the disadvantage of students from minority cultures (Singleton & Linton, 2006). With a lack of any scheduling decision makers from historically marginalized backgrounds at BLCS high schools, there is an inherent lack of the sort of cultural awareness impacting teacher assignment across the district that could only occur as a result of membership and agency from *within* those historically marginalized populations. In more succinct terms, only white educators made all of the scheduling decisions for 2016-2017 that impacted non-white students. In fact, there was at least a modicum of cultural awareness and racial equity that was absent from practically *every* process and system germane to the business of BLCS high schools due to

disparities between the percentages of students from historically marginalized backgrounds and the percentages of certified staff from historically marginalized backgrounds at each high school—most substantively at APHS—as shown in Table 5.1

Table 5.1 Percent Discrepancy Between Students of Color and Staff of Color

<i>BLCS high school</i>	<i>Percent, students of color</i>	<i>Percent, certified staff of color</i>	<i>Discrepancy</i>
KRHS	21	7	-14
APHS	71.1	22	-49.1
LSHS	29.9	15	-14.9

At LSHS, teachers are empowered to make course recommendations for students during spring registration which despite the best of intentions is itself a dynamic that can lead to inequity and cultural reproduction. An LSHS teacher is asked to recommend a student for the class level in the teacher’s department deemed most appropriate by that teacher for that student the following year. If a parent chooses, an override can be signed to allow the student to take whatever course he or she wishes assuming any prerequisites were successfully completed. Through no fault of their own and as detailed in Chapter 2, students from historically marginalized backgrounds are identified for special education services at inequitable rates which can result in assignment to standard-level classes—a trend that once begun is not easy to break, either academically or socially. The LSHS teacher recommendation system is not one required by the district or by the state nor is it utilized at the other two BLCS high schools. Parents of students from historically marginalized backgrounds are disadvantaged in this dynamic. As described by every stakeholder interviewed, African American and Hispanic parents have not been as involved in school matters as white parents. Acknowledging that, LSHS has placed its minority students in a situation where the teacher’s word has ostensibly become law. Parents who feel disenfranchised are less likely to contest a teacher recommendation, know less about how to navigate systems to ply self-advocacy, and are more unaware of processes by virtue of

less access to decision makers than that enjoyed by white parents. Summarizing this through the lens of Pierre Bourdieu, the habitus of parents from historically privileged backgrounds informs the actions of their students. The capital held by those parents at all three schools allows—at a minimum—for access to even have discussions about preferences for teachers and class assignments for their children (which, as was reported by BLCS counselors, did result in favorable scheduling outcomes for some white students). If the qualitative findings are in fact indicative of the reality with BLCS high schools, parents from historically marginalized backgrounds have not been utilizing capital to influence scheduling outcomes for their children nearly to the degree of white parents, if at all.

While not quantified, the data collected from qualitative interviewing for this study did affirm findings from previous scholarly research (Baker & Stevenson, 1986; Clotfelter et al., 2006; Gamoran, 1992; Reddick et al., 2011; Rew, 2009; Useem, 1992; Zimmerman, 2006) that privileged parents ply capital to advantage their students in educational settings—advantages that include but are not limited to the assignment of their students to preferred teachers. Further, the findings from the audits of BLCS high school master schedules and qualitative interviews do affirm and support the findings from previous scholarly research (Cohen-Vogel et al., 2013; Kalogrides et al., 2012) that teachers use capital to influence their assignments to more desirable classes and by extension, to more privileged student groups.

BLCS high schools were like many other high schools in central North Carolina. They each contained a racially and ethnically diverse cohort of students served by a certified faculty that was less racially and ethnically diverse than the cohort of students *being* served. With cultural reproduction being a social dynamic that is nurtured by the unspoken and hidden societal norms and by the *habitus* that is so prized by the dominant culture, and despite even the best of intentions and good will, a measure of cultural reproduction is virtually assured by the BLCS

scheduling agents and teacher assignment processes and protocols detailed through this study. The next section will include recommendations for educators based on the findings of this research study.

Recommendations for Practitioners

As shown through the reviewed literature and research findings detailed throughout this study, teacher-student assignment is a process that by its very nature lends itself to racial equity concerns. A high school's master schedule is a reflection of its values, beliefs, and priorities. There is a reality imposed upon leaders of schools in racially and socioeconomically diverse communities such as those in Bay Lake County that cannot be ignored. Their constituencies include students of privilege and parents with influence who have expectations for high quality in—for example—Band, Honors, or AP classes. Principals with such parents and students would not enjoy much career longevity if those classes and programs were neglected or assumed obvious second-tier priority status. Hence a fair and appropriate balance should be sought between the needs of students from historically marginalized backgrounds and the needs of students from historically privileged backgrounds. Unfortunately and historically, imbalance and priorities have generally erred on the side of privilege at the expense of the needs of black and brown students. The assurance of equity of access to the highest quality teachers possible for students from historically marginalized backgrounds should not be left to chance. The refocusing of priorities when planning master schedules through the creation of inclusive and data-based decision-making systems is necessary to insure more equitable teacher assignment. In fact, vertical equity tasks educators with assigning the highest quality teachers to the students who need them the most. This section will provide a non-exhaustive yet substantive set of recommendations for school leaders and designated agents that are most responsible for the assignment of teachers to students and the construction of schedules.

In their text on organizational leadership, Pfeffer and Sutton (2000) suggested “... [O]ne of the great mysteries in organizational management [is]: why knowledge of what needs to be done frequently fails to result in action or behavior consistent with that knowledge.” Based on the qualitative and quantitative data collected for this study, there are several somewhat obvious (albeit not necessarily easily implemented) systemic changes in the Bay Lake County high schools that could be made to move the district closer to a standard of equity in the assignment of teachers to classes and student groups.

First, each high school should construct a School Priority Goal in its SIP germane to closing its racial achievement gap (note: only APHS had one for 2016-2017). Within that goal a strategy should be written that is specific to intentional scheduling and teacher assignment as a method for providing students from historically marginalized backgrounds with equitable access to the highest quality teacher possible in a given subject. The rationale for using the SIP in this manner is that it ensures a level of accountability to the school for achieving goals. School districts require that SIP meetings be held on a consistent basis, that they involve an array of stakeholders (including parents, administrators, and teachers), and that SIPs themselves are democratically realized representations of each school’s goal setting. In other words, equitable teacher assignment practices would move beyond the philosophical realm and toward greater actualization as SIP goals are revisited by school stakeholders each month and each year. The SIP keeps equitable scheduling practices at the forefront of school planning discussions.

Second, each principal should routinely harness the expertise of a culturally and professionally diverse set of school personnel to assist more substantively and directly in the planning of the master schedule. This may mean that hiring practices may need to change as well. In the case of KRHS, there were only two certified staff members from historically marginalized backgrounds. APHS was a majority-minority school with an enrollment of over

71% students of color but only a mere 22% of its certified staff was of color. Ideally, schools should have a faculty representative of its student body and that is not the case with BLCS high schools. It is critical to the cessation of cultural reproduction at the school-level for racially sensitive scheduling practices to be employed. This is more likely to happen if there are more culturally diverse voices being heard in planning discussions.

Thirdly, summer schedule change and teacher recommendation practices must be made equitable with consideration of and intentional provisions for students and parents from historically marginalized populations. Students who cannot travel to the school campuses during summer days to take advantage of scheduling guidance with counselors, parents whose work schedules will not allow for such meetings or whose lack of English proficiency limits their ability to invest in planning conversations germane to their child's schedule, and students and parents who lack technological resources at home that is necessary for accessing schedule change information and forms are all examples of stakeholders who are more likely to be disadvantaged by current summer schedule change practices. Offering a modicum of dedicated summer evening hours for counselors, providing hard copies of forms and summer office schedules that could be mailed upon request, and offering information sessions for Spanish-speaking parents replete with interpreters and translated versions of all written material are examples of strategies that schools could employ to make individual student guidance opportunities more equitable as well as provide much-needed outreach to disenfranchised black and brown parents—particular stakeholder groups that are noticeably much less involved with school matters as reported by all stakeholders interviewed for this study.

The spirit and intent behind LSHS teachers signing recommendations of individual students' course levels each spring should at least be reviewed in earnest or perhaps ceased as a practice altogether. LSCounselor in her interview statements mentioned her belief that black and

brown students were often scared of the challenge of Honors and AP classes or perhaps too unmotivated to undertake it. If a minority student has a counselor who believes he is too unmotivated and scared to challenge himself, and/or approaches his teacher who—in writing—demonstrates a lack of confidence in him for success in an Honors level course, what are the odds that student will take up a challenge that, if successful, would certainly open doors for his future? What are the odds that he will believe that his educators have his best interests at heart? This is a practice that may affect equity in an unquantifiable way but likely still affects it nonetheless. It is a practice that could definitely perpetuate cultural reproduction.

A fourth—and perhaps most critical—concrete recommendation for practitioners is for *balance* in teacher assignments to be prioritized as part of school culture. APPrincipal stated “I do have...two teachers who’ve been here more than 25 years who are teaching only seniors. I don’t like it that way. And they’re strong teachers, so I prefer they have a good mixture of kids. That’s a culture I could not change immediately in my mind.” School leaders at LSHS were more overt with the prioritization of teacher preferences as prime considerations when constructing the LSHS master schedule. “Some people feel like they own a particular curriculum. And if they do it really well, we’ve got no problems [with that],” stated LSPrincipal. LSAssistant shared something similar about how teacher preferences influence their ultimate assignments: “[Teacher] preferences are a big part of it...We want to put them in a course that...they’re passionate about; [that] they want to be teaching.” The influence of capital is also a potential equity issue with other certified, non-instructional employees. When describing how her counseling department changed their structure from each counselor working with the students in only one grade-level to an alphabetical split with each counselor having a share of students from all grades, LSCounselor asserted “I am tired of working with the same students,”

seemingly unbothered with her lack of student-centered thinking—a personal preference for her (as the school’s lead counselor) that influenced the structural change.

Such deference to teachers and staff is detrimental to making a case for equity in scheduling. In a system where the most effective teachers are allowed to “own a curriculum” in perpetuity, there is inherent inequity. As detailed throughout this study, novice teachers are most often assigned to the neediest learners in standard classes and also exhibit the highest rates of attrition (Boyd et al., 2008; Cohen-Vogel et al., 2013; Clotfelter et al., 2006; Feng, 2010; NBER, 2006; NBER, 2007). Beyond their avoidance of standard-level classes with higher percentages of black and brown students, teachers also specifically avoid assignments to 9th grade classes which are viewed as more challenging due to academic, social, and behavioral transitions (NCDPI, 2008; Neild & Balfanz, 2006; Neild & Farley-Ripple, 2008; Roderick & Camburn, 1999). Confirming prior research, standard-level and freshman-level classes at BLCS high schools were frequently assigned to teachers with lower quality scores.

Even though there was in fact evidence of scheduling inequity at his school as detailed in this study, KRPrincipal espoused an equity-based philosophy about teacher assignments: “[T]he strongest teachers in the department [should] work with the weakest students; not exclusively, but as part of [an expected “share-the-wealth”] balance... The dictum is: you cannot pad your schedule... I mean just look at opposite ends of the spectrum. Mix it up.” Instead of prioritizing teacher preferences over student needs and instead of avoiding difficult conversations with teachers wielding capital to obtain preferable assignments, principals should harness data and diplomacy to change the cultures of entitlement evidenced in this study’s findings. It is recommended as exercises in equity that principals create master schedules that work *more* for the weakest students and the newest teachers than for privileged students and for veteran teachers with capital. Perhaps a formula could be used in which teachers are assigned at most three

sections of AP/Honors classes and/or classes comprised of only upperclassmen and the remaining three or more periods are assignments of standard and/or freshman level classes. This could be a routine method for assigning teachers but not one that is inflexible when unique needs present themselves in a given year.

One possible solution for strengthening equity as well as performance for 9th grade students in BLCS high schools is the use of freshman academies as first described in Chapter 2. A group of high quality, core teachers who are assigned to classes solely comprised of 9th grade students and who share dedicated common planning periods, cross-curricular planning, and other salient programmatic elements could provide equity and quantifiable performance results if implemented with fidelity.

One programmatic element of some freshman academy models that is significantly more equitable is the use of heterogeneous student grouping in which classes are comprised in relatively equal numbers of standard-level students and those receiving Honors credit and in which teachers differentiate instruction and assessment within the same classroom as opposed to planning for separate standard and Honors sections. For example, there would not be standard World History teachers and Honors World History teachers any longer, only World History teachers with classes comprised of both standard and Honors students. The potential good that arises from heterogeneous grouping—including but not limited to positive peer role modeling, the engagement of standard-level students in higher-order thinking tasks, the lessening of teacher burnout and attrition attributable to overly challenging standard classes, and the blurring of social and class lines between the “haves” and the “have-nots” for students—is often outweighed by the fear from teachers tasked with differentiation and the reluctance of teachers enjoying more manageable classes to step out of preferable assignments and into classes with standard students.

Any or all of the recommendations included in this section, if undertaken by school leaders, could lead to greater equity for students of color in terms of access to higher quality teaching, access to educational opportunity, and the forming of parent partnerships. Suggestions for further scholarly research on the topic of racial equity with teacher assignment and high school scheduling processes are offered in the following and final section.

Suggestions for Further Research

While still a substantive contribution to existing research on the equity of teacher assignment practices, this study was conducted on a somewhat modest scale—in one school district with three traditional high schools in central North Carolina—and produced findings that cannot be guaranteed to be generalizable as an accurate indicator throughout the United States or of assignment and scheduling practices at the elementary and middle grades. This section concludes the study and provides suggestions for further research on the topic of equity with teacher assignment practices.

First, the influence of parent capital on teacher-student matching could be studied with more depth by utilizing qualitative methods such as parent interviews, surveys, and/or focus groups. Similar to the cross-case analyses presented in this study that connected qualitative data collected through educator interviews with quantitative findings collected through equity audits of high school master schedules, there is likely similar value in comparing and contrasting qualitative data collected from parents with that collected from educators and with quantitative data mined from audits of master schedules.

Second, the inclusion of the two teacher quality indicators that were ultimately omitted from this study—higher teacher scores on college entrance exams and/or certification exams and performance data from value-added measures—in a similar future study would add substance and breadth to the definition of teacher quality that is used in this study which is one of

experience, licensure, and the attainment of National Board Certification and/or an advance degree. Beyond using the credentials identified by research reviewed for this study as indicators of teacher quality, scholars choosing to further this research could also attempt to capture and perhaps quantify more intangible factors that affect teacher quality: the basic attitudes, values, beliefs, and/or biases of high school teachers that are germane to matters of race and equity.

Third, this was a study of the equity—specific to race and ethnicity—of access to high quality teaching for students from historically marginalized backgrounds as opposed to students from historically privileged backgrounds. Privilege was symbolized by white students and marginalization was symbolized by African American and Hispanic students only. There are existing studies that categorize Asian American students as privileged and students of other racial backgrounds—including but not limited to multi-racial and Native American—as marginalized. Expanding the study to include other racial subgroups—or even to analyze the crossover effects with nonracial subgroups such as Economically Disadvantaged, Students with Disabilities, or Academically/Intellectually Gifted—would also add substance and breadth to this type of research study.

Finally, to add more relevance and generalizability to this work, one could broaden the study to include more schools. The additional schools could come from varied classifications—such as communities that are more urban or more rural than that surrounding BLCS—or perhaps from other states or regions of the country (i.e. juxtapose the analysis of equity found in this one central North Carolina district with an analysis of the equity in a district located in Chicago or Portland).

The gap in achievement between students of color and students of the historically dominant white population will not close itself. The researcher's most fervent hope with this study is that it sparks heightened awareness and greater interest in the role played by teacher

assignment as a contributor to the racial achievement gap and related matters of student equity. If educators take note of the findings of this study and choose to replicate the methods used here in attempts to make their scheduling processes more equitable, then perhaps—school by school and district by district—the learning outcomes for each black and brown student will be more consistently maximized and ultimately lead to the realization of each student’s greatest potential.

APPENDIX A: ENTRY LETTER

Dear [insert name],

My name is Spencer Hawkins and I am a doctoral student from the School of Education at the University of North Carolina - Chapel Hill. I am writing to invite you to participate in my research study about your district's teacher assignment practices and its processes and practices for constructing high school master schedules. You're invited to be in this study because you serve as a high school administrator. I obtained your contact information from the district website.

If you participate in this study, you will also participate in a sixty-minute interview. I would like to audio record the interview. Then, I will use the information to determine which themes emerge regarding the processes the district high schools follow to construct master schedules and assign teachers to students as well as the influences germane to the scheduling and teacher assignment processes. Besides my role as a doctoral student, I am also a high school administrator—an assistant principal at Carrboro High School. I have been in education for 17 years and worked in four local school districts during that time, first as a middle and high school counselor followed by the last five years as a middle and high school administrator. I have ample experience creating master schedules and processing individual schedule changes for students.

Please remember, your participation is voluntary and appreciated. Prior to joining the research study, I am required to review the types and levels of risk you may experience by participating in the study. Once the risks are explained, you will be asked to sign a consent form, which is attached to this email. To ensure you do not feel pressured to participate in the study, there are several ways we can proceed. First, we can conduct the consent conversation prior to the interview beginning. This can be done in the same meeting. Second, we can discuss risk and consent via the phone or face-to-face prior to you signing the consent form. Last, we meet face-to-face and complete the consent form, but wait a few days to conduct the interview. As the participant, you determine our course of actions.

As an incentive for participation, I will happily offer you a copy of the results of my study upon its conclusion. If you'd like to participate or have any questions about the study, please email or contact me at rshawkins104@aol.com or (919) 632-2251.

Thank you very much for your time and consideration.

Sincerely,

Spencer Hawkins
Doctoral Student,
School of Education
University of North Carolina – Chapel Hill

APPENDIX B: DEMOGRAPHIC DATA QUESTIONNAIRE

GENERAL DATA

1. NUMBER OF STUDENTS IN YOUR DISTRICT
2. NUMBER OF STAFF IN YOUR SCHOOL (CERTIFIED AND NONCERTIFIED)
3. NUMBER OF STUDENTS IN YOUR SCHOOL

SOCIAL CLASS

4. STUDENTS RECEIVING FREE AND REDUCED-PRICE LUNCHES IN YOUR EDUCATIONAL SETTING:
5. STUDENTS RECEIVING FREE/REDUCED-PRICE LUNCHES IN OTHER SCHOOLS IN YOUR DISTRICT AT THE SAME LEVEL (SECONDARY):

RACE & ETHNICITY

6. STUDENTS OF COLOR IN YOUR SCHOOL:
7. STUDENTS OF COLOR IN THE TOTAL DISTRICT:
8. HOW DOES THE INFORMATION THAT YOU COLLECTED IN ITEM 14 COMPARE WITH THAT OF THE OTHER SCHOOLS IN YOUR DISTRICT?
9. TOTAL STAFF OF COLOR IN YOUR SCHOOL: COMPARE THE RESPONSE WITH THAT FOR ITEM 14.
10. CERTIFIED STAFF OF COLOR IN YOUR SCHOOL:
11. UNCERTIFIED STAFF OF COLOR IN YOUR SCHOOL:
12. COLLECT RACE/ETHNICITY COMPARISON DATA ON AT LEAST TWO OTHER AREAS IN YOUR SCHOOL/SETTING.

STAFF EMPOWERMENT & MASTER SCHEDULE PRECONSTRUCTION

13. WHICH STAFF MEMBERS PARTICIPATE IN THE INTERVIEWING AND VETTING OF TEACHER CANDIDATES?
14. WHICH STAFF MEMBERS PARTICIPATE IN THE CONSTRUCTION OF THE MASTER SCHEDULE?
15. ARE TEACHERS ALLOWED TO EXPRESS PREFERENCES FOR SPECIFIC COURSE ASSIGNMENTS AND IF SO, IS

THERE A FORMAL PROCESS FOR EXPRESSING
PREFERENCES?

16. WHO DECIDES WHICH TEACHER PREFERENCES TO
GRANT OR DENY?

**MASTER SCHEDULE POSTCONSTRUCTION & COURSE
DEMOGRAPHICS**

17. WHAT ARE THE NUMBER AND PERCENTAGE OF WHITE
STUDENTS IN STANDARD LEVEL CORE COURSES?
18. WHAT ARE THE NUMBER AND PERCENTAGE OF
STUDENTS OF COLOR IN STANDARD LEVEL CORE
COURSES?
19. WHAT ARE THE NUMBER AND PERCENTAGE OF WHITE
STUDENTS IN HONORS LEVEL CORE COURSES?
20. WHAT ARE THE NUMBER AND PERCENTAGE OF
STUDENTS OF COLOR IN HONORS LEVEL CORE
COURSES?
21. WHAT ARE THE NUMBER AND PERCENTAGE OF WHITE
STUDENTS IN AP LEVEL CORE COURSES?
22. WHAT ARE THE NUMBER AND PERCENTAGE OF
STUDENTS OF COLOR IN AP LEVEL CORE COURSES?
23. WHAT ARE THE NUMBER AND PERCENTAGE OF
TEACHERS IN STANDARD LEVEL CORE COURSES WITH
0-3 YEARS EXPERIENCE? 4-10 YEARS EXPERIENCE?
>YEARS EXPERIENCE? FULL LICENSURE? AN
ADVANCED DEGREE? NATIONAL BOARD
CERTIFICATION?
24. WHAT ARE THE NUMBER AND PERCENTAGE OF
TEACHERS IN HONORS LEVEL CORE COURSES WITH 0-3
YEARS EXPERIENCE? 4-10 YEARS EXPERIENCE?
>YEARS EXPERIENCE? FULL LICENSURE? AN
ADVANCED DEGREE? NATIONAL BOARD
CERTIFICATION?
25. WHAT ARE THE NUMBER AND PERCENTAGE OF
TEACHERS IN AP LEVEL CORE COURSES WITH 0-3
YEARS EXPERIENCE? 4-10 YEARS EXPERIENCE?
>YEARS EXPERIENCE? FULL LICENSURE? AN
ADVANCED DEGREE? NATIONAL BOARD
CERTIFICATION?

26. WHAT ARE THE NUMBER AND PERCENTAGE OF TEACHERS IN CORE COURSES THE PRIMARY ENROLLMENT OF WHICH IS 9TH GRADERS WITH 0-3 YEARS EXPERIENCE? 4-10 YEARS EXPERIENCE? >YEARS EXPERIENCE? FULL LICENSURE? AN ADVANCED DEGREE? NATIONAL BOARD CERTIFICATION?
27. WHAT ARE THE NUMBER AND PERCENTAGE OF TEACHERS IN CORE COURSES THE PRIMARY ENROLLMENT OF WHICH IS REPEATING OR REMEDIAL STUDENTS WITH 0-3 YEARS EXPERIENCE? 4-10 YEARS EXPERIENCE? >YEARS EXPERIENCE? FULL LICENSURE? AN ADVANCED DEGREE? NATIONAL BOARD CERTIFICATION?
28. ARE CORE COURSES GROUPED HETEROGENEOUSLY OR HOMOGENEOUSLY?

STUDENT SCHEDULES

29. HOW ARE PARENTS NOTIFIED OF THE REGISTRATION PROCESS AND STUDENT COURSE SELECTIONS?
30. ARE PARENTS NOTIFIED IN ENGLISH AND IN SPANISH?
31. DO STUDENT COURSE SELECTIONS REQUIRE PARENT SIGNATURES?
32. WHO IS ALLOWED TO INITIATE STUDENT SCHEDULE CHANGES?
33. WHO IS AUTHORIZED TO APPROVE/PROCESS STUDENT SCHEDULE CHANGES?
34. ARE THERE CRITERIA ON WHICH SCHEDULE CHANGES MUST BE BASED? WHAT ARE THEY? ARE THEY ALWAYS ADHERED TO?

(Adapted from Capper, Frattura, & Keyes, 2000)

APPENDIX C: INTERVIEW QUESTIONS FOR PARTICIPANTS IN MASTER SCHEDULE CONSTRUCTION

1. Please describe the process of constructing the master schedule each year.
 - a. Who are the key agents in the creation of the schedule?
 - b. What are the primary considerations that drive the creation of your master schedule?
 - c. What data do you use to inform the creation of your master schedule?
2. How are teachers assigned to the courses and levels of courses that they teach?
 - a. What are the primary considerations that affect the assignment of specific teachers to specific courses or grade levels?
 - b. Are indicators of teacher effectiveness or quality factored into teacher assignment decisions and if so, how? Which ones?
 - c. How involved are teachers themselves in their assignment to courses and levels of courses? Are they given input and if so, how is that input manifested?
 - d. How do school leaders respond to teacher advocacy regarding requests for specific course or level assignments?
 - e. What types of reasons are given by teachers for wanting or not wanting to teach specific courses or levels?
3. Please describe the schedule change policy and schedule change process at your school.
 - a. Who is empowered to process and grant schedule changes for individual students?
 - b. What specific criteria—if any—is used to provide schedule changes to individual students?
 - c. Are teachers allowed to recommend, request or influence schedule changes for specific students and if so, how?

4. What role do parents play in the scheduling of their students?
 - a. Is there an official process or forum given to parents to request changes to student schedules and if so, please describe it?
 - b. Are there unofficial strategies used by parents to influence the assignment of their students to specific teachers? If so, please describe.
 - c. How do school leaders or counselors respond to parent advocacy regarding student schedules and requests for specific teacher assignments?
 - d. What are reasons often given by parents or students requesting specific teachers?

APPENDIX D: ALIGNMENT TABLE OF RESEARCH QUESTIONS, TOPICAL/SEMI-STRUCTURED INTERVIEW QUESTIONS, AND THEORETICAL FRAMEWORK

<i>Research Question/Sub-questions</i>	<i>Interview Question #</i>	<i>Theoretical Component</i>
From a leadership perspective, how are teachers assigned to students at the high school level (i.e., what criteria—formal and informal—are and are not considered, including issues of equity)?	1, 1a, 1b, 1c, 1d 2, 2a, 2b, 2c, 2d, 2e 3, 3a, 3b, 3c, 3d, 3e 4, 4a, 4b, 4c, 4d	Cultural Reproduction Cultural Capital Social Capital Symbolic Capital Habitus
How adequate and equitable is the access to preferable teacher assignments enjoyed by students from historically marginalized or at-risk populations when compared to students from the historically privileged, dominant population?	1, 1a, 1b, 1c, 1d 2b, 2e 3b, 3c 4, 4a, 4b, 4c, 4d	Cultural Reproduction Cultural Capital Social Capital Symbolic Capital Habitus
Are the racial achievement gap and equity for students from historically marginalized or at-risk populations considered <i>primary</i> considerations that drive or influence the construction of high school master schedules and if so, how?	1, 1b, 1c, 1d 2, 2a 3b 4c	Cultural Reproduction Cultural Capital Habitus
Do high school teachers wield social and/or cultural capital effectively to influence school principals to gain preferable course assignments and by default, to control the types of students to which they will be assigned to teach and if so, how is it manifested?	1, 1a 2, 2a, 2b, 2c, 2d, 2e 3, 3c 4d	Cultural Reproduction Cultural Capital Social Capital Symbolic Capital
How actively involved are the parents of students from historically privileged or dominant populations in determining the courses to which their children enroll and advocating with principals and counselors for the teachers to whom their children are assigned than are the parents of students from historically marginalized or at-risk populations?	1, 1b 3, 3b 4, 4a, 4b, 4c, 4d	Cultural Reproduction Cultural Capital Social Capital Symbolic Capital Habitus

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