PERCEPTIONS OF PRINCIPAL INFLUENCE AND COMPETENCE IN RACIALIZED CONTEXTS

By

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ABSTRACT

This dissertation furthers the research on racial mismatch by examining principals' perception of influence and teachers' perspectives of principal competence and support with a critical perspective. This study uses regression and fixed-effects models. In addition, a new critical interpretive framework was developed to analyze these findings. I present three key findings. These are: (1) Black and IPOC teachers are associated with having higher perceptions principals' effectiveness and competency and Black principals are associated with a more positive perception of White principals' supportiveness, enforcement of the rules, and communication of expectations than White teachers; (2) that racial matching does not demonstrate higher perceptions of White principals' competence; and (3) the contextual variables used as controls are associated principal perceptions of influence in meaningful ways.

This work is dedicated to the memory of my father, Thomas M. Drake Sr. After retiring from a career as a public finance executive, he became a math teacher in the juvenile system. It was the most rewarding part of his working life. I am so deeply saddened that the man who filled our home with books, will never have the chance to read this.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I: INTRODUCTION

> *"...management and leadership are formulated as White prerogatives, replicating the hierarchy of the antebellum plantation."* (Collins, 1993, as cited in Ray, 2019, p.33)

This dissertation examines K12 principals' *racialized identities*[1], their perceptions of influence over aspects of their work, and teacher perceptions of principals' competence in racialized contexts. This introduction briefly examines the importance of the principalship and current state of representation of racialized identities in the principalship. Then, I discuss prior research on racial mismatch in education. I consider how "racial mismatch" as a concept that situates this type of work in a line of large-scale quantitative research, yet the term is not an accurate description the phenomena being studied. Then, I share the problem statement, the research questions, and my positionality as a White scholar and former educational practitioner on this topic. Last, I outline and describe the forthcoming chapters of this dissertation.

The Importance of Principals

Effective school principals are incredibly important to student achievement and success (Grissom et al., 2021; Leithwood et al., 2004). The impact of school principals is only second to that of effective teachers (Grissom et al., 2021; Leithwood et al., 2004). Principals who are effective focus on learning and fostering a school climate that is collaborative and productive while strategically using the resources available to them (Hallinger, 2014; Leithwood et al., 2004). However, principals' impact on student learning and school climate is indirect; it is mediated by the instructional core (i.e., teachers, paraprofessionals, reading specialists, etc.) of the school (Grissom et al., 2021; Hallinger & Heck, 1996; Hallinger & Heck, 2011a, 2011b;

[1] This research will discuss the concept of "racialized identities" where similar research may use the term race. This is done as a result of the conceptual foundations of this research in Critical Race Theory, which posits that race is a social construct and assigned to individuals through a process of racialization (Delgado & Stefancic, 2017).

Leithwood et al., 2004). Grissom et al. (2021) recently examined six studies of over 22,000 principals estimating that schools transitioning from a principal at the 25th percentile of effectiveness to a principal at the 75th percentile of effectiveness observed increases in academic outcomes for students. Grissom et al. (2021) also note that there is a need for principals to focus on equity in their schools to meet the needs of marginalized students. This need is compounded by the significant gaps between the growing diversity of K12 students and the representation of non-White identities in the principalship (Grissom et al., 2021) and the 79% of public school teachers who are White (National Center for Educational Statistics, 2020a). The overrepresentation of White teachers and underrepresentation of Black, Indigenous, and persons of color (BIPOC) in the principalship may create a context that is limiting to BIPOC principals' effectiveness. Educational research has found that the *mismatch* between the racialized identities of students and White educators can be associated with negative outcomes for the students (Dee, 2005; Gershenson et al., 2018; Redding, 2019). Additional research has examined how the experience of BIPOC teachers is related to their mismatch to White principals (Grissom & Keiser, 2011; Viano & Hunter, 2017), but no prior research has examined the mismatch of racialized identities as it is related to the experience of principals.

Racial Mismatch and its Asymmetrical Consequences

I address this gap by examining racial mismatch in relationship to principals' perceptions of influence. I study this relationship using data from the 2015-16 National Teacher and Principal Survey (NTPS) to focus on indicators from two perspectives. The first examines principals' perceptions of influence over seven categories of work related to the principalship. These categories include performance standards, curriculum, teacher development, teacher evaluation, teacher hiring, discipline policy, and budget. The second perspective examines

teachers' perceptions of principal competency and support. This indicator provides the ability to analyze the evidence from principals' perceptions alongside the perceptions of teachers they work with to see if trends are associated with the mismatch of racialized identities. This research studies the experience of principals from all racialized identities. However, I am more focused on understanding the experience of BIPOC principals whose teaching staffs are majority White and comparing those experiences with those of White principals who are matched or mismatched to the majority of their teaching staffs. As with other critical educational studies using the frame racial mismatch, I seek to learn if there is evidence to suggest marginalization for BIPOC-racialized principals.

While this is an important line of education research, the concept of racial mismatch is a bit of a misnomer. The term suggests a—potentially harmful—frame of objectivity by implying that racialized identities are equitable treatments—each with the same potential for harm or benefit based on the match or mismatch of their racialized identity to others. This is simply not true. There is no evidence of systematic harm to White-racialized identities that are mismatched to others within U.S. educational contexts. There is extensive evidence of systematic harm to individuals of Non-White racialized identities in relation to their proximity and interactions with Whiteness (Dee, 2005; Gershenson et al., 2018; Grissom & Keiser, 2011; McGrady & Reynolds, 2013; Redding, 2019). Research using racial mismatch in these contexts is really examining the discrimination, dehumanization, and violence experienced by BIPOC-racialized individuals through the explicit and implicit perpetuation of White Supremacy and the individuals' proximity to Whiteness. Despite the shortcomings of racial mismatch as a concept, I use it as a type of shorthand in this dissertation because it situates this research in a line of quantitative studies that have illuminated inequity in K-12 schools. Then I expand upon that line of research

through its utilization of Critical Race Theory (CRT) (Delgado & Stefancic, 2017; Solórzano & Yosso, 2002), Social and Cultural Capital Theory (SCCT) (Bourdieu, 1986), and Theory of Racialized Organizations (TRO) (Ray, 2019) as a conceptual frame in the examination of BIPOC principal experiences in K-12 organizations. CRT (Delgado & Stefancic, 2017; Solórzano & Yosso, 2002) provides a lens to understand race as a social construct and not a biological fact. As such, a person is not a race—but that person that has been racialized based on social categorizations (Bonilla-Silva, 1997; Delgado & Stefancic, 2017). Through SCCT (Bourdieu, 1986) I argue that the racialized identity of individuals serves as a form of social capital where Whiteness is held as the most valuable form of capital. Last, Ray's (2019) TRO affords the opportunity to recognize the ways in which the social construct of racialized identities—and their associated social capital—enter into the K-12 organization, and intersect with the work of principals and teachers. I ask that readers of this work interpret the shorthand of *racial mismatch* as the potential detriment/harm caused by White Supremacy—and the proximity to Whiteness—to BIPOC-racialized individuals. This interpretation is supported by findings made in prior studies examining racial mismatch (Dee, 2005; Gershenson et al., 2018; Grissom & Keiser, 2011; McGrady & Reynolds, 2013; Redding, 2019).

As noted, the majority of research examining racial mismatch in education has focused on the experience of students' mismatch to teachers. This is critical work given the disproportionate number of White public school teachers and rise in the number of BIPOC public school students. The National Center for Educational Statistics (2020a) using 2017-18 data identifies that almost 79 percent of public school teachers were White. This was a nearly 5% decline in the percentage of White teachers from 2000 (National Center for Educational Statistics, 2020a). The increase in the number of BIPOC teachers (approximately 16-21% of the

teaching force) is positive, but this change is not keeping pace with the changing demographics of public school students (National Center for Educational Statistics, 2020a). During the same time frame from 2000-2017, the percentage of BIPOC public school students grew from 39% to 52% of total enrollment (National Center for Educational Statistics, 2020b).

Statement of the Problem

A less explored facet of racial mismatch in education involves teachers and school leaders. There little extant research on teacher-principal racial mismatch and studies of related phenomena suggest that it may have critical implications for leaders, teachers, and schools, more generally. For example, a recent analysis of Missouri and Tennessee administrative data revealed that having a Black principal increased the likelihood of hiring and retaining Black teachers (Bartanen & Grissom, 2021). This supported prior findings that racial matching between teachers and principals was associated with reduced turnover and higher job satisfaction (Grissom & Keiser, 2011). Other studies have also shown that teacher-principal racial mismatch is associated with reduced job satisfaction (Fairchild et al., 2012; Price, 2012; Viano & Hunter, 2017). Interestingly, data presented in a few studies (Price, 2012; Viano & Hunter, 2017) also seem to indicate that racial mismatch may be associated with reduced job satisfaction for White teachers. Though research on the effects of racial mismatch between students and teachers is well established and the research on teacher-principal racial mismatch is developing, there has been comparatively little examination of how this phenomenon is associated with the experience of school principals. This is an important area for new research given the overrepresentation of Whiteness in the teaching profession and the underrepresentation of BIPOC-racialized principals. This study will examine the experience of principals through their perceptions of influence. I will also examine teachers' perceptions of principal competency and support for

teachers whose racialized identity is not matched to the racialized identity of their principals.

Research Questions

The questions for this research are as follows:

RQ1. How do principals, racialized as Black and IPOC[2], perceive their influence over aspects of the school organization? How do their perceptions of influence compare to those of White-racialized principals?

RQ2. How do teachers' perceptions of school principals' competence and support vary in relation to the teacher's racial match or mismatch to the principal?

These questions will support the study of principals' racialized identities and perceptions of influence in racially mismatched settings. In answering RQ1, I will describe principals' perceptions of influence, if there are observable differences in these perceptions when considering principals' racialized categorizations and what can be observed about the different contexts in which they work. Next, through RQ2, I will use teachers' perceptions of school principals' competency and support as an additional data point to examine how teacher-principal racial mismatch is associated with teachers' perceptions of their principals. After these statistical processes are conducted, I will use a QuantCrit[3] framework to analyze the findings.

Interpretive Framework

The interpretive framework I use for this study is based on the guiding principles of *QuantCrit* research developed by Gillborn et al. (2018). *QuantCrit* questions the objectivity that

[2] The use of the racialized category of IPOC is a choice made to facilitate statistical analysis. This decision is made with some hesitation. Collapsing the perspectives of many identities into a single category is a process of "essentializing"—a core component of how White Supremacy is reductive towards non-White racialized identities (Delgado & Stefancic, 2017). This research intends to use statistical analysis to examine commonalities in the ways in which White Supremacy may affect different groups, but not to reduce those identities and experiences.

[3] QuantCrit is a developing area of scholarship that conducts quantitative research that is informed by Critical Race Theory. QuantCrit seeks to identify and redress the ways in which quantitative research may cause harm to people of marginalized racialized identities.

is associated with quantitative research—arguing that context of race and racism in society is not easily measured (Garcia et al., 2018a). *QuantCrit*—similar to Critical Race Methodology (Solórzano & Yosso, 2002)—centers race and racism in the analysis and prompts the researcher to challenge paradigms that subjugate those of marginalized identities. These guidelines support an asset-based approach that studies structural racial inequity. Gillborn et al. (2018, p. 169) summarizes these guidelines as follows: (1) "the centrality of racism; (2) numbers are not neutral; (3) categories are neither 'natural' nor given: for 'race' read 'racism'; (4) voice and insight: data cannot 'speak for itself '; and (5) using numbers for social justice." I use these guidelines as an interpretive framework to limit the interpretation of unobserved racial bias in the quantitative methodological approaches used in this study. Further details regarding this interpretive framework are provided in Chapter IV of this dissertation. Next, I discuss the limitations and potential contributions of this research.

The Limitations and Significance of this Research

This research offers many potential contributions through its study of the relationship of racialized identities on principals' perceptions of influence, and teachers' perceptions of principal competency and support. However, it also has limitations. First, this research only uses quantitative data, which limits the findings from providing any nuance or details of principals' experience. Second, this research relies on secondary data analysis. Secondary data limits the potential research questions and subjects to the methodological and theoretical approaches of the initial primary investigator. A similar study using primary data collection would create an opportunity to refine survey items to better assess aspects of principal and teacher perceptions examined here—as well as create opportunities to employ other research designs to examine these phenomena.

Despite these limitations, this research offers potential contributions to the field. This dissertation will advance knowledge of racial mismatch in schools in several ways. First, this research expands the research on racial mismatch by examining the experience of principals whose racialized identities are mismatched to those of their teaching staffs. Prior research has examined racial mismatch of teachers and principals, and students and principals, but neither had the principal as the research subject. In addition, this study is a novel contribution to the field in its examination of the association of principal-teacher racial mismatch with principals' perception of influence in the school organization and teachers' perceptions of their competence. This focus on principal influence may offer new insight into how principals perceive the distribution of power within the school organization as a racialized context. Teacher perceptions of principal competence provide the opportunity to triangulate principals' self-perceptions within the school contexts. Finally, this study proposes a new conceptual model for the study of schools as racialized organizations through the combination of Social and Cultural Capital Theory (SCCT) (Bourdieu, 1986), Critical Race Theory (CRT) (Delgado & Stefancic, 2017; Solórzano & Yosso, 2002), and Theory of Racialized Organizations (TRO) (Ray, 2019). This conceptual framing of the school-organizational context may offer new research opportunities to study the association of racialized identities and principal and teacher outcomes. Next, I will discuss my positionality in this research as a White scholar and former practitioner.

Researcher Positionality

This dissertation seeks to extend and build upon prior research on racial mismatch and principal influence, but it is also driven by my experiences as a White educator. I worked for 10 years as a teacher and school administrator in schools with large populations of BIPOC-racialized students. The principals I considered mentors identified as Black or Latina/x.

Throughout my professional experience in K-12 schools, there were many instances where I observed behaviors from my White colleagues that communicated undertones of racial bias. In some cases, these were more subtle forms of resistance and skepticism. In other cases, the racism was far more explicit—using descriptors like "gap-toothed" in a blog post rant, or refusing to use the name of the principal—instead referencing the principal as "her", "she", or "this woman"[4] to dehumanize her. I have always considered challenging racial inequity as part of my responsibility as a White educator—in the work of teaching and leadership—but also in how I try to dismantle stereotypes in professional and personal conversations about "those kids" I/we worked with, or "those communities" I/we worked in. Through my growth as a scholar and practitioner, I can easily reflect on many ways in which I did not do enough to live up to this responsibility as a White educator. This dissertation is a continuation of my efforts towards illuminating and disrupting racism as it exists in K-12 contexts.

Organization of the Dissertation

The following chapters are organized as follows. Chapter II will present the conceptual framework for this research. The conceptual framework draws on Critical Race Theory (CRT) (Delgado & Stefancic, 2017; Solórzano & Yosso, 2002), Social and Cultural Capital Theory (SCCT) (Bourdieu, 1986), and Theory of Racialized Organizations (TRO) (Ray, 2019) to frame the examination of BIPOC principals' perceptions of their influence. Chapter III will develop the literature base to support this research, drawing on empirical studies research of the principalship, principal perceptions of influence, principal race, and racial mismatch. Chapter IV discusses the data sources and analytical methods used to carry out the proposed research. In

[4] I note that some of these instances represent perspectives of racism interwoven with misogyny. Gender identity is controlled for in this study, but is not a primary focus. Future research will examine of intersectionality of gendered and racialized identities in the principalship.

particular, this chapter discusses the 2015-2016 National Teacher and Principal Survey and the quantitative approaches that will used to analyze the data. Chapter V will share the quantitative results. Chapter VI will discuss the findings in relation to the research questions and offer implications of this study. Chapter VII will summarize the dissertation findings and discussion. Next, I describe the conceptual model for this research in Chapter II.

CHAPTER II: CONCEPTUAL FRAMEWORK

This research draws from Social and Cultural Capital Theory (SCCT), Critical Race Theory (CRT), and Theory of Racialized Organizations (TRO) as a conceptual framework. This chapter will outline a multi-layered theoretical approach that supports rigorous analysis of how principals' racialized identities influence perceptions of principal influence within racially mismatched organizational contexts. First, I review SCCT and CRT. This is followed by a synthesis of how they support this work within the context of schools as racialized organizations. In short, Bourdieu's (1977; 1986) CCT facilitates the understanding of social capital being related to perceptions of principal's influence within the school organization. CRT allows for consideration of the principal as someone who has been racially categorized within a social context of that places higher value on Whiteness (Delgado & Stefancic, 2017). TRO frames my dissertation's perspective of schools as organizational contexts that are racialized and susceptible to the broader societal forces of White Supremacy (Ray, 2019). Next, I offer a brief review SCCT.

Social and Cultural Capital Theory

Bourdieu (1977) created Social and Cultural Capital Theory (SCCT) in response to prior theories of human capital that examined labor as the only human contribution to the development of capital. In SCCT, Bourdieu (1986) conceptualized other characteristics or forms of "capital" which may support individual success in the social world (i.e. the *field*), which would translate to economic capital. Bourdieu (1986) identified three forms—or states—in which social capital exists. First, the *embodied* state considers characteristics of the person both in temperament and body—their ways of being (Bourdieu, 1986). Second, the *objectified* state refers to objects one might possess that are of cultural value (i.e. books, art, music, etc.) (Bourdieu, 1986). Last, the

institutionalized state of cultural capital comes in the form of education or training (Bourdieu, 1986). It was in fact education that Bourdieu (1986) credited as the inspiration for SCCT.

While conducting research in schools, Bourdieu observed the differences in academic performance between children of different social classes (Bourdieu, 1986). Bourdieu (1986) noted that a simple logical assumption is that variation in students' performance was a result of variation in natural ability. However, this notion of meritocracy was a false assumption because it was clear that some students were more prepared to succeed in school because of cultural and social assets provided from their family and social world—and that these cultural and social assets were often aligned to social class (Bourdieu, 1986). In this research, I use SCCT to understand that social and cultural capital play an integral in role human perception. Here, I theorize that principals' perceptions of their influence will be associated with their social and cultural capital in the workplace. Second, I theorize that teachers' perceptions of principal competency and support will serve as an indicator of principals' social and cultural capital in relation to their teachers. I also theorize that there will be some association between these measures and the racialized identities of teachers and principals. While SCCT provides a robust lens through which research may unpack and examine social phenomena, but Bourdieu's (1977) theory does have some significant gaps in its perspectives.

There are two significant critiques that scholars have identified in SCCT that pertain to this research. First, Bourdieu does not account for individuals' awareness of their social position (Reay, 2004; Sayer, 2005; Tichavakunda, 2019). This critique simply notes a deficit-orientation in individual agency and awareness of social status. This critique is unlikely to be relevant for this research. The commonplace of racism in the U.S. makes it unreasonable to assume that most people are not aware of how their racialized identity is valued or devalued in this context

(Delgado & Stefancic, 2017). A second critique is that SCCT is contextualized within a hegemonic French-colonialist perspective that fails to articulate many identities (i.e. race, gender, sexual orientation, etc.) that are oppressed; instead, it focuses solely on conceptualizations of class (Musoba & Baez, 2009; Tichavakunda, 2019). While scholars like Go (2013) have debated this—positing that Bourdieu's early work does have a postcolonial frame that addresses issues of systemic racism—Bourdieu's conceptualization of SCCT does not do enough to account for or attended to social identities that are devalued as a matter of social structure. This offers some irony as Bourdieu is unable to escape his own *habitus* of hegemonic perspectives (Tichavakunda, 2019). Unlike SCCT, CRT is able to attend to these social inequities when considering racialized identities.

Critical Race Theory

CRT identifies racism as pervasive in the U.S. context—entrenched within a culture that is focused on maintaining standards and values that limit opportunities for persons of color (Delgado & Stefancic, 2017; Delgado et al., 2012; Solórzano & Yosso, 2002; Tate IV, 1997). Delgado et al. (2012) state that "racism is ordinary, not aberrational—"normal science," the usual way society does business, the common, everyday experience of most people of color in this country" (p. 7). CRT originated in the 1970's, theoretically indebted to the critical legal studies' concept of legal indeterminacy—a concept that legal cases are decided based on the subjective interpretation of those in authority—and radical feminism's perceptions of power, social roles, and the invisible structures that facilitate oppression (Delgado et al., 2012; Ladson-Billings, 2009). CRT also drew influence from European philosophers, American civil rights leaders, and the Black Power and Chicano movements of that time (Delgado et al., 2012). Early leaders in this field—including Derrick Bell, Alan Freeman, and Richard Delgado—understood

the need to address the more implicit and subtle ways that racism plays out within societal structures (Delgado et al., 2012).

Not all critical race theorists share the same perspective, but there are two major frames of thought (Delgado et al., 2012). The first category is *idealists,* who believe racism is a phenomenon that exists as a thought-process or individual belief system (Delgado et al., 2012). *Materialists*—also discussed as realists or economic determinists—see it as a more structural process of the dominant group used to dehumanize and convey inferiority of the group(s) they intended to exploit (Delgado et al., 2012). While these perspectives may differ, Delgado et al. (2012) share several widely-held central beliefs. The first is that racism is a commonplace-everyday experience (Delgado et al., 2012). The second is that the U.S. systems and social contexts promote white supremacy or dominance over other groups (Delgado et al., 2012). The third belief is that race is not biological but socially constructed—i.e. people are not born a race but are racially categorized by society, which they are born into (Delgado et al., 2012). The concept of differential racialization considers how society may racialize groups differently over time. Anti-essentialism focus on how racial identities should not be interpreted as limiting. These concepts are similar in that they both concern variation in racial identities, but are antithetical in that differential racialization identifies oppressive societal forces as the locus of the variation in identity whereas intersectionality looks to the individual's self-perception (Delgado et al., 2012). The last concept considers the "unique voice of color" in that those who have been oppressed have a unique perspective and competence in discussing issues concerning racism (Delgado et al., 2012). Delgado et al. (2012) synthesize these concepts into four overarching themes that capture the work of critical race theorists.

Delgado et al. (2012) identify the four themes that frame CRT work as: *interest*

convergence, material determinism, and racial realism; *revisionist history*; *critique of liberalism*; *and structural determinism*. The theme of *interest convergence, material determinism, and racial realism* addresses race as a social construction and the contrasting perspectives of the idealists and the materialists (Delgado et al., 2012). Work in the theme of *revisionist history* reconsiders history from marginalized perspectives and to bring to light histories that were ignored or suppressed by majoritarian perspectives (Delgado et al., 2012). Revisionist historians often use an economic determinist lens, interpreting history through issues of labor supply, profit, and the political and economic interests of Whites (Delgado et al., 2012). The next theme of CRT work is the *critique of liberalism*, which examines "colorblind" or neutral, equality-based approaches to racial concerns while ignoring the varying historical and social contexts that are often at the root of these concerns (Delgado et al., 2012). Last, *structural determinism* examines the structures of our systems and how they are unable to address the complexities of racism, particularly those that are more subtle in form (Delgado et al., 2012). This dissertation fits within the theme of *structural determinism*—blending the perspectives of idealists and realists—in that it considers racism as a habit of mind that is largely implicit in nature, but exists as an artifact of broader social forces and contexts that have sought to exploit and subjugate persons of color. CRT is central to this research because I am examining how racialized identities are associated principals' perceptions of influence and teachers' perceptions of principal competency and support. CRT centers the processes racialization as being associated with social value, where Whiteness is seen as the highest value in the broader social context. Where SCCT fails to adequately conceptualize racialized identities, I incorporate CRT to establish that racialized identities are associated with a social value and serve as a form of social and cultural capital. Building on SCCT and CRT, TRO provides a lens to examine how these broader conceptions of

social and cultural capital and racialized identities infiltrate the organizational structure and processes of schools.

Racialized Organizations

This dissertation's conceptual model is codified by Ray's (2019) Racialized Organizational Theory (TRO)[5]. Ray (2019) notes that conventional thinking in organizational theory utilizes a race-neutral approach. Ray (2019) takes a different approach that conceptualizes organizations as being comprised of racial processes that shape organizational policies and material resources. Ray (2019) identifies that scholarship on racial inequity does focus on racism as a systemic problem, but that researchers have not done enough to theorize the role of organizations in institutionalizing and propagating racist structures. Ray (2019) theorizes that race's connection to cultural and social hierarchies and material resources. Ray's (2019) theory of racialized organizations builds off of prior work on Racialized Social Systems Theory (RSST) (Bonilla-Silva, 1997; Jung, 2015) which defines the process of racialization and racism as systemic in opposition to traditional perspectives of racism as an individual psychological phenomenon. Ray (2019) expands beyond RSST through the Sewell Jr.'s (1992) Dual Theory of Social Structure. Sewell Jr. (1992) argues that racial ideologies at the individual level are connected to material and social resources at the organizational level. As such, individual racial biases diminish the access to these resources providing a structure to racial inequity in support of its reproduction (Ray, 2019).

Ray (2019) theorizes that these processes are embedded within three structural levels as diagrammed in Figure 1. First, is the *Racial Superstructure*, which is the overarching cultural ideology of the context in which the organization exists (Ray, 2019). The *Racial Superstructure*

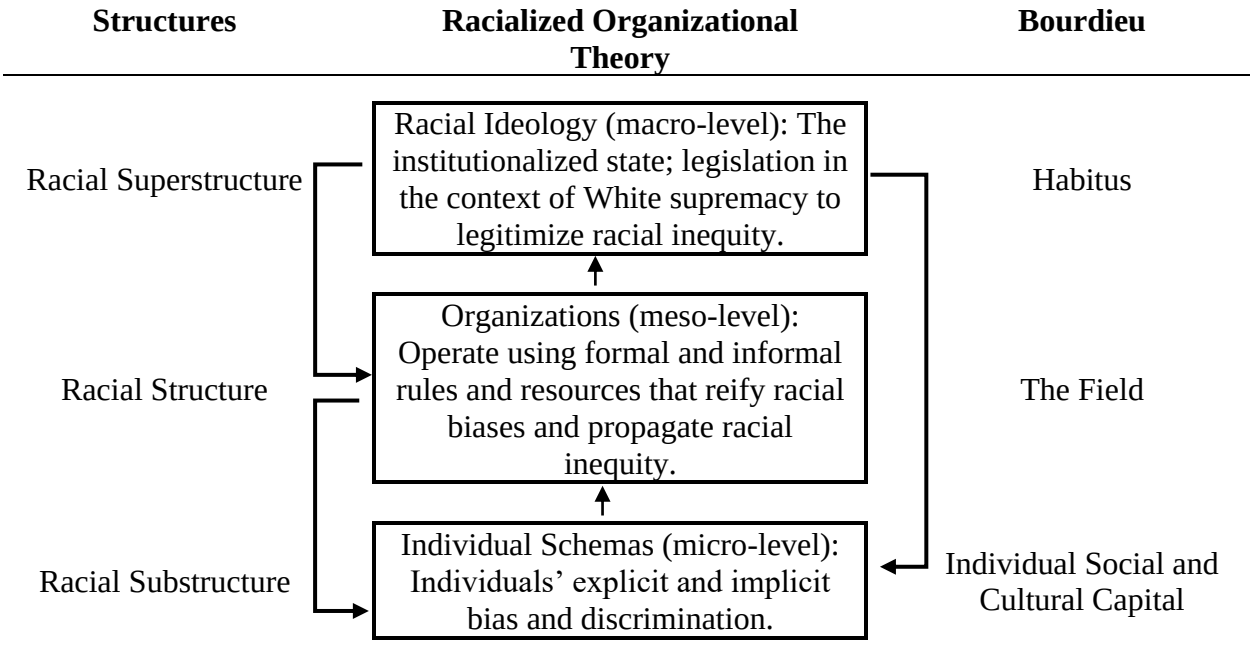
[5] Ray (2019) also notes macro-level disadvantages to organizations that are largely non-White. However, this is not relevant to this line of inquiry and not discussed in this dissertation.

is very similar to Bourdieu's (1977) conception of habitus. Next is the *Racial Structure*, this is the meso-level organization (i.e. schools, corporations, etc.) and functions similarly to Bourdieu's (1977) concept of the field—the space where social and material resources are located. Ray (2019)—building off the work of Bonilla-Silva (1997) and Sewell Jr. (1992)—describes the *Racial Structure* as being the rules and resources of the organization. Namely, the *Racial Structure* is the status quo (i.e. the process of how things have been created and operated for the benefit of Whiteness—resulting in the harm of others). Last, Ray (2019) defines the *Racial Substructure* as the individual-level schemas and biases of organization members. Ray (2019) theorizes that these racial processes are maintained at the organizational-level through four central tenets.

Ray (2019) proposes four central beliefs that maintain the structures of racial inequality. First, he states that racialized organizations expand or diminish individuals' agency based on their racialized identities (Ray, 2019). Second, he states that racialized organizations use policies and processes to legitimize the unequal distribution of material and social resources (Ray, 2019). He also states that racialized organizations see Whiteness as a type of credential that increases access to material and social resources (Ray, 2019). Last, Ray (2019) proposes that organizations decouple their actions from the formal policies in situations that are racialized—to the detriment of BIPOC-racialized individuals. Where SCCT and CRT integrate to conceptualize racialized identities as a form of social capital, TRO maps out the processes by which this capital provides benefit or harm. In terms of this dissertation, it provides a lens to understand how racialized identities are associated with differences in perceptions principal influence and competency.

Figure 1

Mapping Bourdieu on to the Racialized Organization



Note: Adapted from Ray (2019, pp. 28, 33), Bourdieu (1977), and Bourdieu (1986)

Principal Influence within the Context of White Supremacy

My dissertation bridges SCCT, CRT, and TRO to examine principals and perceptions of their influence. SCCT and CRT are well suited to support this research as they are both critical of deficit orientations and they both seek to illuminate how society reproduces itself through the relationship of culture and social structures (Tichavakunda, 2019). Both frameworks are similar in that they are unwilling to see individual behaviors as being isolated from broader social, cultural, or organizational structures (Tichavakunda, 2019). Ray's (2019) TRO allows me to expand upon the understandings provided by SCCT and CRT to focus on the level of organizations—in this case, schools. Specifically, this work aims to examine the *field* of the policy environment in which principals work, and how their racialized identities moderate principals' abilities to hold influence over their work in those contexts.

This research studies principals' perceptions of influence within CRT's *structural determinist* frame that acknowledges the social context of White ascendancy in which principals' influence exists. From SCCT, I understand that within this context of White ascendancy or White supremacy—Whiteness serves as a form of capital considered to be of higher "value" than other racialized identities. A form of capital that—within the sociopolitical context of the U.S. institutions and schools—devalues persons, histories, curricula that are not aligned with the values of White Supremacy. The lens of CRT provides a way for SCCT to articulate racial inequality in relation to social capital that prevents deficit-orientations (Yosso, 2005). Similarly, Ray (2019) identifies Whiteness as a credential that offers enhanced agency and additional resources and privileges in racialized organizations.

This research conceptualizes racialized identities as a form of embodied cultural capital[6] diagrammed in Figure 2. First, the role of the principal is considered to understand the modalities over which they are afforded influence. Principals serve as site-level leaders but are—typically[7]—middle management in the broader organization. This makes the role of the principal unique in that their influence is structured by oversight policy (e.g. district, government, school board, etc.) yet it is—as described by Hallinger and Heck (1996)—mediated or operationalized by teachers. Thus, this research considers both the structural contexts and the operational contexts in which principals work and exert influence. These contexts are what Bourdieu (1977)

[6] CRT defines racialized identities as a social construct and notes that the parameters which define these categories vary throughout time. As such, racial identities could be theorized as an objectified form of cultural capital. However, while racialized identity categories are social constructs and the racialized categorical definitions may shift in their objectification and dehumanization of non-White individuals—the context of White Supremacy makes racialized identities inseparable from the person to which they are assigned. Thus, racialized identity as an embodied form of cultural capital is the appropriate conceptualization for this research.

[7] In most "typical" school organizations, principals serve as a mediary between a central office and school-site. In smaller school districts or single site charter schools, principals may be closer to the strategic apex of the organization but still subject to forms of oversight policy. This concept—adapted from the Mintzberg (1989) outline of organizational structures—will be discussed in more depth in chapter three.

would refer to as the *fields* in which social capital is enacted and what Ray (2019) would describe as the *racialized structure* in which material and social resources are distributed.

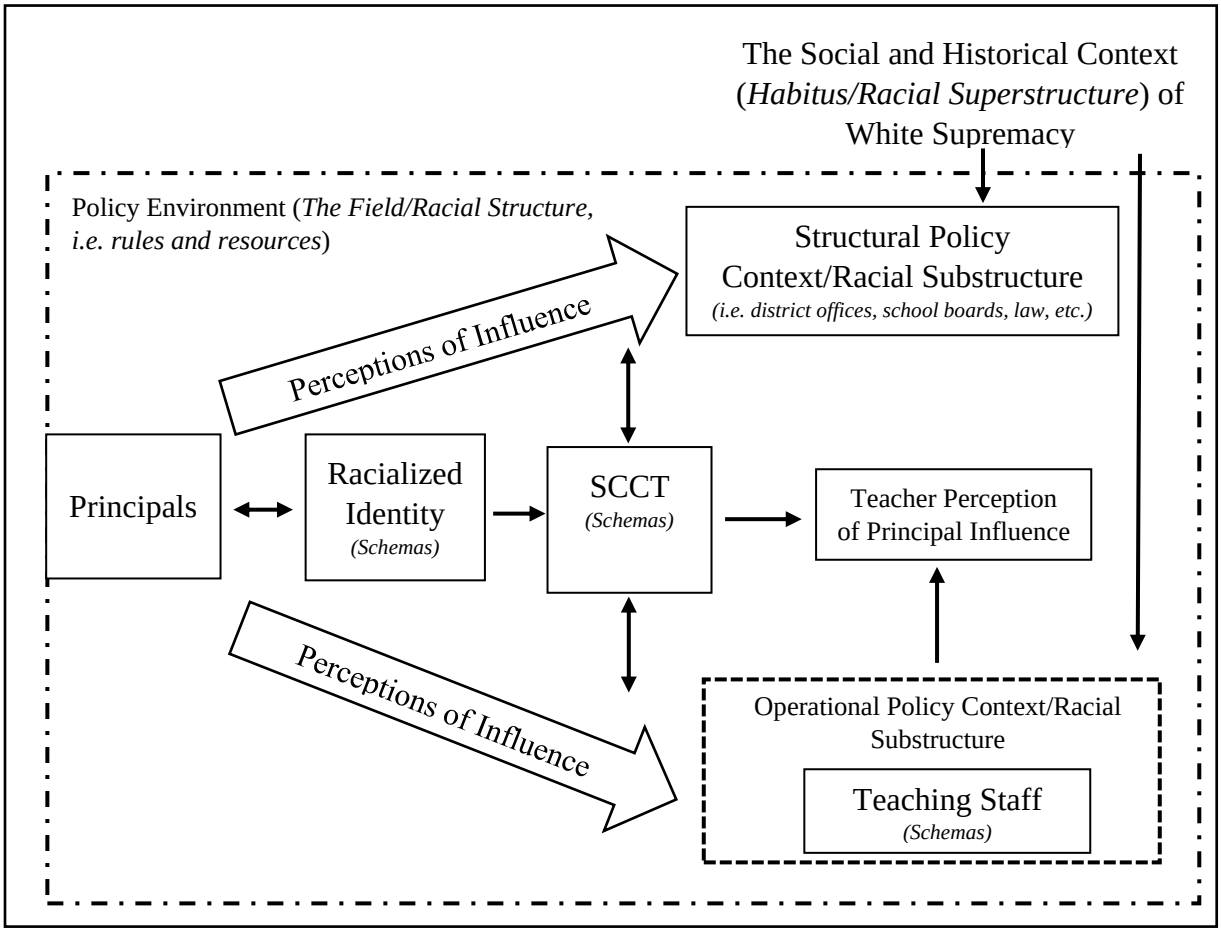
The broader context of White supremacy is represented in Figure 2 as the outer frame of the graphic, serving as a bounded rationality (i.e. the information structures that influence decision-making given human limitations (Simon, 1991)), or what Bourdieu (1977) would call *habitus* while Ray (2019) would define it as the *racial superstructure*. This bounded rationality of White Supremacy permeates the policy and school environments—it is the foundation upon which U.S. educational systems were designed. This is not to suggest persistence of these structures necessarily intentional, but more often exhibited implicitly in values, beliefs, and actions that perpetuate racial inequality. Research on implicit bias often focuses on conceptualizing the context of White Supremacy as being the "air we breathe"—it is always present, shaping our perspectives, and maintaining the status quo of preserving power and privilege to those who are White (Delgado & Stefancic, 2017; Diamond, 2013; Quillian, 2006). This conceptualization is important, but it is vital to acknowledge that the "air we breathe" results in *racist* actions. These actions may be done without cognitive intent, but they are no less harmful to the well-being of BIPOC individuals (Quillian, 2006). While ever-present, White Supremacy is likely to be more salient in spaces where (a) there is a White majority, and (b) a person that has been racialized as BIPOC is in a position of authority over a White majority. The racialization of school organizations is deeply woven into its structures, embedded into its rules and resources—it is inescapable.

This dissertation examines a particular facet of how racialization is operationalized for principals and teachers through the examination of the degree to which principals' racialized identities are related to perceptions of principal influence and then considering how those

perceptions may be moderated by the racialized identities of the teaching staff. I also examine teachers' perceptions of principal competency and support as an additional indicator to understand how racialized identities may be associated with individual benefit or harm in the organization. Figure 2 models how principals' perceptions of influence in the structural and operational contexts of their work are associated by the social and the cultural capital associated with their racialized identities.

Figure 2

Principal perceptions of principal influence and teacher perceptions of principal competency and support in the context of White supremacy



Note: This figure diagrams the conceptual model of this research; depicting perceptions of principal influence as it is moderated by the social and cultural capital associated with racialized identities within the broader context of White supremacy.

Figure 2 also models how principals' racialized identities serve as a form of cultural capital that moderates teachers' perceptions of principal support and competency. I anticipate that the finding from this research will mirror other studies examining racial mismatch. Broadly, I expect that the findings will demonstrate lower perceptions of influence, competency, and support associated with BIPOC racialized principals than their White counterparts and that the contrast of these perceptions will be more significant for principals racialized as Black. My expectations for the findings are aligned to each research question in hypotheses (H) below.

H1. BIPOC-racialized principals will perceive lower levels of influence than their White counterparts.

H1A. The principals racialized as Black will perceive lower levels of influence than IPOC-racialized principals.

H2. White teachers will perceive Black and IPOC principals as being less competent and supportive than White principals.

Conclusion

White Supremacy has a pervasive impact on schools, school systems, and the role of the principal. This context affords benefit and privilege to Whiteness that those in the principalship are not immune from. Next, a broad set of literatures will be explored to support this research. This review will examine research on the principalship, organizational theory, race and racial mismatch and QuantCrit research. This review will support this research to study the relationship of principal race and perceptions of their influence and teachers' perceptions of principal competence and support.

CHAPTER III: LITERATURE REVIEW

As noted in Chapter I, there is no known prior research that examines principals' perceptions of influence or teachers' perspectives of principal competency and support as they are associated with racialized contexts. As such, this review draws from a broad set of literatures. First, it will examine the role and influence of principals and principal positionality within the broader educational organization. Then, this review explores literature on racial mismatch in K-12 settings as a frame to understand how this concept may affect principals and their work. Last, I will describe recent developments in QuantCrit research on education. Next, I will explore the importance role of the principalship.

Why principals?

> *Leadership is second only to classroom instruction among all school-related factors that contribute to what students learn at school.*
> -Leithwood et al. (2004, p. 5)

Many scholars have portrayed school leaders as singular influencers, causal agents of school effectiveness (Bridges, 1970; Diamond, 2013; Hallinger & Heck, 2011a). This literature places focus on "top-down" policies that distribute decision-making powers across hierarchical models from centralized structures (i.e., district offices, charter management organizations, government offices) to schools (Hallinger & Heck, 1998). However, such claims are not valid measures of school leadership's impact on learning because they fail to account for causal ordering or proximal connection between school leaders and learners (Hallinger & Heck, 1996; Hallinger & Heck, 2011a, 2011b). The impact of school leadership on student learning is mediated by the instructional core (i.e., teachers, paraprofessionals, reading specialists, etc.) of the school (Hallinger & Heck, 1996; Hallinger & Heck, 2011a, 2011b). Diamond (2013) notes that research on distributed leadership has shown that principals do influence teachers and that

much of the prior research on leadership focuses solely on individual traits of leadership.

In contrast to a causal agent model, mediated models are more appropriate for assessing the impact of school leadership (Hallinger & Heck, 1996; Hallinger & Heck, 2011a, 2011b). The capacity of school principals for leadership is effectively mediated by the performance of teachers (Hallinger & Heck, 1996; Hallinger & Heck, 2011a). The structures or organizational routines created by school leaders create strong linkages between the the intenion of the principal and the actions of the teacher (Coldren & Spillane, 2007; Diamond, 2013; Spillane & Diamond, 2007). Principals have a significant impact on students through their influence on teachers (Grissom et al., 2021).

Kraft (2020) found that a transitioning from a less effective school principal to a more effective one to a more effective principal could have a significant impact on student learning. Kraft (2020) found that the difference between a principals at first and third quartile of effectiveness could translate to an additional *2.9* months of learning in math and *2.7* months of learning in reading each year for students. Similarly, Bartanen (2020) found that this same transition accounted for an average *0.13* standard deviation (SD) on student achievement scores in reading and a *0.24* SD increase on student achievement scores in mathematics when examining ten years of data from the Tennessee Department of Education (Grissom et al., 2021). The impact of principals have been measured beyond academic measures to include attendance (Bartanen, 2020) and school suspensions (Bacher-Hicks et al., 2019). Principal effectiveness has also been connected to job satisfaction and reduced turnover of teachers (Grissom & Bartanen, 2019; Johnson et al., 2012). Principals are incredibly important in fostering contexts that promote effective teaching and learning (Grissom et al., 2021). However, given the unique positionality of principals, their influence must extend beyond the school site into other areas of the

educational organization.

Principal postionality within the broader organization

The principalship is unique in where it resides within the hierarchy of educational organizations. At the school-site level, the principal is the individual accountable for the operation and performance of the school—even in a distributed model of leadership. Yet, within the frame of the broader organization (i.e., school district, charter management organization) the principalship is effectively a position of middle management—balancing the demands of leadership against the capacity and resources of the instructional core (Adamowki et al., 2007). Figure 3 adapts the five basic organizational structures from Mintzberg (1989, p. 20) to display the role of principal within the typical[8] school district or charter management structure. This graphic illuminates how the principal is central in the broader school organization—a *middle management* role between the strategic apex (i.e. district/charter management offices) and the operational core (i.e. teachers) (Adamowki et al., 2007; Mintzberg, 1989). The *Technostructure* (i.e. data and information systems) and the *support staff* (i.e. curriculum staff and instructional consultants) provide support from peripheral positions, but are not a direct respondent to—or in supervision of—principals. Adamowki et al. (2007) notes that most public school principals believe they practice exercise effective leadership as they try to work within the system as middle management not leadership (Adamowki et al., 2007).

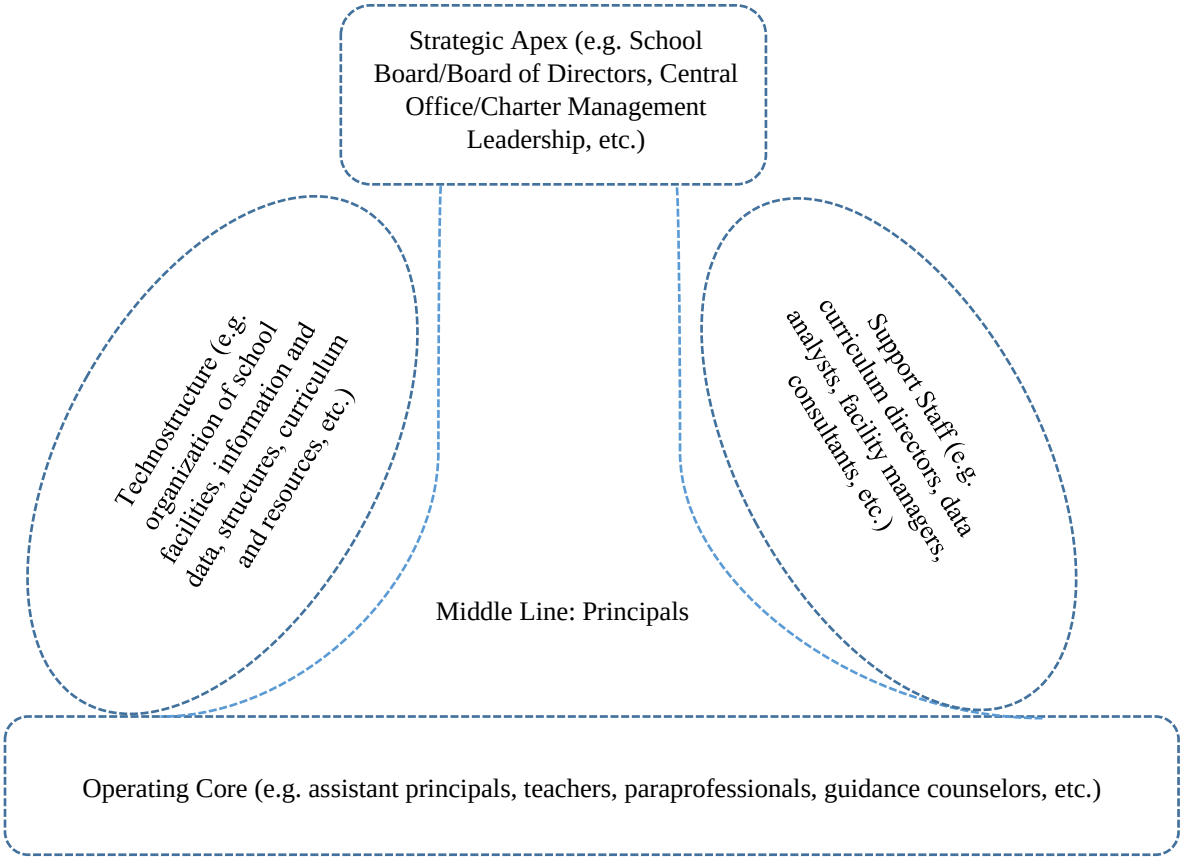
From the Mintzberg (1989) model, it becomes apparent that the *strategic apex*—be it a district office or state policy—provides the principal with the structures and guideline in which they make decisions, and that the principal's ability to make decisions is operationalized by the

[8] Principals in many smaller school districts and charter school organizations have expanded responsibilities that would locate them closer to the *Strategic Apex* in the Mintzberg (1989) model. Ultimately, even in cases of one school districts/charters, principals are still subject to oversight policy from governing agencies.

instructional core of the school. The structures and resources set at the strategic apex may not align to the needs of the instructional core. Principals need to be able influence the teachers in the instructional core, but they also need to be able to influence others in the organization to ensure the resources necessary to support an effective learning environment.

Figure 3

The five basic structures of school organizations



Note. This figure diagrams the five basic structures of organizations posited by Mintzberg (1989, p. 20): Strategic Apex; Technostructure; Support Staff; Middle Line; and the Operating Core. These five basic structures have been adapted to consider the school organization, identifying principals as the Middle Line.

The influence necessary to manage an effective school is complex. For example, a principals' influence over the curriculum may require them to have the ability to influence a

teacher to implement a curriculum, but may also require principals to have influence over the curriculum that is selected—either through influence on the decision of what curriculum is selected by other areas of the organization, or through their own selection. In this way, principal influence is a difficult construct to conceive of and measure. It is not only how principals perceive their own efficacy, but also how they perceive the distribution of power through the organization.

Principal influence is shaped by structures and oversight policy, but also by their agency in gathering the necessary resources to manage an effective school through their interactions with others. The capacity to make or influence decisions within middle management are not necessarily based on heiracrchical positionality, but by possesing valued forms of capital within the social space (Diamond, 2013). As Diamond (2013) discusses Weber (1968), he notes that the ability to have authority is—in part—about the willingness of the subordiante to comply. This capital, or ability to influence, is shaped by cultural values in a system that places a higher value on whiteness (Yosso, 2005). This social capital becomes more complex as one considers how the role of principal is structured within the organization and how the organization is influenced by broader systems of White supremacy (Ray, 2019).

Race and racial mismatch

When conceptualizing the process of principal influence in relation to the social capital associated with racialized identities, it is important to restate that principals and teachers of marginalized identities are underrepresented (NCES, 2020a; Grissom et al., 2021). Meanwhile, the number of students of those same marginalized identities are increasing (NCES, 2020b). Given the centrality of race in this issue, the next section of the review is focused on research pertaining to racism and racial mismatch in education.

Race (i.e. racism). From housing and unemployment to school discipline, the value of whiteness over others is an institutionalized, structured, collective effort—it is commonplace (Delgado et al., 2012; Garner, 2006; Lipsitz, 1995; Rothstein, 2017). Delgado et al. (2012) note that research using a standard measure of bias—the Implicit Association Test (IAT)—shows that many Americans hold negative beliefs towards outgroup members. For those from marginalized identities, the negative beliefs held against them have regularly and systematically been operationalized to oppress socially, economically, and often through violence. The historical and structural relationship between race and power has not just been one that values whiteness over others, but one that seeks to maintain the power or *influence* of Whites over others in broader sociological contexts and within organizations (Delgado et al., 2012; Ray, 2019). Schools are an organizational context that operationalize White supremacy, reinforce it, and—ultimately—reproduce it.

Racial mismatch. As noted in the introduction, studies conceptualized around racial mismatch reliably demonstrate harm to persons of marginalized racial identities through the enactment of White supremacy. For example, research has shown that racial mismatch between White teachers and Black students are often associated with less positive outcomes (Dee, 2005; Renzulli et al., 2011) and that student-teacher racial matching is associated with positive academic and non-academic outcomes for students of color (Dee, 2005; Gershenson et al., 2018; Grissom & Keiser, 2011). Dee (2005) found that White teachers were more likely to view Black and Hispanic students as frequently disruptive and inattentive. Research by McGrady and Reynolds (2013) found that White teachers rate White students as having more ability than their Black peers, and that teachers' evaluations of students are, "susceptible to racial stereotypes that disadvantage Black and Hispanic students" (McGrady & Reynolds, 2013, p. 15). They also noted

that Latino/a students are perceived as being more disruptive and argumentative when they are assigned to teachers of a different race or ethnicity[9] (McGrady & Reynolds, 2013).

Counterpoint to this, racial matching has often demonstrated benefit for individuals from marginalized racial identities. Grissom et al. (2021) notes that there are few studies demonstrating evidence linking principal race and student performance and the findings are mixed. However, the benefits of teacher and student racial matching are more established. Gershenson et al. (2018) found that black students had reduced high school attendance and graduation rates for black students if they did not have at least one black teacher in K-3 Tennessee STAR project. Redding (2019), in his systematic review of teacher-student racial matching, notes that there is evidence of academic and non-academic benefits Black students, but that evidence is not conclusive for Latinx students. Redding (2019) identifies many areas for further research that examines teacher-student racial matching alongside side issues of teacher quality, gender, the role of school leaders, and teacher sensitivity to the school context. Redding (2019, p. 499) also states, "Underlying this research is the belief that the cultural fit between students and teachers has the potential to improve a child's academic and nonacademic performance in school." However, this underlying notion of "cultural fit" is problematic, as Yosso (2005) notes that "cultural difference" is often coded deficit-oriented language for race and adherence—or lack of adherence—to curricula, policies, and expectations organized to benefit and value whiteness. There is a great deal of research that examines the student experiences and outcomes as related to the concept of racial mismatch, but less examine how it relates to the experience of teachers and principals.

A study of principals in North Carolina showed that principals in schools where they

[9] The data did examine the difference in perceptions by non-Latinx BIPOC teachers and White teachers, but noted that the findings are possibly impacted by the overrepresentation of White teachers in the profession.

racially matched their student population were less likely to leave their positions than those that did not match (Gates et al., 2006; Snodgrass Rangel, 2018). Viano and Hunter (2017) found that White teachers with White principals experience higher job satisfaction than when they work with a Black principal. Similar studies have examined teacher-principal racial matching, finding that it was predictive of job satisfaction for White teachers (Fairchild et al., 2012) as well as teacher cohesion and commitment, though only teacher cohesion was significant (Price, 2012). Brezicha and Fuller (2019) found that race and gender matching between teachers and principals in North Carolina was important for teachers developing a trusting relationship. Other research has demonstrated a preference for racial matching among Black teachers reporting higher levels of support, influence, and recognition (Grissom & Keiser, 2011) More recently, Bartanen and Grissom (2019) reported a 5-6% increased likelihood of hiring a black teacher when the principal is Black. They also show a 3% increase in retention rates for teachers when they are racially matched to their principal (Bartanen & Grissom, 2019, 2021). Similar findings were identified for as well as Hispanic principals and teachers in Texas (Meier et al., 2004). The line of research identified as "racial mismatch" has made great contributions to the literature on racial inequities. However, there are other ways in which it has limited its potential for impact.

Much of the research on racial mismatch discussed in this review identifies one of two conclusive findings: (a) racial mismatch is associated with negative outcomes for people of marginalized racial identities; and (b) that racial matching (i.e. removing White people from the context) is associated with benefits to people of marginalized racial identities. The only findings that contrasted this was Viano and Hunter's (2017) findings that White teachers'—and Black teachers to a lesser degree—experience higher job satisfaction when working for White principals. Despite the findings of most racial mismatch research, there is an absence of phrases

like “White supremacy” or “systemic racism” and a lack of discussion as to how these facts may connect to the differences observed by race. The absence of a deep engagement of the potential linkages between differences observed by race and racism can actually support and maintain racial inequities (Bonilla-Silva, 1997, 2006; Diamond, 2013).

A new lens for looking. QuantCrit is a developing area of research that engages quantitative measurement through a lens of Critical Race Theory (Castillo & Gillborn, 2022). QuantCrit seeks to identify and disrupt the ways in which quantitative research may cause harm to people of marginalized racialized identities (Castillo & Gillborn, 2022; Garcia et al., 2018b; Garcia & Mayorga, 2018). QuantCrit research is conducted in accordance with five guiding principles developed by Gillborn et al. (2018). They are: (1) racism is a central aspect of life; (2) numbers and the processes by which they are measured are not neutral or inherently objective; (3) racial categories are socially constructed; (4) data does not have the ability to speak for itself; and (5) numbers and statistical processes can be used for social justice (Gillborn et al., 2018). Recent research in QuantCrit has demonstrated promising findings.

A recent study by Garcia et al. (2022), used QuantCrit approach in a mixed methods intervention with Black and Latinx youth that been pushed out of school. Garcia et al. (2022) used QuantCrit to interpret descriptive criminal justice data on California youth that matches the experiences of the youth participating in the intervention. Through critical interpretation, the researchers contrast ways in which disproportionate punishment of marginalized youth is represented statistically against the rich data and contextual realities of youth experiences evidenced in interviews. In another recent study by Wronowski et al. (2023), pre-service teachers demonstrated an increased critical social justice disposition after taking a new social justice focused teacher education course as part of a whole-program redesign. More relevant to the

focus of this study is a recent publication by Reynolds and Tabron (2022) that examined early principal hiring practices (i.e. early stages of the recruitment and hiring process) from across 240 school districts. They found that many districts engaged in early principal hiring practices that were likely to suppress the diversity of the applicant pool—noting that 61% of districts did not use written criterion by which to assess applicants. Reynolds and Tabron (2022) also noted that districts relied too heavily on personal social networks—reproducing whiteness in leadership.

Conclusion

This dissertation approaches the study of racial mismatch with a QuantCrit perspective to study the experiences of school principals—who have not been centered in this type of research previously. There is not a single literature base to draw from. As such, this review discusses prior research on the role of the principal, organizational theory, racism, racial mismatch, and QuantCrit methods. This review supports the conceptual framework that understands the role of the principal within an organizational context of White supremacy that sees whiteness as a more valuable form of social capital than other racialized identities. Next, Chapter IV will describe the data and methods used to conduct this research.

CHAPTER IV: DATA AND METHODS

This dissertation examines the associations between principals' racialized identities and their perceptions of influence over their work. This dissertation also studies the associations between the teachers' racialized identities and their perceptions of principal competency and support. This dissertation furthers prior research examining the mismatch of racialized identities, and is the first known to use this approach to focus on school principals. It is also the first research on the mismatch of racialized identities to draw from CRT (Delgado & Stefancic, 2017) and TRO (Ray, 2019) as a conceptual framework. This chapter discusses the data and analytical methods use in this research.

This research uses data from the 2015-16 National Teacher and Principal Survey[10] (NTPS) under a restricted-use license. NTPS is a nationally representative data set available through the National Center for Education Statistics (NCES). First, I describe the sample, data sources and preparation for this research. Then, I will discuss the sample and key variables—including the processes by which these variables were transformed or created in preparation for this analysis. Following this overview, I explain the quantitative methods selected for this research. These methods include descriptive statistics, multiple regression and mediated regression. Last, I describe the QuanCrit interpretive framework used to interpret these findings (Gillborn et al., 2018).

Data

The NTPS is a system of surveys that collect descriptive data on the context of schools and also provide additional statistics on the state of U.S. education (National Center for

[10] There are more recent NTPS data currently available—including the 2018-19 and 2021-22 NTPS data. The 2015-16 NTPS data was the most recent data available when the dissertation was started. Some elements of this analysis will be replicated with the most current available data set, as this work is adapted for publication. However, there are several items regarding teachers' perspectives of principals that are only present in the 2015-16 data set—making it ideal for examining elements of teacher bias that are not available in the more recent data.

Educational Statistics, n.d.). The NTPS is the most recent version of the Schools and Staffing Survey (SASS) (NCES, n.d.). The NTPS collects data on many significant topics on schools and educational personnel using internet and paper instruments every two years (National Center for Educational Statistics, n.d.). The NTPS data focus on school quality, school management, and teacher quality (NCES, n.d.). This data is accessed under a restricted license from the Institute of Education Sciences (IES) and includes school characteristics, classes taught, personnel demographics, and educator preparation and experience. The NTPS also contains survey modules on conditions, professional development, and evaluation (NCES, n.d.).

The 2015–16 NTPS was the first administration of this survey and consisted of three questionnaires: one for principals, one for schools, and one for teachers. Unlike its SASS predecessor, the 2015–16 NTPS only included public schools—both charter and traditional—and did not collect data on private schools (NCES, n.d.). The 2015–16 NTPS also differs from SASS in that it is not intended to produce state-level estimates and used a four-level model to categorize charter schools (NCES, n.d.). The 2015-16 NTPS is the ideal data set for this research because it contains measures of principal perceptions of influence, teacher perceptions of principal effectiveness and support, demographic information on principals and teachers, and other data points serve as appropriate control variables for these research questions. This research will utilize data from the school, principal, and teacher questionnaires.

Sample

The sample used for this research draws from the draw from the Principal, Teacher, and School survey data of the NTPS. This research uses the unweighted data from each of these files. The research questions used in this study examine findings related to public school principals

(*n=5,120*)[11] and public school teachers (*n=25,680*). Imputation was not used for this analysis, thus the principal sample of *5,120* and the teacher sample of *25*,680 represent a possible maximum number of observations and some analyses may document a smaller number of observations. Table 1 displays the number of principals and teachers in this sample identified by the racialized categorization that are used in this analysis.

Table 1
Principal and teacher sample

Racialized categories	N
Principals	
Black	540
IPOC	490
White	4,090
Teachers	
Black	1660
IPOC	2610
White	21,400

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS), "Public School Principal Data File," 2015–16; and U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS), "Public School Teacher Data File," 2015–16.

This research uses three racialized categorizations for this analysis—Black, IPOC, and White—as noted previously. Respondents identifying as Black were categorized as Black and those that identified as White were categorized as White. Respondents that identified as Hispanic and White, American Indian or Native Alaskan, Hawaiian or Pacific Islander, or Asian were categorized as IPOC. While Hispanic is considered an ethnicity and not a race, it is an identity that has been racialized by White supremacy and categorized as IPOC (Lynn & Dixson, 2013; Ray, 2019). Respondents identifying as Hispanic and Black were categorized as Black, given the

[11] All sample sizes are rounded to the nearest 10 in accordance with National Center for Education Statistics reporting policies.

historical context of anti-Black racism. In addition, as noted before, collapsing these different identities into a single categorization is an *essentializing* process—itself a mechanism of White Supremacy. This research is focused on identifying the potential detriment that White Supremacy may cause for members of BIPOC-racialized identities and not representative of any single racialized identity. In considering options, I decided that there may be more potential harm by eliminating the data from these respondents than might be caused by collapsing identities into an IPOC category. Similarly, great caution was used to prepare data for analysis from respondents that identified more than one racial/ethnic indicator using a whole-assignment[12] "bridge" using a predetermined rule (Perlmann & Waters, 2002).

Teachers and principals were able to select as many racial/ethnic identity indicators as they felt represented them in their respective surveys. The number of subjects reporting multiple racial/ethnic identities was low and highly varied. In these cases, subjects reporting multiple identities were transitioned to a single category for the purposes of statistical analysis using a predetermined rule. The rule on how to categorize respondents reporting multiple identities were made based on their proximity to the potential harm caused by White Supremacy. Respondents that selected multiple identities were only counted in the category with the greatest proximity to the potential harm caused by White Supremacy. For example, if a respondent identifies as White and Asian (or another IPOC-categorized identity) they may be *othered* by White people—or structures built for Whiteness—and are categorized as IPOC. Similarly, if a respondent identified as Black and another identity they were categorized as Black, given the centrality of anti-Black racism in White supremacist ideology. Next, I will describe data collection and preparation.

[12] Fractional assignment and the National Center for Health Statistics (NCHS) were also considered, but whole assignment was determined to be more appropriate given the aim of identifying harm associated with White supremacy (Liebler & Halpern-Manners, 2008)

Data Collection and Preparation

The U.S. Census Bureau managed the processing, weighting and imputation of the each data set (Goldring et al., 2017). The U.S. Census Bureau coded each questionnaire to indicate whether it was complete, the respondent refused, or the site was closed. This was conducted to determine the respondent's eligibility to be included in the 2015-16 NTPS (NCES, n.d. –a). Then the data were reviewed for quality, with problematic cases being ruled ineligible for the survey. The U.S. Census Bureau employed a rigorous weighting scheme as described by Goldring et al. (2017). However, those processes are not relevant to this research as it uses the unweighted responses from the School, Principal, and Teacher surveys. Next, I will discuss the handling of missing and incomplete data.

Missing, Imputed, and Omitted Data

The U.S. Census Bureau coded each questionnaire to indicate whether it was complete, the respondent refused, or the site was closed. This was conducted to determine the respondent's eligibility to be included in the 2015-16 NTPS (Goldring et al., 2017). Then the data were reviewed for quality, with problematic cases being ruled ineligible for the survey. Goldring et al. (2018) report that the NTPS had a high response rate and that questionnaires had a high completion rate as displayed in Table 2. Census Bureau analysts used two approaches to impute missing data (Goldring et al., 2018). First, they used donor respondent methods. If a donor respondent could not be found then a mean or mode from similar cases when a donor could not be identified (Goldring et al., 2018). For these cases, analysts reviewed the imputed data for consistency and identified an appropriate value in rare cases (Goldring et al., 2018). This research uses some imputed data but removes other imputed observations from its analysis.

The racialized identities of principals and teachers are central to this research. Despite the

accuracy of imputation models, any chance of inaccuracy was determined to be inappropriate given the salience of racialized identities to this research. Thus, cases that used imputed values for principal and teacher racialized identities were removed in preparation for analysis. There were an additional 14 principal cases that were removed from analysis as a result of responding that they had an Associate's degree or less as their highest education. These responses seemed highly unlikely given the professional requirements to work as a principal. The remaining principal- and teacher-level survey items remain in the data—however—other cases were also dropped from the analysis.

Table 2

Questionnaire response and completion rates

Surveys	Response rate	85% completion rate
Public school	71.8	96.6
Public school principal	71.2	100
Public school teachers	68.4	96.6

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS), "Public School, Public School Principal, and Public School Teacher Data Files," 2015–16.

This research examines principal and teacher perceptions within the school organization but notes that school organizations exist within a larger policy and social context. The NTPS sampling frame collected data from five different school program types: Program Type 1 (Regular, n=5070); Program Type 2 (Special Program Emphasis, n=220); Program Type 3 (Special Education, n=90); Program Type 4 (Career/Technical/Vocational, n=90); and Program Type 5 (Alternative, n=90). Program types 3, 4, and 5 have significant structural differences than regular school programs or special emphasis schools (i.e., magnet-type schools that engage in their respective state curricula) and may be subject to different legal policies and accreditation requirements. As such, cases from program type 3, 4, and 5 schools were dropped from the analysis. The total observations dropped from the data are displayed in Table 3. Next, I will

describe the key variables used in this research.

Table 3
Dropped observations

Variable	Observations[1]	Observations dropped[1]	Final sample[1]
School program types	5,560	270	5,290
Principals	5,230	100	5,120
Teachers	26,270	590	25,680

[1] Individual respondents are rounded to the nearest 10 in accordance with NCES reporting standards.
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS), "Public School, Public School Principal, and Public School Teacher Data Files," 2015–16.

Variable Transformation and Construction

The variables in this research draw from the Principal, Teacher, and School survey data of the NTPS. The dependent variables for this study include the measurement survey items focused on principal perceptions of their influence, survey items assessing teacher perceptions of principal competency and support, and a composite of the teachers' perceptions. The independent variables examine principals' racialized identities, teachers' racialized identities, the racialized majority of the teaching staff, and the match and mismatch of racialized identities between principals and teachers. The control variables include a series of principal, teacher, and contextual factors that may account for some of the variation observed in the analysis. The selection of control variables was based on prior research examining racial mismatch between teachers and principals (Grissom & Keiser, 2011; Viano & Hunter, 2017). Each variable is identified and described in Table 4. In addition, tables are provided in the methods section to address which variables are being used in each model. A complete codebook is provided in the *Appendix*. While the data was processed by IES, additional effort was required to clean, transform, and create new variables in preparation for this analysis.

Table 4

Variables used in analysis

Variable Use	Variable	Var. Type	Description
Principal dependent	Principal Influence: Performance Standards	Truncated Continuous	range: -3.563 to 0.571
Principal dependent	Principal Influence: Curriculum	Truncated Continuous	range: -2.5337 to 0.9996
Principal dependent	Principal Influence: Teacher development	Truncated Continuous	range: -4.3508 to .6193
Principal dependent	Principal Influence: Teacher evaluation	Truncated Continuous	range: -11.2389 to .1897
Principal dependent	Principal Influence: Teacher hiring	Truncated Continuous	range: -6.6803 to .3181
Principal dependent	Principal Influence: Discipline policy	Truncated Continuous	range: -5.0557 to .5358
Principal dependent	Principal Influence: Budget	Truncated Continuous	range: -3.4292 to .7395
Teacher dependent	Teacher perspective: Supportive admin	Truncated Continuous	range: -2.7123 to.8160
Teacher dependent	Teacher perspective: Principal enforces rules	Truncated Continuous	range: -2.6883 to.8509
Teacher dependent	Teacher perspective: Principal communicates the type of school he/she wants to staff	Truncated Continuous	range: -2.7616 to .8080
Teacher dependent	Teacher perspective: The school is well run	Truncated Continuous	range: -2.2210 to 1.2306
Control	Principal age	Continuous	range: 25 to 79
Control	Charter school	Dichotomous	0=no, 1=yes
Control	School enrollment	Continuous	range: 7 to 14749
Control	National school lunch program (NSLP) enrollment percentage	Continuous	range: 0 to 100
Control	Region: Northeast	Dichotomous	0=no, 1=yes
Control	Region: Midwest	Dichotomous	0=no, 1=yes
Control	Region: South	Dichotomous	0=no, 1=yes
Control	Region: West	Dichotomous	0=no, 1=yes
Control	Full-time teachers	Continuous	range: 1 to 641
Control	Years teaching before principal	Continuous	range: 0 to 38
Control	Years principal at any school	Continuous	range: 0 to 47
Control	Principal highest degree: Bachelor's	Dichotomous	0=no, 1=yes
Control	Principal highest degree: Master's	Dichotomous	0=no, 1=yes

Table 4 (cont'd)

Variable Use	Variable	Var. Type	Description
Control	Principal highest degree: Education Specialist	Dichotomous	0=no, 1=yes
Control	Principal highest degree: Doctorate or Professional degree	Dichotomous	0=no, 1=yes
Control	Principal gender	Dichotomous	0=male, 1=female
Control	Estimated percentage of White students	Continuous	range: 0 to 100
Control	The school program type: Regular	Dichotomous	0=no, 1=yes
Control	The school program type: Magnet/Special Emphasis	Dichotomous	0=no, 1=yes
Control	Four category school level: Primary	Dichotomous	0=no, 1=yes
Control	Four category school level: Middle	Dichotomous	0=no, 1=yes
Control	Four category school level: High	Dichotomous	0=no, 1=yes
Control	Four category school level: Combined	Dichotomous	0=no, 1=yes
Control	Teacher Gender	Dichotomous	0=male, 1=female
Control	Teacher experience	Continuous	range: 1 to 53
Control	School locale code: City	Dichotomous	0=no, 1=yes
Control	School locale code: Suburban	Dichotomous	0=no, 1=yes
Control	School locale code: Town	Dichotomous	0=no, 1=yes
Control	School locale code: Rural	Dichotomous	0=no, 1=yes
Descriptive	75% of students qualify for the NSLP	Dichotomous	0=no, 1=yes
Principal independent	Black Principal	Dichotomous	0=not Black, 1=is Black
Principal independent	IPOC Principal	Dichotomous	0=not IPOC, 1=is IPOC
Principal independent	White Principal	Dichotomous	0=not White, 1=is White
Principal independent	White Principal	Dichotomous	0=not White, 1=is White
Principal independent	Diverse teaching staff	Dichotomous	0=no, 1=yes
Principal independent	Majority Black teaching staff	Dichotomous	0=no, 1=yes
Principal independent	Majority IPOC teaching staff	Dichotomous	0=no, 1=yes

Table 4 (cont'd)

Variable Use	Variable	Var. Type	Description
Principal independent	Majority White teaching staff	Dichotomous	0=no, 1=yes
Teacher independent	Black Teacher	Dichotomous	0=not Black, 1=is Black
Teacher independent	IPOC Teacher	Dichotomous	0=not non-Black IPOC, 1=is non-Black IPOC
Teacher independent	White Teacher	Dichotomous	0=not White, 1=is White

Data Cleaning and Preparation. The data was processed and analyzed using STATA SE 17 software for statistical analysis. All stages of preparation and analysis were conducted using *do* files to ensure that this research is reproducible. There are 10 files in total—eight of which are dedicated to data preparation, cleaning, transformation, and variable creation. The first three of these files are provided by NCES to read the raw data file into Stata. Then the data was merged, using a one-to-one merge for the principal and school data into a new file. Then a many to one merge was conducted to join all three data sets. Next, the imputed values for racialized identities and the data for Program Types 3, 4, and 5 were dropped. The total cases dropped are documented in Table 3 as previously noted. Then a data check was performed to evaluate all data considered for analysis. This included producing summary statistics, frequency tables, and a histogram for each variable and reviewing each individually. Many data required cleaning or changes in preparation for analysis. These data were transformed and additional variables were created for this analysis.

Variable Transformation. Many variables were transformed or recoded in preparation for this research. A full list of each transformed variable is provided in *Appendix A.* The changes to this data can be broadly described in three categories: ordinal variables recoded to begin at 0;

dichotomous categorical variables recoded as 0 or 1; and missing data that needed to be recoded or dropped from the sample. The teacher and principal perception items were both coded using a four-point Likert-type scale that began at 1 and ended at 4. These were both recoded to begin at 0 and end at 3. The teacher items were originally reverse coded from strongly agree (*0*) to strongly disagree (*3*) but were recoded to strongly disagree (*0*) to strongly agree (*3*). The principal items also allowed for a response of not applicable. This was coded as a 5 in the data. These responses were recoded as valid missing data as the response could not be interpreted in regards to perceptions of influence. Dichotomous variables coded as 1 or 2 were recoded as 0 or 1 for use as dummy variables. In addition, teachers' racial and ethnic identities were originally coded as 1 or -8 (valid skip). These items were recoded with 0 replacing -8 for use in the creation of new dummy variables. Many new variables were also created from the original survey data.

Variable Creation. This analysis required the creation of several variables. Many created variables served as identifiers for racial categorization, identity matching, and indicators of teaching staff composition. These variables were dichotomous as described in Table 4. Other variables were truncated-continuous variables that were standardized transformations of the original Likert-type survey responses. The dependent variables consisted of both truncated-continuous and dichotomous variables. In addition, categorical control variables were used to create dichotomous variables representing each of their values. The source variables used to create dichotomous controls include: region; highest degree earned; school locale; school level; and school program type.

Dependent Variables. First, seven dependent variables were created to study principals' perceptions of their influence. These variables were standardized adaptations of the original survey items on the following topics: performance standards; curriculum; teacher development;

teacher evaluation; teacher hiring; discipline policy; and budget. I did attempt to consolidate these influence items into a single scale and a set of two scales—one focused on operational influence and the other on policy influence—but neither model exhibited a suitable alpha. As such, each type of analysis examining principals' perceptions of influence is conducted using each of the individual influence items as the outcome variable of the respective models. The independent variables created for this research focus on the racialized identities of teachers and principals in the schools.

Independent Variables. The independent variables created for this study establish racialized identity categories for principals, teachers, and teaching staff composition. As discussed in the sample description, principals and teachers were categorized into a single racialized category of Black, IPOC, or White. These decisions were made using a rule based system that prioritized the potential for harm cause by White supremacy. Next, I will describe the analytic and interpretive methods used in this work.

Research Methods

This research uses a series of quantitative models. The role of principals and teachers in schools that are within a social context of White supremacy embodies many layers of complexity. First, I use descriptive analysis to examine the contexts in which principals work and their associated control variables. Then, I describe the quantitative models used to answer the research questions including multiple and fixed-effects regression models. After describing the quantitative analysis methods, I describe a framework based on Gillborn et al.'s (2018) five tenets of QuantCrit research that is used to interpret these findings. Next, I will describe the methods of analysis used to assess the contexts of this sample.

Describing the principals and their contexts of influence

This study will begin with descriptive analysis of the principals and the contexts in which they work. Characteristics of the principals and the schools they work in are cross-tabulated in relation to the racialized categories established in this research (Black, IPOC, or White). The numbers for each descriptor represent an average within that item or a percentage of that racialized category of principals. The descriptors include: principal age; percentage of principals in charter schools; number of students enrolled in the school; number of full-time teachers; years teaching before principal; years of principal experience; percentage of each at highest degree attained; percent of principals identifying as female[13]; percentage of student enrollment that is White; percentage of regular school program type; percentage in each of the four category school level; number of teachers; years of experience of (teachers); percentage of four category locales; and percentage of schools where 75% or more of students qualify for the NSLP. These descriptive indicators provide insight into observable differences between principals in different racialized categories pertaining to their experience, preparation, and the contexts in which they work. In addition to these descriptors, I also conducted regression analysis to understand the relationship between control variables and the measures of principal influence.

The measures of principal influence used in this study are broad and may be interpreted along a spectrum of interactions that may in some cases include direct work with teachers and in other cases may pertain to work with central office personnel. For example, a principal's influence over discipline policy may reflect their ability to address needed changes to support equity at a district level, but could also reflect working with teachers, students, and families to develop preventative strategies. This variation in the scenarios described could represent the

[13] This dataset is not inclusive in its representation of gender and only uses binary gender identifiers.

experience of a single principal whose work fluctuates between these policy and operational spaces, but they could also represent the experiences of two different principals in how they determine their work related to discipline policy. There is the potential for variation in how principals conceptualize their influence based on their experience and the contexts they work in. Principals' work and their background is important to examine as a frame for the analysis that follows. Next, the methods of analysis for research question one will be discussed.

RQ1. How do principals, racialized as Black and IPOC, perceive their influence over aspects of the school organization? How do their perceptions of influence compare to those of White-racialized principals?

The first research question examines how principals perceive their influence over aspects of the school organization. The principals' racialized identity is the independent variable to determine if—and possibly to what extent—principals' racialized identities are associated with their perceptions of influence. A series of multiple linear regressions are used to study this with a set of control variables. The control variables include: principal experience; principal gender; years teaching experience; principals' highest degree indicator variables; principal age; school locale indicator variables; school level indicator variables; percentage of students enrolled in the school lunch program; U.S. region indicator variables; the school program type indicator variables; the student enrollment; and the percentage of students identified as White. Equations (1) and (2) provide a template for each equation that displays the dependent *y* variable representing principals' perceptions for each of the influence items as associated with the *P* principals' racialized identity with the control variables previously described. Equation (1) displays this model only using the independent variables of principal race. Equation (2) incorporates the control variables. The control variables include: principal age; charter school;

school enrollment; national school lunch program (NSLP) enrollment; region: northeast; region: Midwest; region: South; region: West; years teaching before principal; years principal at any school; principal highest degree: bachelor's; principal highest degree: master's; principal highest degree: education specialist; principal highest degree: doctorate or professional degree; principal gender; estimated percentage of white students; the school program type: regular the school program type: magnet/special emphasis; four category school level: primary; four category school level: middle; four category school level: high four category school level: combined; teacher gender; teacher experience; school locale code: city; school locale code: suburban; school locale code: town; and school locale code: rural. Research question 2 expands upon this to examine if teachers' perspectives of principals' effectiveness are associated with teacher and/or principal racialized identities.

$$Y_i = \beta_0 + \beta_1 P_i + e \quad (1)$$

$$Y_i = \beta_0 + \beta_1 P_i + \beta_2 P(Cont.)_i + e \quad (2)$$

RQ2. How do teachers' perceptions of school principals' effectiveness and support vary in relation to the teacher's racial match or mismatch to the principal?

The second research question of this study transitions from focusing on the perspectives of principals to the perspectives of teachers. I examine this question through a fixed-effects model. The dependent variables for the models are teachers' perspectives of how supportive principals are, their enforcement of rules, their communication of the school they want, and how well the school is run (i.e., effectiveness). As with RQ1, the model is run without control variables and in a final model with controls. Two equations are provided below to demonstrate each model. Equation 3 displays a fixed-effects model where the *T* teacher *e* perceptions are measured as associated with the *T* teacher *r* racialized identity nested at school level (μ_s).

Equation 4 presents the final model with controls. Each equation is conducted three times and conditioned on each of the principal racialized categories.

$$Y_{es} = \mu_s + \beta T_{rs} + e_{rs} \text{ [if } P_r = 1] \quad (3)$$

$$Y_{es} = \mu_s + \beta_1 T_{rs} + \beta_2 T(Cont.)_{is} + e_{rs} \text{ [if } P_r = 1] \quad (4)$$

The statistical analysis used in this study provide opportunity to examine this data as measure. However, there is a long—and often harmful—history of statistical analysis that studies racialized identities (Gillborn et al., 2018; Zuberi, 2001; Zuberi & Bonilla-Silva, 2008). As such, this research seeks to employ an interpretive framework that is accountable for the ways in which statistical findings may facilitate harm to prevent that occurrence. To do this, I am creating an interpretive framework derived from Gillborn et al.'s (2018) tenets of *QuantCrit* research.

Interpretive Framework

I adapt and extend Gillborn et al.'s (2018) five QuantCrit tenets and draw on the Critical Race Mixed Methodology of DeCuir-Gunby (2020) as well as Covarrubias and Velez's (2013) Critical Race Quantitative Intersectionality (CRQI) to develop the REASN Interpretive Framework (see Table 5 below), which I use as a complementary method to interpret the findings and interrogate the processes and contexts of this work. The REASN framework builds upon the work of many Critical Race Theorists and Methodologists (Covarrubias & Vélez, 2013; DeCuir-Gunby, 2020; Delgado & Stefancic, 2017; Gillborn et al., 2018; Ladson-Billings, 2009; Solórzano & Yosso, 2002). Through this framework, I first seek to more concretely operationalize the tenets discussed by Gillborn et al. (2018). Gillborn et al.'s (2018) QuantCrit tenets provide conceptual understandings of critical-race perspectives in relation to statistics. I extend this work in the REASN framework to adapt these concepts into actionable steps that

researchers can take to ensure that their quantitative work promotes anti-racist perspectives. The five action items of the REASN framework are not ordinal and should be utilized as an iterative tool to reflect on the findings of the quantitative analysis. Below, I discuss the principles underlying the REASN framework and describe each component in greater detail.

Principles supporting the REASN framework

The first principle to support the REASN framework's validity is that *research is a learning process*. There are many theories of learning that can be drawn from, but what is most important is that each conceptualizes the learner as an active participant. The researcher is a learner that is asking questions, using a process to measure or make sense of the questions given the data they have. The process by which they measure—or make sense of—the data is framed by their knowledge—and all of the socio-cultural experiences and perspectives that have constructed their knowledge. All measurement holds the potential for error. There are the standard forms of error we estimate in analyses, but there is also unobserved—and possibly unmeasurable forms of—error. In quantitative research, unobserved error may be derived from deficit-oriented logics used by researchers that are unable to identify—or unaware of—how their concepts of objectivity may be framed by White supremacist perspectives (Garcia & Mayorga, 2018; Strunk & Hoover, 2019). The researcher, as a learner themself, can almost be conceptualized as an unobserved matrix of data that shapes each study in its entirety. The REASN framework provides an interpretivist approach to account for potential unobserved error in quantitative approaches to research—a way to acknowledge this potential form of analytical bias by drawing on prior research, interrogating the research methods and data, and considering the researcher's positionality in the work in efforts to reduce conceptions of "objectivity" that center themselves on whiteness.

The second principle I offer to support the REASN framework's validity as a complementary method is that *race is a social construct*. This is a foundational concept of all of the critical race research—cited here and elsewhere. Race as a social construct is also supported by the field of genetics, with the Human Genome Project confirming that all humans are 99.9% genetically identical in 2003 (Duello et al., 2021). Similarly, Duello et al. (2021) conducted a systematic review of genetic studies that used racialized identities to define the study population, but none of these studies could explain race as a category through genetic information. These facts support the understanding of race as a social phenomenon and not in terms of biological/genetic differences. This knowledge frames how I as a researcher consider all measurement and analysis that considers race. The acceptance of race as a social construct posits that all measurable outcomes for persons of all racialized identities should fall similarly along the normal distribution with sufficient observations. For example, if we were to measure standardized test scores for middle school students, the data should show a similar distribution of results for students of all racialized identities. If a similar distribution of academic achievement is not observed for students of all racialized identities, then it is reasonable to assume that White supremacy has some association with the observed outcomes—even if other variables demonstrate an associative or predictive relationship. For example, if higher scores were observed for White students in the academic achievement scenario, researchers might observe that variables like zip codes or family income are associated with the White students' test scores. This would be a valid finding. However, it would omit the ways in which White supremacy has shaped how zip codes and income have provided benefit to White racialized identities. In many cases, constructs operationalized in variables like zip code and income are the embodiment of—or the mechanism by which—White supremacy has been operationalized. These types of

variables are commonly used as control variables and often reduce outcome differences by racialized identities. The REASN framework provides a tool for researchers to engage with the confounding nature of these types of control variables. These types of variables demonstrate how White supremacy is a system that is complex and adapts to maintain power.

The last principle I offer to justify the *REASN* framework's validity is that *White supremacy is a complex adaptive system (CAS)*. CASs are systems made up of many different components that operate in support of similar results and adapt based on their interactions without centralized control (Eidelson, 1997; Holland, 2006). Holland (2006) notes that CAS are central to many social concerns engaged by social scientists. Bobo (2018) describes race as a CAS noting that the systems of racial inequity adapt to maintain White supremacy. A clear and well documented example of this is segregation. Legal and de facto segregation policy has adapted over time to maintain the racial heirarchy through oppression. This has had significant and broad impact on Black and IPOC families and educational equity across generations (Allen et al., 1968; Bailey, 1968; Garcia, 2018; Rothstein, 2017). Segregation has directly impacted many variables researchers may measure in ways that are not clearly measurable—like the zip code and family income example previously discussed. The REASN framework is intended to provide an interpretive qualitative approach to quantitative work for the consideration of findings within the social contexts they are measured, but does not provide the ability to make associative or causal claims. I anticipate that a critique to this work will focus on the application of a posteriori perspectives to findings resulting from a priori methodological approaches. In consideration of this, I would note that while the REASN framework brings an interpretivist frame informed by Critical Race Theory and QuantCrit research that traditional emprical approaches also bring a framework of thought informed by positivist and post-positivist

perspectives—a framework that (a) attends to abstract constructs and separate them from relevant knowledges that are not easily quantifiable, and (b) has and continues to reify deficit orientations in support of racial oppression (Strunk & Hoover, 2019; Zuberi, 2001; Zuberi & Bonilla-Silva, 2008). Next, I discuss each action item of the REASN framework beginning with "*Reflect on the role of race."*

Reflect on the role of race. All quantitative research examining race should be centered on the knowledge that racism is a common occurrence in the present and throughout history. This requires that researchers acknowledge that some of the ways that racism manifests in social contexts is not easily quantifiable, or they may be within other measured variables studies—such as the zip code example discussed previously. Researchers need to consider the ways in which racialized identities are related to the research questions, data, and methods being used to engage the results.

Engage findings. Researchers need to follow the science and accurately document findings with objectivity, knowledge of their positionality and biases, an understanding of the research context, and consideration of potential implications of their findings. They must also recognize that race-neutral—"objective"—discussions of findings have the potential to cause harm. Drawing from the prior example, if a researcher were to present that zip codes and income are predictive of higher test scores for White students without a broader contextualization of how those variables are shaped by White Supremacy, it could be interpreted in many ways that reify racist and deficit conceptions of Black and IPOC families and students. For example, if zip code and income reiterate a myth of meritocracy, of hard work that has led to the higher test scores for White students Researchers also need to interrogate the methods, data, and processes that resulted in these findings.

Assess measures and methods. Researchers must investigate the measures and methods employed to theorize possible ways in which White supremacy may be present in the research and influencing the findings. A clear example of a concerning measure in this study is the use of the IPOC racial category to collapse several racialized identities into a single category. This will be discussed more extensively in Chapter VI.

Seek insight. During the interpretive process, researchers should seek insight by examining the findings in ways that the research questions had not intended them to. They should also be open to revisiting literature or personal experience to frame and interpret findings, deepen their understanding of the context, and theorize possible mechanisms of association or causation in how White Supremacy is operationalized. Beyond theorizing, researchers also need to identify established knowledge that is related to their findings.

Name the known. There are many racial inequities well documented in prior research literature. Researchers should discuss established research that relates to their findings. For example, if a study observed discrepancies in school discipline for Black youth, researchers should discuss their findings within the context of related research that may extend beyond school discipline to consider long-term impacts on those students. Researchers should not imply associations or causation. However, to simply address the discrepancies in discipline while not referencing known connections of school discipline to incarceration rates has the potential to cause harm. Social scientists benefit from their research on racial inequity, and have a responsibility to situate findings in the broader context to illuminate and disrupt racial inequities.

The implementation of the REASN framework is not a defined structured process. This is intentional to ensure that the framework can be responsive to the data, methods, and findings of individual quantitative studies. The five action items in the REASN framework are not ordinal in

nature. These items should be used in an iterative, reflective manner and documented after the standard results and discussion of the quantitative analysis in Chapters V and VI. Next, I will summarize this chapter and discuss the results section of this dissertation.

Table 5

Alignment of the tenets of QuantCrit to the REASN framework

Tenets of *QuantCrit* Research (Gillborn et al., 2018, p. 169)	REASN Interpretive Framework	Interpretive Action
"the centrality of racism"	**R**eflect on the role of race	Racism is a common aspect in everyday life manifested through White supremacist policies and ideologies. When research findings observe differences in outcome measures when comparing racialized identities, it is reasonable to assume that racism is associated with the measured outcomes.
"numbers are not neutral"	**E**ngage measures and methods	Researchers must interrogate the measures and methods employed in the research to theorize potential ways in which White supremacy may be present in the process and how confounding factors may relate to the findings.
"categories are neither 'natural' nor given: for 'race' read 'racism'"	**A**ssess findings	Researchers need to follow the science and findings of the methodologies used with objectivity and knowledge of their positionality and biases. They must also recognize that race-neutral "objective" discussion of findings have the potential to cause harm.
"voice and insight: data cannot 'speak for itself '"	**S**eek insight	**S**eek insight in the data, in the literature, and in yourself to better understand the context or consider possible mechanisms of association or causation.
"using numbers for social justice"	**N**ame the known	Researchers should discuss established knowledges in relation to their findings. This is not to suggest that researchers imply associations or causation where not appropriate. However, when outcome measures are indicative of social inequities, not addressing those contexts has the potential to cause harm.

Conclusion

The NTPS is an ideal data source to examine principals' perceptions of influence and teachers' perceptions of principal support and competency in relation to their racialized identities using a series of quantitative approaches. Then I describe REASN interpretive framework I created that operationalizes Gillborn et al.'s (2018) tenets of QuantCrit research. In addition to the research the REASN framework is developed from, I provide three principles that justify the valid use of this framework for the interpretation of empirical findings. Next, I will share the results in Chapter V.

CHAPTER V: RESEARCH FINDINGS

This chapter documents the findings of the research methods outlined in Chapter IV. Tables are provided for each analytic process. The tables are accompanied by descriptions of significant findings and results that are interesting in relation to the research questions. Further discussion and analysis of the results will occurs in Chapter VI. First, the descriptive findings are described and displayed in Table 6.

Descriptive Findings

Table 6 displays a series of descriptive statistics regarding the principals in this sample. These statistics are calculated means related to principals' racialized categories. Many of the statistics are highly similar for principals in all racial categories. For example, Black, IPOC, and White principals all have similar means for age (*~46.5* yrs.) and teaching experience before becoming a principal (*~10.7* yrs.). They manage teaching staffs that have a similar average number of teachers (*~44.5*) with similar average age (*~42* yrs.) and experience (*~11*yrs.). There are also several items that are not similar across principal racial categories. For example, a higher percentage of Black and IPOC principals—*19%* each—are employed in charter schools than White principals—*11%*. Similarly, a higher percentage of Black (*66%*) and IPOC (*56%)* principals identified as female compared to White principals (*47.7%*). Black and IPOC principals also have higher rate of doctorate or professional degrees—*18*% and *13%* respectively—than their White counterparts (*8.6%*). There are also observed differences in where these principals work and the students they serve.

A similar percentage of Black, IPOC, and White principals work in suburban locales, however Black and IPOC principals work in urban locales at a much higher percentage— *49%* and *36%* compared to *21%* of White principals. This is contrasted by the higher percentage of

White principals working in towns and rural settings. White principals also serve in schools with a higher percentage of White students than Black or IPOC principals. The most notable observed difference is that *58%* of Black principals *45%* of IPOC principals work in schools where *75%* or more of the student body qualifies for the National School Lunch Program compared to only *23.5%* of White principals. Next, Table 7 will provide the findings from the regression analysis.

Table 6

Principal descriptive statistics

	Black	IPOC	White
Principal age (avg. yrs.)	46.48	46.29	47.34
Charter School (%)	19	19	11
School enrollment (avg.)	650.46	724.52	662.06
1.0 FTE teachers (avg.)	44.09	43.22	43.56
Years teaching before principal (avg.)	10.38	10.48	11.33
Years principal experience (avg.)	5.8	5.72	6.78
Highest degree (%)			
Bachelor's	2	3	1.7
Master's	53	71	62.4
Education Specialist	27	13	27.3
Doctorate or professional degree	18	12	8.6
Female principals (%)	66	56	47.7
White student enrollment (%)	19	25	61.1
Regular school program type (%)	94	94	96.3
Four category school level (%)			
Primary	54	51	46.8
Middle	22	19	18.2
High	20	16	22.3
Combined	4	14	12.7
Teacher age (avg. yrs.)	42	43	42
Teachers' experience (avg. yrs.)	12	13	13.7
Urbanicity (%)			
City	49	36	21
Suburb	28	33	29.4
Town	10	12	17.7
Urbanicity (%) cont.			
Rural	13	18	31.8

Table 6 (cont'd)

	Black	IPOC	White
75% or more of students qualify for the NSLP (%)	58	45	23.5

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS), "Public School Principal Data File," 2015–16; and U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS), "Public School Teacher Data File," 2015–16.

RQ1. How do principals, racialized as Black and IPOC, perceive their influence over aspects of the school organization? How do their perceptions of influence compare to those of White-racialized principals?

Research question one examines how principals perceive their influence to determine if—and possibly to what extent—principals' racialized identities are associated with their perceptions of influence using linear regression models. As noted in Chapter IV, the variables for influence were transformed from a Likert-type scale 0 to 3 to a standardized value with a mean of *0* and an *SD* of *1*. This process aids in the ability to interpret the findings as relational—positive or negative in terms of the mean (i.e., comparing one category of principals to the average of all others). Table 7 displays the results from these analyses. Each influence item is displayed with and without the control variables. The independent variables of IPOC and Black principals are contrasted to White principals for each influence item.

Positive and statistically significant coefficients were observed for principal influence over performance standards, curriculum, and budget for IPOC principals. IPOC influence over budget (*0.1103*) was observed at a significance level of $p \leq .05$ but only without the control variables. IPOC principal influence over performance standards and the curriculum were observed as statistically significant both with and without the control variables. In fact, the coefficient and significance level for each influence item increase when the control variables are included in the model. For performance standards, IPOC principals' perception of influence

increases from *0.1217* at a significance level of $p \leq .05$ to *0.1498* at a significance level of $p \leq .01$. Similarly, IPOC principal influence over the curriculum increased from *0.0976* at a significance level of $p \leq .05$ to *0.1998* at a significance level of $p \leq .001$. Only one coefficient measuring Black principal perceptions of influence was significant. Black principal influence over the hiring of teachers was -*0.1224* at a significance level of $p \leq .05$—slightly below the mean of *0*. Despite the minimal significant findings between principal race and influence, there were clear associations between several of the control variables and perception of influence.

The control variables used in this model demonstrated many associations with the principal influence items that were statistically significant. For many, such as the association between principal age and curriculum (-*0.0063*) and teacher development (-*0.0080*), the coefficients were effectively zero. Whereas, other control variables like charter schools' association with influence items such as performance standards (*0.2538*), the curriculum (*0.53*), teacher development (*0.2634*), and teacher hiring (*0.1887*) demonstrated larger coefficients. Stronger and statistically significant findings were also observed in relation to where the principals worked. Principals working in cities observed a positive association of influence of influence over teacher development (*0.1359*) and a negative association of influence over performance standards (-*0.0936*) and teacher hiring (-*0.0832*). The association of influence over the curriculum as statistically significant for principals working in towns (*0.2326*) and rural settings (-*0.0063*). Region also demonstrated some statistically significant findings such as for curriculum (-*0.2692*), teacher development (-*0.1701*), teacher hiring (-*0.2862*), and the budget (-*0.2714*) in the Northeast and similar findings in the West and Midwest regions. Next, teachers' perceptions of principals are displayed in Table 8.

Table 7

Principal race and perceptions of influence

	Perf. Standards		Curriculum		Teacher dev.		Teacher eval.		Teacher hiring		Discipline policy		Budget	
IPOC principals	0.1217*	0.1498**	0.0976*	0.1998***	0.0497	0.0327	0.0337	0.0629	-0.0818	-0.0110	-0.0588	-0.0152	0.1103*	-0.0027
	-(0.0479)	(0.0543)	(0.0480)	(0.0520)	(0.0479)	(0.0534)	(0.0480)	(0.0546)	(0.0480)	(0.0533)	(0.0479)	(0.0531)	(0.0479)	(0.0516)
Black principals	0.03052	0.0626	-0.0294	0.0786	0.0266	0.0152	-0.0205	-0.0313	-0.1224*	-0.0633	-0.0440	0.0857	0.0359	-0.0140
	-(0.0457)	(0.0539)	(0.0459)	(0.0516)	(0.0458)	(0.0530)	(0.0458)	(0.0541)	(0.0458)	(0.0529)	(0.0458)	(0.0527)	(0.0458)	(0.0513)
Principal experience		0.0095**		0.0110***		0.0044		0.0024		0.0053		0.0018		0.0021
		(0.0033)		(0.0031)		(0.0032)		(0.0033)		(0.0032)		(0.0032)		(0.0031)
Female principals		-0.0490		0.0333		0.1960***		0.0657*		0.1024**		0.0332		0.0732*
		(0.0328)		(0.0314)		(0.0322)		(0.0329)		(0.0322)		(0.0321)		(0.0312)
Years teaching		0.0040		0.0073*		0.0041		0.0022		-0.0004		0.0045		-0.0005
		(0.0031)		(0.0030)		(0.0031)		(0.0031)		(0.0031)		(0.0031)		(0.0030)
Principal age		-0.0069**		-0.0063*		-0.0080**		-0.0033		-0.0031		0.0045		0.0011
		(0.0026)		(0.0025)		(0.0025)		(0.0026)		(0.0025)		(0.0025)		(0.0024)
Percent NSLP stud.		0.0004		0.0014**		-0.0005		-0.0006		-0.0027***		0.0000		-0.0006
		(0.0006)		(0.0005)		(0.0006)		(0.0006)		(0.0006)		(0.0006)		(0.0005)
Enrollment		0.0000		-0.0001		0.0000		-0.0001**		0.0000		-0.0002***		0.0002***
		(0.0000)		(0.0000)		(0.0000)		(0.0000)		(0.0000)		(0.0000)		(0.0000)
Charter		0.2538*		0.5300***		0.2634***		-0.0830		0.1887***		0.0609		-0.1583**
		(0.0531)		(0.0507)		(0.0522)		(0.0533)		(0.0521)		(0.0520)		(0.0505)
Percent of White stud.		-0.0002		0.0014*		0.0013*		0.0000		0.0010		0.0014*		0.0014*
		(0.0006)		(0.0006)		(0.0006)		(0.0006)		(0.0006)		(0.0006)		(0.0006)

Table 7 (cont'd)

	Perf. Standards	Curriculum	Teacher dev.	Teacher eval.	Teacher hiring	Discipline policy	Budget
Teacher Gender	-0.0014	-0.0594	-0.0024	-0.0273	-0.0190	0.0045	0.0267
	(0.0389)	(0.0372)	(0.0383)	(0.0391)	(0.0382)	(0.0381)	(0.0370)
Teacher exp.	0.0002	0.0021	0.0004	0.0015	-0.0015	0.0012	-0.0004
	(0.0016)	(0.0015)	(0.0016)	(0.0016)	(0.0016)	(0.0016)	(0.0015)
Highest deg.							
Bachelor's	-0.0564	-0.0385	-0.0799	-0.2630*	-0.1665	0.0410	0.0950
	(0.1190)	(0.1137)	(0.1171)	(0.1201)	(0.1166)	(0.1164)	(0.1132)
Ed. Specialist	0.0013	0.0135	0.0394	-0.0461	0.0374	-0.0849*	0.0130
	(0.0349)	(0.0334)	(0.0343)	(0.0350)	(0.0342)	(0.0341)	(0.0332)
Doc. or Prof. deg.	-0.0040	-0.0315	0.0151	0.0004	-0.0861	-0.0904	-0.0565
	(0.0511)	(0.0490)	(0.0503)	(0.0513)	(0.0501)	(0.0500)	(0.0487)
Regular school program	-0.0284	-0.0826	-0.0424	0.1568	0.1289	-0.0795	-0.1403
	(0.0804)	(0.0768)	(0.0790)	(0.0810)	(0.0789)	(0.0786)	(0.0764)
Locale							
City	-0.0936*	-0.0319	0.1359**	-0.0351	-0.0789	-0.0832*	-0.0593
	(0.0428)	(0.0410)	(0.0421)	(0.0430)	(0.0420)	(0.0419)	(0.0407)
Town	0.0250	0.2326***	0.0830	0.0037	0.0795	0.0215	-0.1732
	(0.0483)	(0.0463)	(0.0475)	(0.0485)	(0.0474)	(0.0473)	(0.0460)
Rural	0.0456	0.2675***	0.1086*	-0.0044	0.0125	0.0751	-0.2444***
	(0.0454)	(0.0434)	(0.0446)	(0.0456)	(0.0445)	(0.0444)	(0.0432)
Region							
Northeast	0.0463	0.2692***	-0.1701***	-0.0830	-0.2862***	0.0797	-0.2714***
	(0.0464)	(0.0444)	(0.0457)	(0.0467)	(0.0456)	(0.0455)	(0.0442)

Table 7 (cont'd)

	Perf. Standards		Curriculum		Teacher dev.		Teacher eval.		Teacher hiring		Discipline policy		Budget	
Midwest		0.0484		0.1095**		-0.1000*		-0.0406		-0.1310***		0.0395		-0.3350***
		(0.0403)		(0.0385)		(0.0396)		(0.0405)		(0.0396)		(0.0394)		(0.0383)
West		-0.0152		0.0335		0.0965*		-0.1244		-0.1683***		0.1798***		0.0625
		(0.0425)		(0.0407)		(0.0418)		(0.0427)		(0.0417)		(0.0416)		(0.0405)
Level														
Primary		-0.0133		-0.2225***		-0.0658		-0.0437		-0.1679***		-0.0461		0.0897*
		(0.0478)		(0.0457)		(0.0471)		(0.0480)		(0.0469)		(0.0468)		(0.0455)
Middle		-0.0100		-0.2315***		-0.0652		-0.0269		-0.0940*		-0.0358		0.1361**
		(0.0501)		(0.0479)		(0.0493)		(0.0503)		(0.0492)		(0.0490)		(0.0477)
Combined		0.0024		0.0954		-0.0070		-0.0552		-0.1902**		-0.0103		-0.3158***
		(0.0602)		(0.0576)		(0.0592)		(0.0605)		(0.0591)		(0.0589)		(0.0573)
_cons	-0.01482	0.204807	-0.0062	-0.0280	-0.0076	0.1380	-0.0010	0.1442	0.0207	0.2924	0.0103	-0.2031	-0.0143	0.0945
	(0.0156)	(0.1523)	(0.0157)	(0.1457)	(0.0156)	(0.1498)	(0.0157)	(0.1533)	(0.0157)	(0.1497)	(0.0157)	(0.1491)	(0.0156)	(0.1450)
N	5110	4690	5100	4680	5110	4690	5100	4680	5100	4670	5110	4690	5110	4690
eta2	0.0013	0.0128	0.0010	0.0796	0.0003	0.0295	0.0002	0.0100	0.0018	0.0350	0.0004	0.0267	0.0011	0.0809

* Significant at $p \leq .05$
** Significant at $p \leq .01$
*** Significant at $p \leq .001$
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS), "Public School Principal Data File," 2015–16; and U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS), "Public School Teacher Data File," 2015–16.

RQ2. How do teachers' perceptions of school principals' competence and support vary in relation to the teacher's racial match or mismatch to the principal?

Research question three examines teachers' perspectives of principal competency and support by racialized identities. This is examined using a fixed effects model where the data is nested at the school level and conditioned on principal race. Similar to the prior regressions, coefficients for IPOC and Black teachers are contrasted to White teachers in a model without control variables and one with them. These analyses examine teachers' perspectives of principals on four items: supportiveness, enforcing the rules, communicating expectations of the type of school they want, and if the school is well run. First, I discuss perspectives of IPOC principals.

Observations of IPOC teachers with IPOC principals displayed positive coefficients that were statistically significant for three of the four perception of principals' competence outcomes. IPOC teachers had a higher perception of IPOC principals' effectiveness with and without control variables for three outcomes: supportive administration (*0.1231* and *0.1160*), enforcing the rules (*0.1170* and *0.1133*), and running the school well (*0.1646* and *0.1617*). Black teachers were associated with a more positive perspective of IPOC principals' supportiveness (*0.1961*) without controls and enforcement of the rules (*0.2295* and *0.2235*) without controls and in the final model. Teacher experience has two findings that are observed to be statistically significant, but both are close to the mean of zero. Female teachers are associated with a lower perception of administration support (*-0.1262*) and overall running of the school (*-0.1360*) for IPOC principals. Positive views were also observed for Black principals.

IPOC teachers were associated with positive perspectives of Black principals enforcing the rules (*0.2549* and *0.2586*) without controls and in the final model. Black teachers were associated with positive perspectives of Black principals' supportiveness (*0.2843* and *0.2925*),

enforcement of the rules (*0.3155* and *0.3210*), communication of expectations (*0.2317* and *0.2290*), and running of the school (*0.2729* and *0.2801*) with and without controls at a significance level of $p \leq .001$. Female teachers are associated with a lower perception of rule enforcement (*-0.1129*) and overall running of the school (*-0.1169*) for Black principals. Fewer observations for White principals were observed as statistically significant.

None of the IPOC teachers' perspectives of White principals were observed as statistically significant. However, Black teachers were associated with positive perspectives of White principals' supportiveness (*0.1038* and *0.0953*), enforcement of the rules (*0.0892* and *0.0815*), and communicating expectations (*0.0967* and *0.0942*) with and without controls at a significance level of $p \leq .05$. Female teachers were associated with a lower perceptions of White principals supportiveness (- *0.0715*), enforcement of the rules (*-0.0923*), and communicating expectations (*-0.0456*), and overall running of the school (*-0.0736*) for White principals at a significance level of $p \leq .001$. Teacher experience was associated with supportiveness (*-0.0053*), enforcing of the rules (*-0.0037*), and running the school well (*-0.0033*) for White principals. Next, I will discuss these findings and outline the remainder of this dissertation.

Table 8

Fixed effects model of teacher perspectives of principal conditioned on race

	Supportive Admin		Enforcing rules		Communicates expectations		School is well run	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
IPOC principals								
IPOC teachers	0.1231*	0.1160*	0.1170*	0.1133*	0.0549	0.0488	0.1646**	0.1617**
	(0.0577)	(0.0576)	(0.0554)	(0.0554)	(0.0547)	(0.0547)	(0.0567)	(0.0567)
Black teachers	0.1961*	0.1843	0.2295*	0.2235*	0.1073	0.0978	0.1869	0.1815
	(0.0990)	(0.0988)	(0.0950)	(0.0951)	(0.0939)	(0.0938)	(0.0973)	(0.0972)
Teacher gender		-0.1262*		-0.0579		-0.0345		-0.1360**
		(0.0520)		(0.0500)		(0.0494)		(0.0512)
Teacher exp.		-0.0076**		-0.0039		-0.0057*		-0.0040
		(0.0025)		(0.0024)		(0.0024)		(0.0024)
constant	-0.0918**	0.1051	-0.0613*	0.0336	-0.0115	0.0912	-0.1216***	0.0333
	(0.0317)	(0.0611)	(0.0304)	(0.0588)	(0.0300)	(0.0580)	(0.0311)	(0.0601)
N	2480	2480	2480	2480	2480	2480	2480	2480
Black principals								
IPOC teachers	0.1082	0.1025	0.2549**	0.2586**	0.1367	0.1384	0.0009	0.0014
	(0.0839)	(0.0840)	(0.0838)	(0.0839)	(0.0805)	(0.0807)	(0.0849)	(0.0850)
Black teachers	0.2843***	0.2925***	0.3155***	0.3210***	0.2317***	0.2290***	0.2729***	0.2801***
	(0.0582)	(0.0582)	(0.0581)	(0.0582)	(0.0558)	(0.0559)	(0.0589)	(0.0589)
Teacher gender		-0.0906		-0.1129*		0.0322		-0.1169*
		(0.0541)		(0.0540)		(0.0519)		(0.0547)
Teacher exp.		-0.0040		0.0000		0.0012		-0.0015
		(0.0024)		(0.0024)		(0.0023)		(0.0024)
constant	-0.2457***	-0.1288*	-0.2332***	-0.1489**	-0.0880**	-0.1274*	-0.3287***	-0.2222***
	(0.0289)	(0.0571)	(0.0289)	(0.0570)	(0.0278)	(0.0549)	(0.0293)	(0.0578)
N	2320	2320	2320	2320	2320	2320	2320	2320

Table 8 (cont'd)

	Supportive Admin		Enforcing rules		Communicates expectations		School is well run	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
White principals								
IPOC teachers	0.0259	0.0123	0.0233	0.0142	0.0443	0.0431	0.0243	0.0162
	(0.0289)	(0.0289)	(0.0285)	(0.0285)	(0.0283)	(0.0284)	(0.0285)	(0.0286)
Black teachers	0.1038*	0.0953*	0.0892*	0.0815*	0.0967*	0.0942*	0.0059	-0.0006
	(0.0407)	(0.0407)	(0.0402)	(0.0402)	(0.0400)	(0.0400)	(0.0402)	(0.0402)
Teacher gender		-0.0715***		-0.0923***		-0.0456**		-0.0736***
		(0.0168)		(0.0166)		(0.0166)		(0.0166)
Teacher exp.		-0.0053***		-0.0037***		-0.0006		-0.0033**
		(0.0008)		(0.0008)		(0.0007)		(0.0008)
constant	0.0387***	0.1675***	0.0378***	0.1599***	0.0091	0.0522**	0.0557***	0.1579***
	(0.0067)	(0.0180)	(0.0067)	(0.0177)	(0.0066)	(0.0177)	(0.0067)	(0.0177)
N	20880	20880	20880	20880	20880	20880	20880	20880

* Significant at $p \leq .05$
** Significant at $p \leq .01$
*** Significant at $p \leq .001$
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS), "Public School Principal Data File," 2015–16; and U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS), "Public School Teacher Data File," 2015–16.

Conclusion

Chapter V shares the findings from the analyses used to answer the research questions. In addition, it provides additional descriptive data to understand the sample and context of this work. The findings shared in this chapter begin to surface some important relationships in this data. One interesting takeaway is that many of the findings in this research demonstrate limited statistical significance regarding principal influence and that IPOC principals are associated with a higher perspective of influence than White principals. The most important findings are related to teachers' perspectives of principals, which demonstrates clear evidence that IPOC and Black teachers have more positive perceptions of Black, IPOC, and White principals. Chapter VI will discuss these findings in more depth. First, the findings will be discussed in relation to the original hypotheses. Then, the REASN framework will be used to interpret the findings and posit ways in which White supremacy is explicitly present or may be embedded in the observed results. Last, key understandings to be drawn from this research are shared. Chapter VII will summarize the work of this dissertation and consider future research opportunities.

CHAPTER VI: DISCUSSION

This chapter discusses the findings of the study. First, I will reflect on the findings in relation to each hypothesis provided in Chapter II. Then, the REASN framework will be used to interpret the findings and posit ways in which White supremacy may be present in the observed results. Last, key understandings that can be drawn from this research will be identified and discussed.

Review of Hypotheses

This dissertation examines specific outcomes of how racialization is operationalized through the perceptions of principals and teachers. It examines principals' perceptions of their own influence and teachers' perceptions of principal competency and support. These analyses are conducted within the racialized context of schools—where White supremacy is institutionalized. In what follows, I discuss the results in terms of each hypothesized outcome.

H1. BIPOC-racialized principals will perceive lower levels of influence than their White counterparts. & H1A. The principals racialized as Black will perceive lower levels of influence than IPOC-racialized principals.

The null hypotheses for H1 and H1A cannot be rejected. Only one finding for Black principals was lower than the perceptions of White principals. The remaining statistically significant coefficients were higher for IPOC principals than they were for White principals. Positive and statistically significant coefficients were observed for principal influence over performance standards, curriculum, and budget for IPOC principals. IPOC principals' perceptions of influence over budget (*0.1103*) was observed at a significance level of $p \leq .05$ without control variables but not in the final model. IPOC principals' perception of influence over performance standards increased from *0.1217* at a significance level of $p \leq .05$ to *0.1498* at

a significance level of $p \leq .01$, and influence over the curriculum increased from *0.0976* at a significance level of $p \leq .05$ to *0.1998* at a significance level of $p \leq .001$ in the final model. Only one coefficient measuring Black principal perceptions of influence was observed as significant. Black principal influence over the hiring of teachers was *-0.1224* at a significance level of $p \leq .05$—slightly below the mean of *0.* However, teacher hiring is no longer statistically significant for Black principals in the final model, but—interestingly—the control variable of city is associated with a coefficient of *-0.0832.* Several of the other control variables were associated with principal influence at a statistically significant level.

Several control variables were statistically significant. For many, the coefficients were effectively zero, while other control variables like charter schools' association with influence items such as performance standards (*0.2538*), the curriculum (*0.53*), teacher development (*0.2634*), and teacher hiring (*0.1887*) demonstrated larger coefficients. Where principals work also demonstrates a strong and statistically significant association to principal influence. Principals working in cities perceived themselves as having more of influence of influence over teacher development (*0.1359*) and less influence over performance standards (*-0.0936*) and teacher hiring (*-0.0832*)—as noted above. Similarly, principals working in towns (*0.2326*) and rural settings (*-0.0063*) demonstrated a positive association of influence over the curriculum. Region also played a role as statistically significant findings such as for curriculum (*-0.2692*), teacher development (*-0.1701*), teacher hiring (*-0.2862*), and the budget (*-0.2714*) in the Northeast—with similar findings in the West and Midwest.

The findings from these analyses are not sufficient to reject the null hypothesis, but they do provide many insights. The first is that White principals' perceptions of influence as measured in this sample are, largely, not higher than Black and IPOC principals' perceptions of

influence. The second is that these findings demonstrate that the context of the school (i.e., locale) or its status as a charter school are strongly associated with aspects of principal influence. Last, the findings as measured in this sample is not strongly associated with racialized identities—and when they are, the control variables are strongly connected to the relationship. For example, Black principals were associated with lower perceptions of influence over teacher hiring, but this finding was no longer statistically significant in the final model. Conversely, IPOC principals' perceptions of influence over the curriculum doubles when the control variables are added. This finding leads me to suspect that there may be other ways that variables on school context may be related to racialized identities—providing many possibilities for future research.

H2. White teachers will perceive Black and IPOC principals as being less competent and supportive than White principals.

H2 was confirmed with statistical significance across many of the models employed by contrasting IPOC and Black teacher perspectives with those of White teachers. Displayed in Table 8, IPOC teachers were associated with higher perceptions of IPOC principals' competency as evidenced by their perspectives on enforcing the rules (*0.1170* and *0.1133*), running the school well (*0.1646* and *0.1617*) and support as demonstrated by the coefficients observed for supportive administration (*0.1231* and *0.1160*) without controls and in the final model. Black teachers perceived IPOC principals' supportiveness as positive (*0.1961*) without controls and enforcement of the rules (*0.2295* and *0.2235*)—without control variables and in the final model. IPOC teachers were also associated with positive perspectives of Black principals.

The coefficients for IPOC teacher perspectives of Black principals enforcing the rules *0.2549* without and *0.2586* with controls. Black teachers' associations of positive perspectives of

Black principals were significant for all items and the largest magnitude of all coefficients. This included: administrative supportiveness (*0.2843* and *0.2925*), enforcement of the rules (*0.3155* and *0.3210*), communication of expectations (*0.2317* and *0.2290*), and running of the school (*0.2729* and *0.2801*) at a significance level of $p \leq .001$. Similarly, Black teachers were also associated with more positive perspectives than White teachers for White principals' supportiveness (*0.1038* and *0.0953*), enforcement of the rules (*0.0892* and *0.0815*), and communicating expectations (*0.0967* and *0.0942*) at a significance level of $p \leq .05$. The control variables also provided some insight.

Teacher experience was associated with statistically significant negative perspectives for IPOC and White principals, but the magnitude of the coefficients were effectively zero. Female teachers were associated with negative statistically significant perspectives for IPOC, Black, and White principals. They were associated with a lower perception of IPOC principals for administrative support (*-0.1262*) and overall running of the school (*-0.1360*), Black principals for rule enforcement (*-0.1129*) and overall running of the school (*-0.1169*), White principals for supportiveness (- *0.0715*), enforcement of the rules (*-0.0923*), and communicating expectations (*-0.0456*), and overall running of the school (*-0.0736*).

These findings demonstrate that there is clear evidence to support that IPOC and Black teachers have higher perceptions of IPOC and Black principals' competence and support than White teachers. Surprisingly, these findings also demonstrate that Black teachers are also associated with a higher perception of White principals' competence and support than White teachers. The negative associations of female teachers and lower perceptions of principal competence and support was interesting and will be important to explore further in future research. Next, I will discuss the findings in relation to the REASN framework.

The REASN Framework

The REASN framework is adapted from Gillborn et al.'s (2018) five QuantCrit tenets to create an actionable interpretivist lens that can serve as a complementary method for quantitative work that engages measures associated with racialized identities. In Chapter IV, I offered three principles to justify the use of this approach to interpret quantitative findings: (1) research is a process of learning where meaning is constructed based on evidence (Zuberi, 2001; Zuberi & Bonilla-Silva, 2008; Garcia & Mayorga, 2018; Strunk & Hoover, 2019); (2) race is a social construct as demonstrated by social theory and genetic evidence (Duello et al., 2021); and (3) that White supremacy is a complex adaptive system (CAS) that adapts to maintain racial inequity without a centralized control (Eidelson, 1997; Holland, 2006). Next, I engage each action item of the REASN framework in relation to this quantitative research beginning by reflecting on the role of race.

Reflecting on the role of race

The social construct of race is central to all aspects of this research. This research was developed with the conceptual frame that schools are racialized organizations where White supremacist ideologies consider Black- and IPOC-racialized principals to have lower social capital. This research theorizes that the decrease in social capital associated with racialized identities under White supremacy will (a) result lowered perceptions of influence by Black and IPOC principals, and (b) that White teachers will see Black and IPOC principals as being less effective than White principals. These hypotheses were not confirmed and have pushed me to question what other contextual factors may be present in these analyses. As discussed more in the paragraphs that follow, the social construct of race and the contexts in which schools exist are complex—some structural factors relevant to racial inequities may hold influence over the

findings separate from the principals' racialized identities.

Engaging the measures and methods

The methods employed in the research are appropriate to the research questions asked, but do raise concerns in two key areas. First, the creation and use of the IPOC racial category is problematic. The process of consolidating several racialized identities into a single category is an essentializing process—a tactic of White supremacy. As noted in Chapter I, this decision was made to retain the voices of IPOC principals and represent them in this research. However, I should have pursued alternative methods by which to retain the voices of these individuals in a manner that was more accurate. An alternative process may not have aligned to the quantitative methods used for Black- and White-racialized identities in the sample, but it would have been equitable and representative to individuals categorized as IPOC. This became clear in analyzing the results and reflecting on my process as a researcher. I retained these processes and findings in the final publication to illuminate this concern explicitly, and to acknowledge my own participation—as a White scholar using quantitative methods—in White supremacy.

The other measurement concern in this research is the confounding nature of racialized contexts and variables commonly used as controls in regression models. There are many factors—such as locale or student participation in the national school lunch program (NSLP)—that are used as control variables when studying school contexts. However, these factors are often highly associated with the ways in which White supremacy has harmed urban contexts and caused disproportionate levels of poverty in Black and Brown communities. In many instances, research using these controls may disguise the ways in which racialized identities are truly associated with the outcome variables of interest. There are several ways these control variables may be shaping the results.

Assessing the results

The findings focused on principal influence in research question one demonstrate significance on only a few items. The findings largely contrasted with my original hypotheses that White principals report experiencing a higher level of influence. The only item that was confirmed was Black principal influence over the hiring of teachers (*-0.1224*) but this was no longer significant in the final model. The remaining findings that were observed at a statistically significant level demonstrated that IPOC principals perceived a higher level of influence than White teachers over the performance standards, the curriculum, and the budget (without control variables). There were no other significant findings.

I have struggled to interpret these findings. A simple explanation may be that Black and IPOC principals perceive more influence than White principals. Another idea I have considered is that the higher perceptions of influence may relate to the larger number of Black and IPOC principals in urban schools—which may be more loosely coupled to central oversight than other school locales—and charter schools—where principals are closer to the organizational apex. Measuring a construct like influence is challenging given the complexity of school contexts. This measurement is made more complex by attempting to measure influence in relation to the context of race. I suspect that these complexities contribute to many of the null and unanticipated findings observed here. Teachers' perspectives of principals' competency and support were less nuanced. Black and IPOC teachers have higher perceptions of Black and IPOC principals than White teachers do. This relationship is best exemplified by the large coefficients of perceptions of Black teachers towards Black principals. Prior research on "racial match/mismatch" and a more exploratory examination of the variables may provide deeper insight into results.

Seeking insight

The lack of prior research on how principals' racialized identities that are associated to the racialized identities of the majority of their teaching staffs requires that I draw from other areas of research that conceptualize "racial match/mismatch", and reflect on my own experience as a practitioner in K12 contexts. As discussed in Chapter I, there is clear evidence that research on "racial mismatch" most commonly identifies results that observe harm to Black and IPOC individuals and communities through the operationalization of White supremacy—even if those studies do not define the process as "White supremacy" (Bartanen & Grissom, 2021; Dee, 2005; Gershenson et al., 2018). The prominence of null findings on principal influence contrast with my personal observations from practitioner experience and prior research on "racial mismatch".

The construct of influence is challenging to measure because it shaped both by structure and interpersonal relations**.** The teachers' perceptions of principal effectiveness provide some insight in considering how racialized identities may be related to influence in the school context. While the evidence on principals' perceptions of influence in relation to racialized identities is more limited, the measures of teachers' perspectives of principal effectiveness demonstrate a clear association of White teachers not having positive perceptions Black and IPOC principals' competence and support as evidenced by the contrast to Black and IPOC teachers' views. Triangulating from these two points of evidence, it is reasonable to associate that White supremacy is present in these school contexts and is associated with principals' perceptions of influence over some areas of their work and is also associated with negative perceptions of principals' held by White teachers—but not only through interpersonal interactions.

The significant relationships of control variables such as locale, charter identifier, and region to the principal influence items suggests structural ways in which White supremacy is

present in these findings. Black and IPOC principals in this sample work at charter schools at a higher frequency. Charter schools may offer more affordances for principals to have influence over their work. While charter schools may be associated with more influence, Black and IPOC principals in this sample are also more frequently working in schools with students experiencing higher levels of poverty in urban districts that are tied to complex histories of racial inequity. Structural aspects of schools with Black and IPOC principals suggest that their work may be harder because it is connected to broader social challenges—where they are more likely to be viewed as ineffective. Next, these concepts are described in more detail.

Name the known

Black and IPOC principals are more likely to work in urban settings with children experiencing poverty. They are also likely to be employed in a school where less than 1 in 4 students are White. There are many who might attribute these observed differences to selection bias or "preference", but these notions are an exemplar of how quantitative researchers' perceptions of objectivity can be problematic. The structural complexities of observational studies such as this are not objective, they are the result of how White Supremacy—explicitly and implicitly—shapes the contexts of the schools where Black and IPOC principals are seen as valid leaders. Even if their principalship was truly a self-selection process, a Black or IPOC principals' choice to take a position in a school where the majority of students are marginalized racial identity is still—to some degree—compelled by the broader context of White supremacy and the desire to provide learning opportunities that do not perpetuate racial inequities. To dismiss the differences in the contexts of where Black and IPOC principals work as self-selection bias under the guise of objectivity obfuscates the real ways in which White supremacy harms those spaces and reifies narratives of racial inferiority as evidenced in the White teachers'

perceptions of Black and IPOC principals' effectiveness.

Figure 4 outlines several findings within Ray's layers of racialized structure. In the *racial superstructure*, I note the broad contextual nature of White supremacy that has valued Whiteness to the detriment and harm of other racialized identities. At the *racial structure* level, I identify that Black and IPOC principals are less likely to be employed in communities with White children and more frequently working in schools with students experiencing high levels of poverty in urban settings. The *racial substructure* notes that being a Black or IPOC teacher is significantly significant and associated with having higher perceptions of Black and IPOC principals' effectiveness and competency than White teachers.

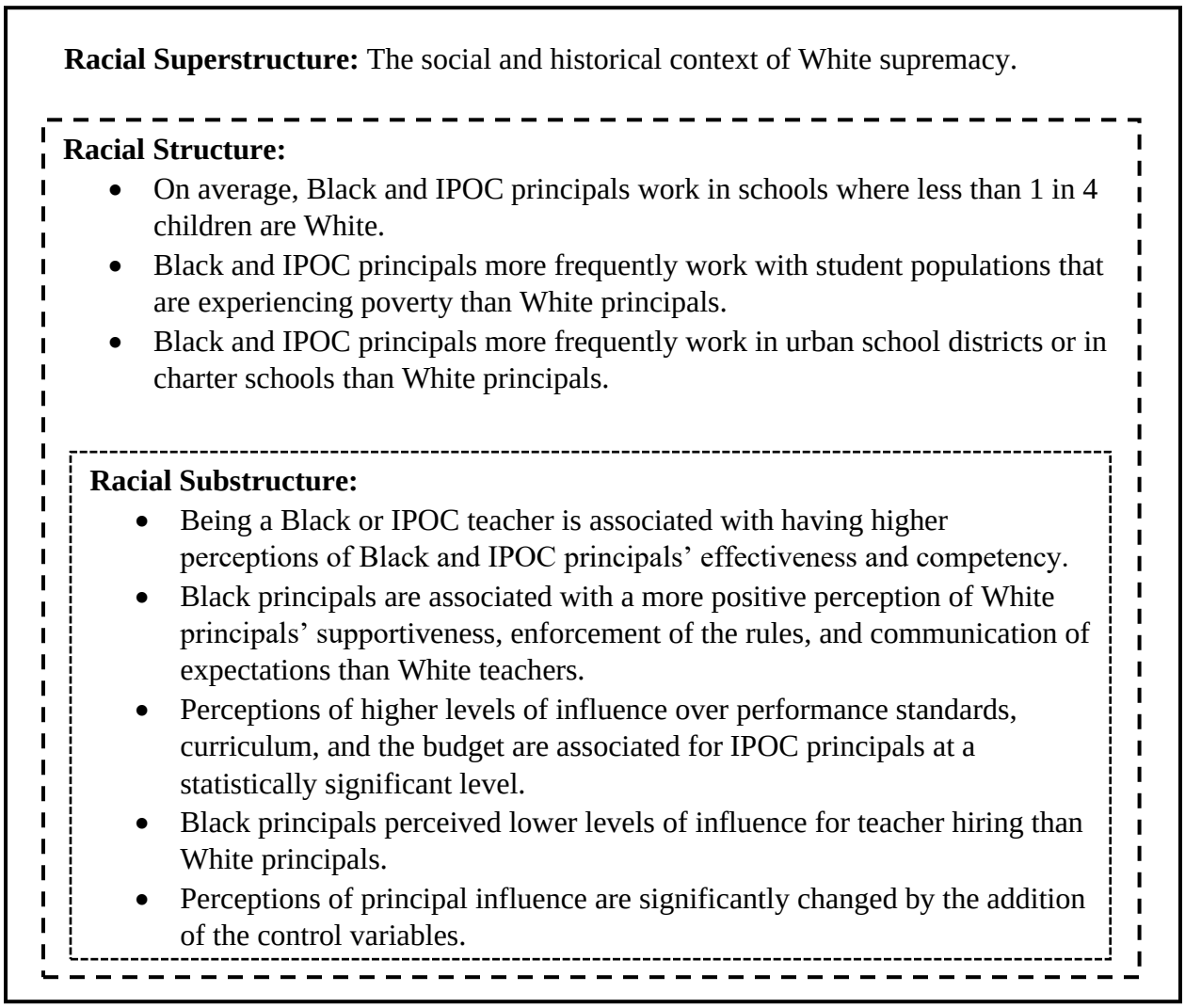
Considering the findings of this research within the structure of Ray's (2019) *Theory of Racialized Organizations*, provides a framework to understand that the findings from this research demonstrate that schools are racialized organization. These findings also demonstrate that principals' perceptions of influence on may not be represented as anticipated in a context of White supremacy. Teachers' perceptions of principal competence and effectiveness more strongly align to hierarchical trends of White supremacy with strong levels of significance. Next, I will summarize the quantitative results and discussion from the REASN framework to identify three key understandings that can be taken forward from this research.

Key Understandings

The methods—quantitative and interpretive—have led to three key understandings that may inform other research that examines of schools, race, and White supremacy. These are: (1) Black and IPOC teachers are associated with having higher perceptions principals' effectiveness

Figure 4

Diagram of findings in racialized context



and competency and Black principals are associated with a more positive perception of White principals' supportiveness, enforcement of the rules, and communication of expectations than White teachers; (2) that racial matching does not demonstrate higher perceptions of White principals' competence; and (3) the contextual variables used as controls are associated principal perceptions of influence in meaningful ways.

Clear evidence Black and IPOC teachers have higher perceptions of principal competence

The findings from this sample demonstrate that there is clear and significant evidence

that Black and IPOC teachers have higher perceptions of Black and IPOC principals than White teachers do. This relationship is best exemplified by the perceptions of Black teachers towards Black principals. Black teachers' associations of positive perspectives of Black principals were statistically significant at a level of $p \leq .001$ with and without controls for all four items: administrative supportiveness (*0.2843* and *0.2925*), enforcement of the rules (*0.3155* and *0.3210*), communication of expectations (*0.2317* and *0.2290*), and running of the school (*0.2729* and *0.2801*). Interestingly, Black teachers are associated with a more positive perception of White principals' supportiveness, enforcement of the rules, and communication of expectations than White teachers. These findings support the argument made in Chapter I of this dissertation. Racial mismatch conceptualizes 'race" as an equal treatment. If that were the case, I would have expected Black teachers to have lower perceptions of White principals than White teachers. These analyses do not support that idea, and there is not clear evidence as to why.

Racial matching does not demonstrate higher perceptions of White principals' competence and support

IPOC and Black teachers' higher perceptions of IPOC and Black principal competency may demonstrate some preference for IPOC and Black principals, but they do not represent a deficit orientation bias against White principals. It is possible that this finding is an artifact of White supremacy, in that Black and IPOC teachers are accustomed to the expectation of Whiteness in leadership positions as the status quo. I am reminded of a quote from Strmic-Pawl (2015, p. 195), "Supporting the structure of White supremacy does not require one to be White." It is also possible that White supremacy fosters a sense of entitlement and resistance in White teachers making them less likely to have positive perceptions of their principals. Even if neither are true, there is evidence to support that we should rethink what is meant by racial mismatch.

As such, I propose to that the field reconsider the concept of racial match/mismatch in education research. As discussed in Chapter 1, there is no systemic evidence of harm to White-racialized people resulting from being mismatched to another group. I propose that studies of this type consider being framed as research within a *racialized context* that places a higher value on White-racialized identities over others. This change in conceptual framing would provide researchers with a more accurate and equitable way of considering research findings that study racialized identities within context.

The contexts of race and schools

Quantifying and measuring the contexts of race and racialized identities in relation to schools is a complex process. These complexities (e.g., locale, NSLP enrollment, etc.) play a significant role in the structure and oversight policy in which principals work. These factors used as control variables may obscure how White supremacy is embedded into structures and oversight policies, and affects the influence of Black- and IPOC-racialized principals and teachers perceptions of their effectiveness. For example, working in cities had a negative and significant relationship with principal influence over discipline policy. Yet, the coefficients for Black and IPOC principal identities do not represent any relationship. How might the long history of legal and de facto segregation—alongside other policies of White supremacy—have shaped the contexts in which discipline policies exist in city schools—where Black- and IPOC-racialized principals more frequently work—that are not present in the IPOC and Black identity indicators? My future research on principals will seek to explore and disentangle the relationships of racialized identities and the contextual factors commonly used as control variables in education research. This type of effort may help to determine potential approaches to disrupt they ways in which education research reinforces White supremacy narratives.

Conclusion

Chapter VI discuss the findings presented in Chapter V. First, the findings are discussed in relation to the specific hypotheses presented in Chapter II. Then, the REASN framework is used to interpret the findings and posit ways in which White supremacy is explicitly or implicitly present in the observed results. Last, three key understandings that can be drawn from this research are identified. Next, Chapter VII will summarize the work of this dissertation and consider future research opportunities.

CHAPTER VII: CONCLUSION

This dissertation studies if K12 principals' racialized identities are associated with their perceptions of influence over aspects of their work, and examines teachers' perceptions of principal support and competence in relation to racialized identities. This dissertation used linear and fixed effects regression models and descriptive statistics. There were many valuable findings from this research, but some of the most import contributions of this research result from the conceptual framing and the REASN framework used to arrive at those findings. Next, I will summarize the contributions and limitations of this dissertation. Then I will discuss my intentions to expand this program of research.

Contributions of this Research

This research is novel in many ways. This dissertation is the first known to study the racialized identities in relation to principals' perceptions of influence and teachers' perceptions of principal competency and support. The study of perceptions of influence and competency are important because of the how essential they are to principals' work in schools and student learning. This study also makes a contribution because it is the first to use a racial mismatch type of approach to examine how White supremacy may be associated with decreased perceptions where the subject has a higher position on the organizational chart (Bartanen & Grissom, 2021; Grissom et al., 2021; Hallinger & Heck, 1996; Hallinger & Heck, 2011a, 2011b; Leithwood et al., 2004). Previous studies have documented racial harm from teachers to students or principals to teachers, but none have examined if the "hierarchical" model of the school organization may be undermined by White supremacy with Black and IPOC principals (Dee, 2005; Gershenson et al., 2018; Redding, 2019). This research is also unique in that it creates a conceptual model that incorporates Critical Race Theory, Social and Cultural capital Theory, and a Theory of

Racialized Organizations to understand schools as racialized organizations where the cultural norms of White supremacy promoting the idea that Black- and IPOC-racialized identities are less valuable.

This research is also unique in its humility. This dissertation is inspired by a longer line of quantitative research conceptualized as "racial match/mismatch", yet I am intentional in identifying the many ways this framing is problematic and the limitations of the quantitative processes it uses. I was able to do this through the development of an interpretive tool adapted from Gillborn et al.'s (2018) five QuantCrit tenets called the REASN framework. The REASN Framework provides quantitative researchers an interpretive lens through which to analyze question and synthesize the results of their quantitative analysis in relation to their own positionality, the design of the study, and broader knowledges of the contexts they study. The REASN framework enabled me to acknowledge how my creation of the IPOC category was a problematic essentializing process and embodied White supremacist thinking. It would have been easier to eliminate the IPOC category and rerun these analyses. I have retained these data and findings for two reasons. First, the creation and use of the IPOC category was well-intentioned to ensure that respondents were represented and the conclusion that it was problematic was an authentic result drawn from the REASN process. Second, I am a White scholar studying racial inequalities, and believe that I have a responsibility to model for other White scholars the ways that White supremacist thinking may be present in my own processes as a researcher and how to be transparent in acknowledging that. Next, I will summarize the findings and key understandings that can be drawn from this dissertation.

Summary of Findings

The examination of principal race and perceptions of influence produced largely null findings. Black principals perceived less influence over teacher hiring (*-0.1224*) than White principals, but this finding was no longer statistically significant in the final model. Similarly, IPOC principals had a positive association of perceived influence over the budget (*0.1103*) that was no longer statistically significant with the addition of the control variables. IPOC principals' perception of influence over performance standards and curriculum also changed with the addition of the control variables, with influence over performance standards increasing from *0.1217* to *0.1498,* and influence over the curriculum increasing from *0.0976* to *0.1998*. These findings demonstrate some evidence that the control variables selected are associated with both principal influence and principals' racialized identities.

Many control variables observed as statistically significant had coefficients that were effectively zero. However, there were other control variables like charter schools' association with influence items such as performance standards (*0.2538*), the curriculum (*0.53*), teacher development (*0.2634*), and teacher hiring (*0.1887*) demonstrated larger coefficients. Locale and region also demonstrated associations with principal influence. Principals working in cities perceived themselves as having more of influence of influence over teacher development (*0.1359*) and a less influence over performance standards (*-0.0936*) and teacher hiring (*-0.0832*)—as noted above, while principals working in towns (*0.2326*) and rural settings (*-0.0063*) demonstrated a positive association of influence over the curriculum. Region also played a role as statistically significant findings such as for curriculum (*-0.2692*), teacher development (*-0.1701*), teacher hiring (*-0.2862*), and the budget (*-0.2714*) in the Northeast. The Western and Midwest regions demonstrated similar findings. These findings will guide future

research questions that examine the role that context and structure play in association with principal influence. The examination of teacher perspectives provided a clearer information on how racialized contexts of schools are associated with teachers' perspectives of principal competence and support.

IPOC and Black teachers had more positive perceptions of IPOC principals than White teachers. IPOC teachers were associated with higher perceptions of IPOC principals' competency and support in their perspectives on enforcing the rules (*0.1170* and *0.1133*), running the school well (*0.1646* and *0.1617*), and being supportive (*0.1231* and *0.1160*) without controls and in the final model. Black teachers perceived IPOC principals' supportiveness as positive (*0.1961*) without controls and enforcement of the rules (*0.2295* and *0.2235*)—with and without. IPOC teachers were also associated with positive perspectives of Black principals' competence and support.

IPOC teachers' perspectives of Black principals enforcing the rules (*0.2549*) without controls and (*0.2586*) with controls were higher than White teachers. Black teachers associations of positive perspectives of Black principals larger than the other coefficients measured when compared to White teachers. Perceptions of administrative supportiveness (*0.2843* and *0.2925*), enforcement of the rules (*0.3155* and *0.3210*), communication of expectations (*0.2317* and *0.2290*), and running of the school (*0.2729* and *0.2801*) were statistically significant at a level of $p \leq .001$ in both models. Black teachers were also associated with more positive perspectives than White teachers for White principals' supportiveness (*0.1038* and *0.0953*), enforcement of the rules (*0.0892* and *0.0815*), and communicating expectations (*0.0967* and *0.0942*) with and without controls. The control variables did not impact the significance or magnitude of the teacher race coefficients, but they do demonstrate the need to pursue future research questions

regarding the role of teacher gender and intersectionality in the work and perceptions of principals. Next, I describe three key takeaways that can be drawn from this work.

Key Understandings. I posit that three key understandings can be taken forward from this dissertation to support future research by myself and other scholars. First, Black and IPOC teachers are associated with having higher perceptions principals' effectiveness and competency. Black principals are also associated with a more positive perception of White principals' supportiveness, enforcement of the rules, and communication of expectations than White teachers. This research takes an asset-based approach that focuses on the positive perceptions of Black and IPOC teachers, but the inverse is also true: White teachers' perspectives of Black and IPOC principals are lower than those of their Black and IPOC teacher colleagues. Second, these findings demonstrate that racial matching does not demonstrate higher perceptions of White principal competence and support. Last, the contextual variables used as controls in measuring principal perceptions of influence allude to a more complex process, where the relationship of racialized identities are not observed as statistically significant but are connected to other contextual variables (i.e. locale and region) that are observed as significant.

IPOC and Black teachers' higher perceptions of IPOC and Black principal competency may be interpreted as demonstrating some preference for IPOC and Black principals, but there is no evidence to support negative perceptions towards White principals. I suspect that tis finding is connected to White supremacy—possibly through the maintenance of White leadership as the status quo or as the entitlement and resistance White teachers might demonstrate towards authority. Next, I will discuss limitations of this research.

Limitations of this Research

There are several limitations of this dissertation that will guide my future research

agenda. First, the creation and use of IPOC category is problematic and needs to be reconceived in future studies—even if that means that simpler, descriptive analysis need to be used to share data from smaller racialized groups present in the sample. There may also be opportunities for NCES to pursue sampling methods that collect sufficient data from underrepresented groups for quantitative analysis. Second, the use of secondary data limits the conceptions of influence and competency that are examined in this study. The array of work areas principals are asked to identify influence over are broad and impacted by contextual variables. Designing primary research questions would support the development of a more nuanced understanding of how racialized identities are associated with both the structural and operational elements of influence.

A third limitation of this dissertation is that there is no linkage to student data. Opportunities to examine any associations between principal influence and student performance and other outcomes are not available in this data set. In addition, having data on perspectives across teachers, principals, and students may offer new insights into other ways that White supremacy manifests and is harmful in schools.

Expanding this Research Agenda

This dissertation is the first known to examine racialized identities as associated with the principalship and teacher perceptions of principals. I will be expanding this program of research to examine additional principal outcome variables (e.g., job satisfaction, persistence, etc.) using similar quantitative methods and additional data sources as well as teacher and student outcomes. I am also considering possibilities for expanding this research using qualitative methods. This work will provide new—and possibly better—opportunities understand how racialized identities shape the experience of the principal and the work of the principalship. Primary data collection may also support the refinement of concepts like influence, so it may be measured with greater

precision. In addition, I plan to explore opportunities to reconsider the role that control variables play in disguising White supremacy. I hope to engage with other scholars in learning how the relationships between racialized identities and common control factors are shaped by marginalizing forces with the aim of (a) improving measurement and (b) disrupting the harm cause caused by White supremacy.

Final Notes

School principals are incredibly important to student achievement and success (Grissom et al., 2021; Leithwood et al., 2004). Principals' impact is mediated by the school's instructional core (Grissom et al., 2021; Hallinger & Heck, 1996; Hallinger & Heck, 2011a, 2011b; Leithwood et al., 2004). This dissertation examines the roles that racialized identities are associated with this relationship between principals and teachers when considering the principals' perceptions of influence and the teachers' perceptions of principal competency in racialized contexts. I find evidence to support that Black and IPOC teachers associate Black and IPOC principals with having more competency than White teachers do. I also observe that the contexts of race and schools are complex to measure and interpret. A potential critique that other scholars may identify as a limitation of this work is the integration of interpretive analysis to quantitative methods.

It is not hard to anticipate, that another scholar reading the REASN Framework may assume that this process and my interpretations are tautological in nature—that I anticipate racism and therefore identify racism in my analysis—leading to the possibility of a Type I-like error. I understand this argument, and through my development as a scholar, I have even taken similar perspectives. In considering this, I refer back to the principles guiding the REASN framework. In understanding researchers as active learners, I acknowledge that statistical

concepts of objectivity are unattainable. Instead, I pursue transparency in my process, positionality, and perspectives on White supremacy. In understanding race as a social construct without genetic basis, I acknowledge that measurement by race should be equally and evenly distributed. In contexts of White supremacy, differences observed by race that demonstrate a deficit orientation are driven by White supremacy. In understanding, White supremacy as a complex and adaptive system, I acknowledge that the harmed cause by White supremacy will never be a simple and straight-forward measure. The harm may be disguised in other measures—like zip code or income or mothers' education. The types of variables that scholars have been taught to use to isolate *race-effects*—may often reify narratives of meritocracy that promote the supremacy of whiteness. Ignoring the presence of White supremacy because it cannot be effectively measured is like studying the effect of water consumption on child development and disregarding that one set of children are drinking from a poisoned water source because you are not sure of the amount of poison in the water. As a scholar and educator, I am unwilling to disregard my knowledge of this poison.

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APPENDIX

Table 9

Research codebook

Variable Use	Item	Description	Var. Type	Values	Notes
Control	AGE_P	Principal's age	Continuous	range: 25 to 79	
Control	CHARFLAG	Is this a charter school	Dichotomous	0=no, 1=yes	recoded from 1, 2
Control	ENRK12UG	Percentage of students in national school lunch program	Continuous	range: 7 to 14749	
Control	NSLAPP_S	Percentage of students in national school lunch program	Continuous	range: 0 to 100	
Control	nerg	Region: Northeast	Dichotomous	0=no, 1=yes	created from REGION code
Control	mwrg	Region: Midwest	Dichotomous	0=no, 1=yes	created from REGION code
Control	srg	Region: South	Dichotomous	0=no, 1=yes	created from REGION code
Control	wrg	Region: West	Dichotomous	0=no, 1=yes	created from REGION code
Control	NUMTCH	Number of 1.0 FTE teachers	Continuous	range: 1 to 641	
Control	P0100	Years teaching before principal	Continuous	range: 0 to 38	
Control	P0104	Years principal at any school	Continuous	range: 0 to 47	
Control	hdbach	Principal highest degree: Bachelor's	Dichotomous	0=no, 1=yes	Created from P0106
Control	hdmast	Principal highest degree: Master's	Dichotomous	0=no, 1=yes	Created from P0106
Control	hdedsp	Principal highest degree: Education Specialist	Dichotomous	0=no, 1=yes	Created from P0106

Table 9 (cont'd)

Variable Use	Item	Description	Var. Type	Values	Notes
Control	hddocp	Principal highest degree: Doctorate or Professional degree	Dichotomous	0=no, 1=yes	Created from P0106
Control	P0900	Principal gender	Dichotomous	0=male, 1=female	recoded from 1, 2
Control	PCT_WHITE	Estimated percentage of White students	Continuous	range: 0 to 100	
Control	regst	The school program type: Regular	Dichotomous	0=no, 1=yes	Created from PGMTYPE. Program types 3, 4, 5 were dropped from the analysis.
Control	magst	The school program type: Magnet/Special Emphasis	Dichotomous	0=no, 1=yes	Created from PGMTYPE. Program types 3, 4, 5 were dropped from the analysis.
Control	prmry	Four category school level: Primary	Dichotomous	0=no, 1=yes	Created from SCHLEV_4CAT.
Control	middl	Four category school level: Middle	Dichotomous	0=no, 1=yes	Created from SCHLEV_4CAT.
Control	scdry	Four category school level: High	Dichotomous	0=no, 1=yes	Created from SCHLEV_4CAT.
Control	comb	Four category school level: Combined	Dichotomous	0=no, 1=yes	Created from SCHLEV_4CAT.
Control	city	School locale code: City	Dichotomous	0=no, 1=yes	Created from URBANS12.
Control	suburb	School locale code: Suburban	Dichotomous	0=no, 1=yes	Created from URBANS12.
Control	town	School locale code: Town	Dichotomous	0=no, 1=yes	Created from URBANS12.

Table 9 (cont'd)

Variable Use	Item	Description	Var. Type	Values	Notes
Control	rural	School locale code: Rural	Dichotomous	0=no, 1=yes	Created from URBANS12.
Descriptive	NSLAPP_75	Indicates that 75% of students qualify for the NSLP	Dichotomous	0=no, 1=yes	Used as a descpritive variable to demonstrate principal/school context.
Principal dependent	Z_P0203	Principal Influence: Performance Standards	Continuous	range: -3.563 to 0.571	a standardized version of the original variable
Principal dependent	Z_P0204	Principal Influence: Curriculum	Continuous	range: -2.5337 to 0.9996	a standardized version of the original variable
Principal dependent	Z_P0205	Principal Influence: Teacher development	Continuous	range: -4.3508 to .6193	a standardized version of the original variable
Principal dependent	Z_P0206	Principal Influence: Teacher evaluation	Continuous	range: -11.2389 to .1897	a standardized version of the original variable
Principal dependent	Z_P0207	Principal Influence: Teacher hiring	Continuous	range: -6.6803 to .3181	a standardized version of the original variable
Principal dependent	Z_P0208	Principal Influence: Discipline policy	Continuous	range: -5.0557 to .5358	a standardized version of the original variable
Principal dependent	Z_P0209	Principal Influence: Budget	Continuous	range: -3.4292 to .7395	a standardized version of the original variable
Principal dependent source	P0203	Principal Influence: Performance Standards	Ordinal	0= no influence, 1=minor influence, 2=moderate influence, 3=major influence	Recoded from 1, 2, 3, 4, 5(NA) as 0, 1, 2, 3, valid skip
Principal dependent source	P0204	Principal Influence: Curriculum	Ordinal	0= no influence, 1=minor influence, 2=moderate influence, 3=major influence	Recoded from 1, 2, 3, 4, 5(NA) as 0, 1, 2, 3, valid skip

Table 9 (cont'd)

Variable Use	Item	Description	Var. Type	Values	Notes
Principal dependent source	P0205	Principal Influence: Teacher development	Ordinal	0= no influence, 1=minor influence, 2=moderate influence, 3=major influence	Recoded from 1, 2, 3, 4, 5(NA) as 0, 1, 2, 3, valid skip
Principal dependent source	P0206	Principal Influence: Teacher evaluation	Ordinal	0= no influence, 1=minor influence, 2=moderate influence, 3=major influence	Recoded from 1, 2, 3, 4, 5(NA) as 0, 1, 2, 3, valid skip
Principal dependent source	P0207	Principal Influence: Teacher hiring	Ordinal	0= no influence, 1=minor influence, 2=moderate influence, 3=major influence	Recoded from 1, 2, 3, 4, 5(NA) as 0, 1, 2, 3, valid skip
Principal dependent source	P0208	Principal Influence: Discipline policy	Ordinal	0= no influence, 1=minor influence, 2=moderate influence, 3=major influence	Recoded from 1, 2, 3, 4, 5(NA) as 0, 1, 2, 3, valid skip
Principal dependent source	P0209	Principal Influence: Budget	Ordinal	0= no influence, 1=minor influence, 2=moderate influence, 3=major influence	Recoded from 1, 2, 3, 4, 5(NA) as 0, 1, 2, 3, valid skip
Principal independent	BLACKP	Black Principal	Dichotomous	0=not Black, 1=is Black	A dummy variable to identify principals that identify as Black. (source: P0903)
Principal independent	NBBIPOCP	non-Black IPOC Principal	Dichotomous	0=not non-Black IPOC, 1=is non-Black IPOC	A dummy variable to identify principals that identify as at least one non-White racialized identity, but do not identify as Black. (source: P0901, P0904, P0905, and P0906)

Table 9 (cont'd)

Variable Use	Item	Description	Var. Type	Values	Notes
Principal independent	WHITEP	White Principal	Dichotomous	0=not White, 1=is White	A dummy variable to identify principals that identify as White and not another racialized identity. (source: P0902 and not P0901, P0904, P0905, and P0906)
Shared independent	DIVTCH	Teaching staff is diverse	Dichotomous	0=no, 1=yes	A dummy variable to identify that there is no majority racialized identity of the teaching staff at each school.
Shared independent	MJBKTCH	Over 70% of the teaching staff identifies as Black	Dichotomous	0=no, 1=yes	A dummy variable to identify the racialized majority (>70%) of the teaching staff.
Shared independent	MJNBBIPOCTCH	Over 70% of the teaching staff identifies as at least one non-White racialized identity, but do not identify as Black.	Dichotomous	0=no, 1=yes	A dummy variable to identify the racialized majority (>70%) of the teaching staff.
Shared independent	MJWHTTCH	Over 70% of the teaching staff identifies as White	Dichotomous	0=no, 1=yes	A dummy variable to identify the racialized majority (>70%) of the teaching staff at each school.
Sorting/Tracking	DUP	an indicator variable for identifying duplicate entries of principal data after the many to one merge	Ordinal	0-19; 0= no duplicates, 1= two duplicates, 3=three duplicates...19=nineteen duplicates	This indicator was created base on the CNTLNUMP variable identifying unique principal responses.
Sorting/Tracking	mergeps	a variable to track file merging	Nominal	1=master file, 2=using only, 3=matched	For tracking the school and principal merge

Table 9 (cont'd)

Variable Use	Item	Description	Var. Type	Values	Notes
Sorting/Tracking	mergepst	a variable to track file merging	Nominal	1=master file, 2=using only, 3=matched	For tracking the school and principal merged file to the teacher data
Sorting/Tracking	race_mx	Indicates that the principal's racialized category matches the racialized category of the majority of their staff.	Dichotomous	0=no, 1=yes	Used in the propensity score and difference in difference estimations.
Teacher dependent	Z_T1713	Teacher perspective: Supportive admin	Truncated Continuous	range: -2.7123 to.8160	
Teacher dependent	Z_T1719	Teacher perspective: Principal enforces rules	Truncated Continuous	range: -2.6883 to.8509	
Teacher dependent	Z_T1722	Teacher perspective: Principal communicates the type of school he/she wants to staff	Truncated Continuous	range: -2.7616 to .8080	
Teacher dependent	Z_T1743	Teacher perspective: The school is well run	Truncated Continuous	range: -2.2210 to 1.2306	
Teacher dependent source	T1713	Teacher perspective: Supportive admin	Ordinal	3=somewhat agree, 2=strongly agree, 1=somewhat disagree, 0=strongly disagree	Recoded from 1, 2, 3, 4 as 0, 1, 2, 3
Teacher dependent source	T1719	Teacher perspective: Principal enforces rules	Ordinal	3=somewhat agree, 2=strongly agree, 1=somewhat disagree, 0=strongly disagree	Recoded from 1, 2, 3, 4 as 0, 1, 2, 3
Teacher dependent source	T1722	Teacher perspective: Principal communicates the type of school he/she wants to staff	Ordinal	3=somewhat agree, 2=strongly agree, 1=somewhat disagree, 0=strongly disagree	Recoded from 1, 2, 3, 4 as 0, 1, 2, 3

Table 9 (cont'd)

Variable Use	Item	Description	Var. Type	Values	Notes
Teacher dependent source	T1743	Teacher perspective: The school is well run	Ordinal	3=somewhat agree, 2=strongly agree, 1=somewhat disagree, 0=strongly disagree	Recoded from 1, 2, 3, 4 as 0, 1, 2, 3
Teacher dependent source	Z_T1713	Teacher perspective: Supportive admin	Continuous	range: -.816 to 2.71	a standardized version of the original variable
Teacher dependent source	Z_T1719	Teacher perspective: Principal enforces rules	Continuous	range: -.851 to2.688	a standardized version of the original variable
Teacher dependent source	Z_T1722	Teacher perspective: Principal communicates the type of school he/she wants to staff	Continuous	range: --.808 to 2.762	a standardized version of the original variable
Teacher dependent source	Z_T1743	Teacher perspective: The school is well run	Continuous	range: -1.231 to 2.221	a standardized version of the original variable
Teacher independent	Age_T	Teacher age	Continuous	range: 21 to 80	
Teacher independent	BLACKT	Black Teacher	Dichotomous	0=not Black, 1=is Black	A dummy variable to identify teachers that identify as Black (source: T0930).
Teacher independent	NBBIPOCT	non-Black IPOC Teacher	Dichotomous	0=not non-Black IPOC, 1=is non-Black IPOC	A dummy variable to identify teachers that identify as at least one non-White racialized identity, but do not identify as Black. (source: T0928, T0931, T0932, T0933, and T0934)

Table 9 (cont'd)

Variable Use	Item	Description	Var. Type	Values	Notes
Control	T0924	Teacher Gender	Dichotomous	0=male, 1=female	recoded from 1, 2
Control	TOTYREXP	Teacher's experience	Continuous	range: 1 to 53	Teachers in their first year of teaching without prior experience are listed as 1.
Teacher independent	WHITET	White Teacher	Dichotomous	0=not White, 1=is White	A dummy variable to identify teachers that identify as White and not another racialized identity. (source: T0929 and not T0928, T0931, T0932, T0933, and T0934)