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BY THE COMMITTEE CONSISTING OF

Dr. Julie Gerlinger, Chair

Dr. Stephanie Burge

Dr. Ian Carrillo

Dr. Jenny Sperling

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ABSTRACT

This dissertation examines how the learning modalities schools utilized during the 2020 – 2021 academic year shaped patterns of school-based social control when students began returning to more traditional in-person instruction in 2021 – 2022. I conduct three related analyses, each structured around the premise that the type of disruption schools experienced during the 2020 – 2021 academic year shaped how exclusionary discipline and medicalization were reestablished the following year. In the first empirical chapter I examine whether learning modality during 2020 – 2021 was associated with suspension and expulsion rates in 2021 – 2022 and whether those associations differed by student race. In the next chapter I examine whether the relationship between learning modality and post-disruption discipline varied across urban, suburban, and rural schools. In the last empirical chapter, I examine how learning modality shaped both criminalization and medicalization as parallel pathways of school-based social control. Throughout the analyses, I draw on a two-condition theoretical framework arguing that school-based social control depends on institutional monitoring capacity and teacher-student relational ties, both of which the pandemic disrupted unevenly across modalities and geographic contexts.

The findings show that the COVID-19 pandemic did not transform the racial structure of school-based social control, instead it reproduced it. Modality-associated increases in suspension were concentrated among White students rather than Black students, as Black student suspension rates are structurally elevated in ways that the modality-specific relational disruption cannot move further. The one clear locale-specific effect was hybrid schools in rural areas, where fragmented relational contact combined with limited institutional alternatives produced the only

significant locale-by-modality finding. Medicalization followed its pre-existing upward trend regardless of modality, confirming that procedurally intensive pathways of social control are more insulated from short-term disruption than discretionary ones. Across all analyses, racial disparities persisted across every modality, every locale, and every model specification. When racial gaps narrowed it was because White student rates increase and not because Black student rates decreased. This dissertation advances sociological understanding of institutional social control by demonstrating that disruption can reshape how social control is enacted without altering the underlying racial inequalities that structure it.

CHAPTER ONE

Introduction

In March 2020, the World Health Organization declared COVID-19 a global pandemic and society shut down, including schools that were forced to shift from traditional in-person learning to remote emergency teaching, in some cases over a single weekend or spring break (Aguliera and Nightengale-Lee 2020; Becker et al. 2020, 2022; Hodges et al. 2020). What many thought would be a two-week disruption turned into a multi-year reorganization of how society functioned. Schools had to adapt throughout the 2020 – 2021 academic year to abide by changing public safety protocols. This impacted schools specifically as they are central sites of social control for children and adolescents, but the ongoing nature of the pandemic introduced new challenges as schools turned to alternative learning modalities to continue educating students while following ever-changing public health requirements (Becker et al. 2020, 2022; Fissel, Wilcox, and Tillyer 2019; Irby 2014). These new and inconsistent arrangements of teaching and learning (i.e., in-person with safety measures, hybrid, or fully virtual) likely influenced how schools tried to reestablish traditional mechanisms of behavioral control the following year, as schools began returning to in-person instruction in 2021 – 2022 while the pandemic was winding down.

Educational disruptions have occurred before, but none at the scale or longevity of COVID-19. Prior research on more localized educational disruptions, such as natural disasters or localized epidemics, shows that these disruptions interrupt not just learning but the organizational routines through which schools manage student behavior, with consequences for

students' life outcomes. The 1916 polio epidemic reduced educational attainment across entire cohorts (Meyers and Thomasson 2021). Natural disasters have disrupted schooling through both temporary and permanent school closures and infrastructure damage. Research following Hurricane Katrina shows that the displacement of students magnified pre-existing inequalities in educational outcomes across race and class (Cain et al. 2010; Kirk 2009; Pane et al. 2008). Beyond the structural damage, displaced students exhibited behavioral problems that were managed through punitive disciplinary responses rather than supportive interventions, reinforcing patterns of racialized social control (Sacerdote 2012; Ward et al. 2008).

The COVID-19 pandemic was different. It was global and prolonged in a way prior disruptions were not. Schools that shifted to emergency remote teaching in March 2020 did not simply recover and resume. Teachers spent their summers preparing for an unknown school year, unsure of how instruction would be delivered as public health protocols continued to shift (An et al. 2021; Cardullo et al. 2021; Geraci et al. 2023). Schools ultimately started the 2020 – 2021 academic year in virtual, hybrid, or in-person with safety measures formats and many continued shifting between them throughout the year (Adams and Gray 2023; Becker et al. 2022; Darling-Hammond, Schachner, and Edgerton 2020). This restructured an entire academic year and disrupted the mechanisms through which schools traditionally exercise social control. Formal mechanisms include punitive discipline such as suspension and expulsion while informal mechanisms include the teacher-student relationships and bonds with the school. Both these mechanisms were disrupted as schools operated in modalities they were not designed for. Schools also reflect their geographic contexts, with urban, suburban, and rural schools deploying these mechanisms of social control differently based on available resources and community conditions (Blackwell and Young 2021; Boggs 1971; Logan and Burdick-Will 2017). Prior

research from localized disruptions suggests that punitive mechanisms of social control intensify as schools return to in-person instruction (Kirk 2009). This pandemic provides a rare opportunity to examine whether the same pattern holds following a disruption of this scale, and what it means for the racial inequalities that already characterized school discipline.

Prior to the pandemic, decades of research had already documented deep racial inequality in school discipline (Anderson and Ritter 2017; Cribb Fabersunne et al. 2023; Davison et al. 2022; Gerlinger et al. 2021; Skiba et al. 2002, 2011; Marchbanks et al. 2018; Welch et al. 2022; Welsh and Little 2018; Welsh, Rodriguez, and Joseph 2025). Black students are more likely than their White peers to experience exclusionary discipline, with consequences that include lower academic achievement and greater criminal justice involvement (Davison et al. 2022; Skiba et al. 2002, 2011; Skiba, Arredondo, and Williams 2014; Welch et al. 2022; Welsh and Little 2018b). Suspension rates had declined in the years leading up to the pandemic, but the racial disparities did not which speaks to how durable these inequalities are within the institution of school. Reform efforts like restorative justice initiatives likely contributed to those overall declines, but they were unevenly implemented and did not close the racial gap (Payne and Welch 2010; Lodi et al. 2021; McCluskey et al. 2008; Payne and Welch 2015). Research on prior educational disruptions suggests this pattern gets worse, not better, following a crisis as suspension rates tend to increase as schools return to in-person instruction with racial disparities still very much in place. Whether the COVID-19 pandemic followed the same pattern, and whether the learning modalities schools utilized during the disruption year shaped how those patterns played out, is what this dissertation examines.

This dissertation argues that the COVID-19 pandemic disrupted two conditions school-based social control depends on. These are the institutional capacity to monitor and enforce

behavioral expectations of students and the relational ties between teachers and students that shape how behavior is interpreted before it reaches formal sanctions. When these conditions are working, schools may handle most behavioral challenges informally because teachers know their students and can contextualize the behavior before it becomes a discipline event (Brandmiller, Dumont, and Becker 2020; Di Lisio et al. 2025). When those conditions are disrupted, formal mechanisms take over (Pane et al. 2008; Sacerdote 2012). Because the interpretive process through which teachers read and respond to student behavior is already shaped by racialized perceptions, disruption to this system does not produce uniform changes across student groups. The central argument of this dissertation is that the pandemic did not suspend or transform school-based social control, instead it reproduced and, in some contexts, intensified the racial inequalities already embedded in it.

With exclusionary discipline, schools also rely on a second parallel system of control. Over the past several decades, the medicalization of student behavior has expanded, with schools increasingly perceiving and responding to behavior through medical frameworks (Conrad 1992; Ramey 2015, 2018). Building on Ramey's framework, criminalization and medicalization operate as dual pathways through which schools route student behavior. Criminalization frames the behavior as willful deviance requiring punishment. Medicalization frames the same behavior as a symptom of underlying conditions requiring treatment. Both pathways are racially stratified as Black students are disproportionately pushed toward the criminalization path while White students are pushed toward the medicalization path even for similar behavior (Ferguson [2000] 2000; Ramey 2015, 2016, 2018). The pandemic disrupted both pathways, but not equally. Suspension can be enacted through fast discretionary teacher judgment while IDEA identification requires more formal evaluation and documentation over time. This means the two

pathways were likely to respond differently to the relational and supervisory disruptions that different learning modalities introduced. The remainder of this introduction previews each empirical chapter and describes the data and methods used across the dissertation.

Race, Modality, and the Reconfiguration of Discipline

Chapter Two examines whether the learning modalities schools utilized during the 2020 – 2021 academic year shaped exclusionary discipline rates in 2021 – 2022, and whether those patterns differed by student race. Preliminary research from the pandemic shows that suspension and expulsion rates increased in 2021 – 2022 following the disruption year (Welsh 2022). But this research treats the pandemic as a single event, the way prior disruption research has, without accounting for how differently schools operated depending on their learning modality (Darling-Hammond et al. 2023; Welsh 2022). The different learning modalities shaped the mechanisms of social control that then had to be reestablished when schools returned to traditional in-person instruction which means schools began 2021 – 2022 from different starting points depending on what their disruption year looked like. Exclusionary discipline is one of the most consequential forms of school-based social control. Suspension and expulsion remove students from their educational environments and are associated with lower academic achievement, weakened school attachment, and increased contact with the criminal justice system (Anderson and Ritter 2017; Cribb Fabersunne et al. 2023; Curran 2020; Gerlinger et al. 2021; Morris and Perry 2016; Skiba et al. 2011; Welsh and Little 2018a). Prior disruption research shows that exclusionary discipline increases as schools return to in-person instruction, but those increases are not distributed evenly. Black students are consistently suspended and expelled at higher rates than

White students, even after accounting for socioeconomic differences and behavioral context, and those disparities persist following disruption (Payne and Welch 2010; Skiba et al. 2002, 2011; Welsh and Little 2018; Welsh et al. 2025). These disparities are driven by discretionary decision-making, as students of color are more likely to be disciplined for subjective infractions like defiance or disrespect and to receive harsher punishments for similar behavior (Ferguson [2000] 2000; Fissel et al. 2019; Skiba et al. 2002). This chapter argues that learning modality utilized during the disruption year altered the conditions through which discipline operates by weakening teacher-student relational ties and disrupting monitoring capacity. Hybrid instruction, which fragmented rather than eliminated in-person contact, is predicted to show the strongest association with post-disruption suspension because fragmented contact requires more active reestablishment of authority than a clean break. The racial dimension of this argument is that modality disruption removes the relational buffers that sometimes constrain racialized perception from becoming formal punishment, but because Black students already had weaker relational buffers before the pandemic, the disruption may not produce the same detectable changes in suspension that it does for White students.

Learning Modality, Locale, and Post-Disruption Exclusionary Discipline

Chapter Three extends the same framework to geographic context. Prior research documents that suspension and expulsion are patterned by locale, urban schools consistently report the highest rates while, rural schools report the lowest formal exclusion but with fewer alternatives when behavioral challenges arise (Logan and Burdick-Will 2017; A. L. Noltemeyer and Mcloughlin 2010). Schools vary by locale in both the resources available and the

mechanisms of social control they rely on, and those differences likely shaped how the disruption played out and how discipline was reestablished in 2021 – 2022. Urban, suburban, and rural communities experienced the pandemic differently. Urban areas faced more prolonged disruptions and often maintained remote instruction longer (Callaghan et al. 2021). Suburban areas typically adopted hybrid models (Kitchen et al. 2021; Randolph and Liu 2022). Rural areas often returned to in-person instruction more quickly, though they faced their own resource constraints (Callaghan et al. 2021; Monnat 2021). These differences shaped both how severely the relational and supervisory conditions of schooling were disrupted and what resources were available to respond when students began to return. Urban schools, which already operate with the most formalized disciplinary mechanisms, are predicted to reassert formal social control more quickly than others but show the least modality-specific variation of exclusionary discipline (Aguliera and Nightengale-Lee 2020; Callaghan et al. 2021). Suburban schools, which have better resources and more organizational flexibility, are predicted to show more moderate effects compared to the other locales (Logan and Burdick-Will 2017; Tefera, Siegel-Hawley, and Sjogren 2022). Rural schools had more instructional continuity but fewer alternatives to suspension, producing more concentrated modality effects on school discipline (Aguliera and Nightengale-Lee 2020; Cuadros et al. 2021).

Criminalization, Medicalization, and Social Control

Chapter Four examines how the pandemic shaped school-based social control through two key pathways which are criminalization and medicalization. Building on Ramey's (2015, 2016, 2018) framework, criminalization frames misbehavior as deviance and responds with

punishment through suspension, while medicalization frames behavior as a symptom of underlying conditions and responds through diagnosis and services such as IDEA identification (Conrad 1992; Hirschfield 2008; Ramey 2016). Although both pathways have expanded over time, they do not operate equally across students. Black students are disproportionately criminalized while White students are more frequently medicalized, even for similar behavior (Ramey 2015, 2018). Prior research has examined these pathways under stable institutional conditions but less is known about how a large-scale educational disruption shapes them, particularly whether the two pathways respond differently to the same disruption. This chapter argues that they do. Suspension, the mechanism of criminalization, can be enacted through fast discretionary teacher judgment and is sensitive to disruptions in relational contact and supervisory routines (Hirschfield 2008; Ramey 2015, 2018). When the relational buffers that normally mediate between behavior and formal sanction are weakened, the threshold for suspension drops (Brandmiller et al. 2020; Chen et al. 2021; Pas and Bradshaw 2014). IDEA identification, the mechanism of medicalization, requires more formal evaluation and institutional investment over time, which make it harder to react more short-term disruption (Rafalovich 2013; Ramey 2018). This procedural asymmetry means criminalization is more likely to respond to modality-specific disruption than medicalization. The racial dimension of this argument follows from the same logic established in Chapter Two, that the learning modality utilized removes relational buffers that differentially protected White students from more formal sanctions, while Black student suspension rates are already structurally elevated in ways that modality cannot move further (Payne and Welch 2010; Ferguson [2000] 2000; Ramey 2015, 2018; Skiba et al. 2002). This chapter asks how criminalization and medicalization rates in 2021 – 2022 compare to pre-pandemic trends, how rates varied by learning modality, whether racial

disparities persisted in both pathways, and whether the pandemic complicated the simple sorting model Ramey's framework predicts (Ramey 2015, 2016, 2018).

DATA AND METHODS

All three empirical chapters use the same nationally representative, school-level administrative data. The primary source is the Civil Rights Data Collection (CRDC), a biennial census of nearly all U.S. public K-12 schools administered by the U.S. Department of Education's Office for Civil Rights. The CRDC provides detailed school-level counts of disciplinary actions and special education participation disaggregated by race, gender, and disability status which makes it particularly well suited for examining racialized patterns of school-based social control. Suspension and expulsion rates and IDEA identification rates are constructed as rates per 100 students enrolled, allowing meaningful comparisons across schools of varying size. To contextualize disciplinary outcomes within broader institutional characteristics, the CRDC is supplemented with data from the National Center for Education Statistics (NCES). The Common Core of Data (CCD) provides information on school enrollment, racial and gender composition, grade level, and eligibility for free or reduced-price lunch (FRL) as a proxy for socioeconomic disadvantage. The Education Demographic and Geographic Estimates (EDGE) program provides geographic locale classifications.

The analysis draws on seven waves of CRDC data: 2009–2010, 2011–2012, 2013–2014, 2015–2016, 2017–2018, 2020–2021, and 2021–2022. The five pre-pandemic waves establish baseline trends in exclusionary discipline prior to COVID-19. The 2021–2022 wave serves as the primary post-disruption outcome period. The 2020–2021 wave is used exclusively to measure

schools' dominant learning modality during the disruption year. The 2017–2018 wave serves an additional role as the source of lagged dependent variables in all regression models, allowing modality coefficients to be interpreted as associations with change in discipline rates relative to pre-pandemic baselines rather than levels. The analytic sample includes all U.S. public K-12 schools with complete data across all seven waves and consistent NCES identifiers. After applying these criteria, the final analytic regression sample consists of 42,988 schools. All regression models include standard errors clustered at the district level to account for non-independence among schools operating within the same administrative context.

SUMMARY

Schools are central institutions in child and adolescent social control. They interpret and label student misbehavior through pathways that shape students' trajectories across the life course. This dissertation examines how the learning modalities schools utilized during the 2020 – 2021 academic year shaped the reestablishment of exclusionary discipline in 2021 – 2022 overall, across geographic locales, and through the dual pathways of criminalization and medicalization. Using nationally representative longitudinal administrative data, I examine how learning modality, school locale, and the racialized patterns of social control intersected in the years surrounding the pandemic. The three empirical chapters are connected by a shared theoretical framework and a shared dataset. Chapter Two establishes the foundational relationship between modality and exclusionary discipline and examines whether that relationship differs by student race. Chapter Three extends the analysis to geographic context, examining how locale conditions the modality-discipline relationship. Chapter Four broadens the

outcome to include both criminalization and medicalization asking whether the dual pathways of school-based social control responded differently to the educational disruption this year and whether the racial structure of each pathway persisted or changed. The three chapters address how a large-scale institutional disruption interacted with the pre-existing racial inequalities of school-based social control.

This dissertation advances sociological understanding of school-based social control by treating the COVID-19 pandemic as a natural experiment in the disruption and reestablishment of disciplinary systems. Rather than examining the pandemic as a single event, I analyze the variation in learning modality as a measure of the type and degree of disruption each school experienced. By connecting that variation to post-disruption disciplinary outcomes, this study examines how institutional responses to crisis recalibrate mechanisms of social control and whether those recalibrations reproduce or reconfigure the racial inequalities already embedded in school discipline prior to the disruption.

CHAPTER TWO

Race, Modality, and the Reconfiguration of Discipline After COVID-19

This chapter examines whether variation in learning modality during the 2020 – 2021 academic year influenced exclusionary discipline rates in the 2021 – 2022 academic year as schools were transitioning back to more traditional measures, and whether these patterns differed by student race. A growing body of research documents changes in school discipline during the COVID-19 pandemic. However, most research treats the pandemic as a single disruption and the 2021 – 2022 academic year as a uniform return to normal (Welsh 2022). This research overlooks a central change to traditional schooling during the first full year of pandemic-era instruction, when schools were not operating in traditional ways. During the 2020 – 2021 academic year, schools operated in different learning modalities, such as virtual, hybrid, or in-person with safety measures, as they navigated the changing landscape of the ongoing COVID-19 pandemic. Because of this, students experienced fundamentally different school environments. These differences shaped supervision, peer interaction, student-teacher relationships, and the overall exercise of authority. These shifts also altered how teachers perceived and responded to student behavior in everyday interactions, particularly under conditions of disruption (An et al. 2021; Long et al. 2022). We know relatively little about how these distinct institutional contexts, compounded by the ongoing pandemic and operating within institutions built for in-person schooling, altered the use of social control schools use to manage student behavior. Limited attention has been paid to how disruptions to teacher-student relationships, a key informal

mechanism of social control, may have shifted educators' reliance toward more formal mechanisms of exclusionary discipline.

Most prior research on educational disruptions focuses on more localized events, such as natural disasters (Kirk 2009; Pane et al. 2008; Sacerdote 2008, 2012), rather than large-scale, system-wide restructuring. The COVID-19 pandemic was a different type of educational disruption. Schools did not simply pause and resume. In March 2020, schools shifted to remote emergency teaching (Becker et al. 2020, 2022), requiring educators to quickly reorganize instruction from in-person "traditional" schooling to completely virtual formats. As the pandemic continued, schools remained virtual through the rest of that academic year. As the new academic year approached, schools had to decide which learning modality they would operate in. These shifts in modality shaped how students were monitored and how administrators managed student behavior in everyday practice. They also reshaped how teachers interpreted student misbehavior, often relying on more limited or ambiguous cues (Cardullo et al. 2021; Morris et al. 2023). Research during the 2020 – 2021 academic year, when most schools operated in virtual, hybrid, or in-person with safety measures, suggests that typical exclusionary discipline mechanisms declined. Indeed, research shows that suspension and expulsion decreased during the 2020 – 2021 academic year and then increased when students began to return to more "traditional" schooling (Darling-Hammond et al. 2023; Welsh 2022). However, these trends do not account for the potential differences in suspension and expulsion by the learning modality.

Exclusionary discipline remains one of the most consequential forms of school punishment and control in the United States. Suspension and expulsion remove students from instructional spaces and disrupt access to key academic and social resources. Decades of research show that these practices are disproportionately applied to Black students (Payne and Welch

2010; Anyon et al. 2014; Lehmann and Meldrum 2021; Morris and Perry 2016; Skiba et al. 2011, 2014; “Trey” Marchbanks et al. 2018). These disparities persist across school contexts and over time, even after accounting for socioeconomic differences and student behavior (Brent 2016; Camacho et al. 2024; Curran 2016; Skiba et al. 2011). The initial pattern of decreases in suspension and expulsion during the first full year of pandemic education, followed by an increase the next year, mirrors patterns observed in prior disruption research. For example, following Hurricane Katrina, exclusionary discipline increased, with Black students experiencing particularly high rates (Kirk 2009; Pane et al. 2008; Tian and Guan 2015).

These traditional social control mechanisms depend on a shared physical space and require the ability to monitor students and remove them from classrooms. The COVID-19 pandemic and the introduction of learning modalities limited these possibilities. Hybrid models disrupted routines and fragmented peer interactions, while virtual learning, adapted from curriculum and expectations designed for in-person schooling, limited teacher oversight and behavior interpretation (Barik, Barik, and Khamkat 2022; Becker et al. 2020; Randolph and Liu 2022). These conditions weakened the relational ties between teachers and students that often facilitate informal regulation of behavior, increasing the likelihood that behavior would be interpreted more punitively and managed through formal disciplinary responses. Even schools operating in person with safety measures faced challenges enforcing typical mechanisms due to masks and social distancing (Adams and Gray 2023; An et al. 2021; Barik et al. 2022; Becker et al. 2022). These differences in instructional context likely shaped how behavior was interpreted and how exclusionary discipline was applied. Because schools are central sites of supervision and authority in adolescents’ lives, these changes in instructional format may have reshaped both overall discipline rates and racial disparities across learning modalities.

This chapter focuses on learning modality as a key institutional condition of the first year of pandemic schooling. I examine whether schools operating virtually, in hybrid models, or in-person with safety measures during the 2020 – 2021 academic year experienced different suspension and expulsion rates in 2021 – 2022. I also examine whether these differences varied by race. In doing so, I conceptualize learning modality not only as a structural disruption, but as a context that reshaped teacher-student relationships and the interpretive processes through which student behavior is understood and disciplined. If disciplinary outcomes differed or shifted across modalities, the pandemic may have done more than interrupt existing patterns and instead reorganized them. By centering instructional modality, this study moves beyond documenting a decline and potential increase in exclusionary discipline to examine how institutional change shapes racialized patterns of school discipline.

Exclusionary Discipline as Institutional Social Control

Exclusionary discipline refers to school practices and policies that remove students from their educational environments and include practices such as in-school and out-of-school suspension and expulsion. These practices are often framed as necessary tools for maintaining safety and enforcing behavioral expectations. They represent one of the most widely used and significant forms of school-based social control in the United States (Brent 2016; Curran 2016; Skiba et al. 2002, 2011). Historically, exclusionary discipline has been justified through the logic of deterrence and the maintenance of social order. The expansion of zero-tolerance policies in the 1990s reflected the assumption that swift, severe, and predictable punishment is what is needed to reduce student misbehavior and protect the broader school environment (Welch et al. 2022;

Welsh and Little 2018b, 2018a). This "get-tough" approach to school discipline mirrored the shifts in the broader juvenile and criminal justice systems during the same period. However, empirical evidence challenges this rationale of deterrence. Rather than improving school safety or student behavior, suspension and expulsion disrupt learning and weaken school attachment, increasing the likelihood of school dropout and later involvement with the criminal justice system (Hirschfield 2008; Morris and Perry 2016; Skiba et al. 2011; "Trey" Marchbanks et al. 2018; Welch et al. 2022). Students who are suspended or expelled are more likely to encounter the criminal justice system, a key component of the school-to-prison pipeline (Hirschfield 2008; Welch et al. 2022).

Importantly, exclusionary discipline does not operate solely through formal policy. It is enacted through the discretionary decision-making embedded in the everyday interactions between teachers and students (Alter, Walker, and Landers 2013; Brandmiller et al. 2020). While formal disciplinary rules provide a framework, their application depends on how educators interpret student behavior in context. These interpretations are shaped not only by institutional policies but also by the quality of teacher-student relationships and the perceptions of student behavior (Brandmiller et al. 2020; Chen et al. 2021; Weathers 2023). In practice, discipline reflects both formal mechanisms of control (e.g., suspension and expulsion) and informal processes (e.g., relational authority and discretion) that shape whether behavior is managed within the classroom or escalated into formal punishment. When teacher-student relationships are strong, educators are more likely to rely on informal strategies rather than exclusion. When these relationships are weakened or disrupted, the threshold for interpreting behavior as warranting formal punishment may be lowered.

Racial disparities in exclusionary discipline are one of the most consistent findings in American education research. Black students face disproportionately higher rates of suspension and expulsion than their White peers even after accounting for socioeconomic background (Curran 2016; Morris and Perry 2016; Skiba et al. 2002, 2011; “Trey” Marchbanks et al. 2018). These disparities show up early and widen over time, contributing to academic disengagement and increased contact with the juvenile justice system (Brent 2016; Camacho et al. 2024; Hirschfield 2008; Morris and Perry 2016; Skiba et al. 2011). They cannot be explained by differences in behavior. Research consistently shows that Black students are more likely to be punished for subjective infractions, such as ‘defiance’ or ‘disrespect’, and to receive harsher punishments than White students for the same behaviors (Skiba et al. 2002, 2014; Ferguson [2000] 2000; Skiba et al. 2002). The term "differential selection" captures what is happening: disciplinary decisions are shaped by socially constructed perceptions of deviance as much as by what a student did (Skiba et al. 2014). When the institutional conditions that typically guide teacher judgment are disrupted, meaning when relational context is weakened and educators have less individualized knowledge of students, those perceptions become more central, not less. Ambiguous behavior gets read as defiance more readily. And because those readings are already shaped by racialized expectations, disruption does not produce uniform changes across student groups. It may amplify existing disparities by removing the relational buffers that sometimes slow them down (Alter et al. 2013; Chen et al. 2021; Ferguson [2000] 2000; Skiba et al. 2011).

School-level composition makes all this worse. Schools that serve higher proportions of Black students are more likely to adopt punitive disciplinary climates and rely more heavily on exclusion. This is not because of anything about those students individually, but because of how institutional context shapes disciplinary culture (Payne and Welch 2023; Ramey 2015; Welch et

al. 2022; Welch and Payne 2010). These schools consistently signal which students are seen as threatening, and those judgments get built into everyday practice in ways that mirror broader racial hierarchies. Exclusionary discipline is not just a policy, it is a system, and it depends on both formal structures and the informal relational processes that run through schools daily. When the informal side gets disrupted, schools lean harder on the formal side.

COVID-19 as Institutional Disruption

The COVID-19 pandemic constituted one of the most abrupt and large-scale disruptions to K-12 education in modern history. Beginning in March 2020, schools across the United States were forced into remote emergency teaching with little preparation time, rapidly shifting from in-person to remote delivery (Becker et al. 2020, 2022). Unlike the established forms of virtual schooling, public K-12 pedagogy and disciplinary systems are fundamentally designed around in-person interaction. The sudden transition did not simply substitute one instructional format for another. Instead, it disrupted the organizational understanding and policies of traditional schooling itself. The curriculum and exclusionary discipline practices through which schools operate and regulate student behavior were dismantled for an unknown amount of time (An et al. 2021; Becker et al. 2020; Long et al. 2022). The disruption extended beyond formal policies and procedures to the relational and interpretive processes that underpin school-based social control. Teacher-student relationships were disrupted. Educators were required to interpret student behavior through unfamiliar and often limited forms of interaction. These conditions reduced opportunities for contextualized understanding of student behavior, increasing ambiguity in how behaviors were perceived and managed. As a result, the pandemic disrupted not only the capacity to enforce discipline but also the relational foundations and interpretive frameworks through

which discipline is enacted. Additionally, schools are embedded within broader organizational and policy environments. When major systemic shocks occur, they tend to expose rather than eliminate existing inequalities. Prior research on educational disruptions, like localized natural disasters, shows that schools often experience a short-term disruption followed by a quick return to "traditional" operations, frequently accompanied by increases in exclusionary discipline as order is reestablished following the instability (Pane et al. 2008; Sacerdote 2008, 2012; Tian and Guan 2015). In these cases, the educational disruption is typically bounded in time and geography which allows for schools to quickly reinstate familiar disciplinary routines once schooling resumes.

The COVID-19 pandemic differed in both scale and duration. It was not a localized or temporary disruption, but a prolonged restructuring of schooling that extended across an entire academic year and, in many cases, beyond. This longevity meant that schools did not simply experience a brief interruption followed by a quick restoration. Instead, they operated under fundamentally altered learning conditions in which multiple learning modalities, such as virtual, hybrid, and in-person with safety measures, became organizational arrangements for entire academic years rather than just short-term remote emergency teaching (Barik et al. 2022; Becker et al. 2022; Bozkurt et al. 2022). This prolonged restructuring is important because it altered both dimensions of school-based social control. In-person mechanisms of monitoring and behavior management were constrained or unevenly applied, while opportunities to build and maintain teacher-student relationships were reduced or fragmented. At the same time, educators were required to rely on new and often imperfect indicators of student engagement (An et al. 2021; Morris et al. 2023). This shift matters because the core mechanisms of exclusionary discipline depend on the traditional in-person surveillance and interaction in public schools. In-person

mechanisms of teaching and behavior control are central to how schools define and respond to student misbehavior (Welsh 2022, 2023). In remote settings, the traditional mechanisms were largely unavailable, which forced schools to rely on digital proxies for engagement and compliance. As a result, exclusionary discipline declined nationally during the 2020 – 2021 academic year (Welsh 2022). However, this decline reflects reduced capacity to implement suspensions and expulsions during an educational disruption and altered teaching rather than a fundamental shift in disciplinary orientation. The weakening of relational ties and increased ambiguity in behavioral interpretation may have altered how teachers perceived student behavior. Behaviors that might have been contextualized or managed informally in in-person settings were more difficult to interpret in virtual environments, increasing the potential for misrecognition or negative attribution. Additionally, emerging research suggests that racial disparities persisted even under these constrained conditions, with Black students continuing to experience disproportionate disciplinary action in virtual environments for subjective or discretionary infractions such as disengagement or the failure to meet digital participation expectations (Darling-Hammond et al. 2023; Jones 2021; Welsh 2022). Rather than disappearing, racialized discipline adapted to the constraints of remote teaching.

Overall, the pandemic represents a distinct type of educational disruption. One that is not only large-scale, but also prolonged and structurally reorganizing through the sustained use of multiple learning modalities. The institutional effects of this restructuring have not fully resolved, even as schools have nominally returned to pre-pandemic routines. This distinguishes it from prior crises in which schools temporarily deviate from in-person instruction before quickly returning to standardized routines. The pandemic did not simply interrupt school-based social control. Instead, it reconfigured the relational and interpretive conditions through which that

control operates. Understanding how discipline operated under these conditions therefore requires attention not only to the fact of disruption, but to the specific learning modalities through which schooling was reorganized over time. The next section turns to these modalities as the key mechanism shaping variation in disciplinary outcomes.

Learning Modalities

The 2020 – 2021 academic year was characterized by substantial variation in learning modality. Although a vast majority of schools were operating under hybrid learning, anything different from traditional in-person classes created differing levels of institutional disruption across schools. Whether the schools were completely virtual, hybrid, or tried to continue in-person following safety measures put in place to stop the spread of the coronavirus, these modalities did not merely shape the academic delivery of curriculum, it restructured the conditions under which behavioral norms were monitored and enforced, which produced distinct configurations of school-based social control. These modalities differentially shaped both the strength of teacher-student relationships and the ways in which educators perceived and evaluated student behavior, thereby altering the balance between informal and formal disciplinary responses. Prolonged virtual learning significantly weakened traditional forms of social bonds and of surveillance (Barik et al. 2022; Becker et al. 2022; Bozkurt et al. 2022). Without the shared physical space, teachers relied on digital indicators of engagement to assess student compliance (An et al. 2021; Cardullo et al. 2021; Long et al. 2022). These indicators often provide limited insight into students' circumstances or intent, increasing ambiguity in behavioral interpretation. In this context, disengagement may be interpreted as noncompliance or

defiance rather than as a product of external constraints or weakened attachment to school. Additionally, the physical removal of students from a classroom, a defining feature of exclusionary discipline, was largely unavailable in a virtual environment. Although overall discipline rates declined during the 2020 – 2021 academic year, evidence suggests that racial inequalities persisted, even for subjective violations tied to virtual engagement (Darling-Hammond et al. 2023, 2020; Welsh 2022). In this sense, the racialized interpretations of behavior migrated from the physical space to digital platforms rather than dissipating. These interpretations may have also been shaped by unequal access to reliable internet and supportive learning environments across socioeconomic and racial groups (Bacher-Hicks, Goodman, and Mulhern 2021; Baum and Jacob 2024; Daniels, Thompson, and Emery 2023).

Hybrid learning introduced a different form of strain. Fragmented schedules of in-person versus virtual learning days/times disrupted the consistency of behavioral norms. Teacher-student relationships, a protective factor against exclusionary discipline, were strained by this intermittent contact (An et al. 2021; Long et al. 2022; Welsh 2023). This fragmentation limited the development of stable relational bonds and reduced teachers' ability to interpret behavior within a broader context. The inconsistency in supervision and routine may have increased reliance on discretionary judgment, heightening the potential for bias in disciplinary decision-making. Schools that operated in-person but still were adhering to the safety measures necessary, such as masks and social distancing, may have greater continuity in surveillance structures and daily routines. Some schools may not have changed their learning modality at all due to the pandemic, however even these schools were embedded within communities navigating the ever changing nature of the pandemic (Darling-Hammond et al. 2020). As such, the stability even in this learning modality did not equate to insulation from broader societal strain. Because these

modalities shaped relational contact and supervisory capacity differently, schools likely entered 2021 – 2022 from uneven starting points in their capacity to reestablish behavioral authority.

THEORETICAL FRAMEWORK

School discipline operates as a central mechanism of institutional social control. Schools do not only teach students curriculum, they also maintain order by regulating student behavior through formal rules and informal interactions (Chen et al. 2021; Payne and Welch 2023; Welsh and Little 2018a). These processes rely on routine and shared physical space. Formal mechanisms include disciplinary practices such as suspensions and expulsions enforced through administrative procedures (Hirschfield 2008; Welch and Payne 2012), while informal mechanisms include teacher-student relationships and the discretionary judgments made about student behavior (Alter et al. 2013; Chen et al. 2021). Together, these elements produce a relatively stable system through which schools maintain order and authority. This system depends not only on institutional enforcement, but also on the relational dynamics between students and administrators. Students' connections to school are not one-directional, they are shaped through ongoing interactions with teachers and administrators, and in turn influence how student behavior is perceived and managed (Brandmiller et al. 2020; Chen et al. 2021; Weathers 2023). In this sense, social bonds within schools function not only as constraints on behavior, but also as lenses through which behavior is understood (Alter et al. 2013). Strong, consistent relationships may facilitate informal resolution of minor misbehavior, while weaker or strained relationships may increase the likelihood that similar behaviors are interpreted as defiance or disruption and escalated into formal discipline (Tian and Guan 2015; Wegmann and Smith 2019).

School-based social control therefore depends on two interrelated conditions, the institutional capacity to monitor and enforce behavior, and the quality and consistency of relational ties that shape how behavior is interpreted and managed. These conditions are mutually reinforcing. When relational ties are strong, schools may rely less on formal discipline. When they are weakened, formal mechanisms become more central.

The COVID-19 pandemic disrupted both conditions, but not uniformly. The learning modalities during the 2020 – 2021 academic year structured this disruption in distinct ways. Schools that shifted to virtual learning limited direct surveillance and constrained the use of exclusionary discipline by removing students from physical spaces of control, while also weakening opportunities for sustained interaction. This reduction in interaction altered not only students' engagement, but also teachers' ability to contextualize and interpret student behavior. Schools that utilized hybrid models fragmented routines and consistency, disrupting both monitoring and the development of stable relationships, and increasing reliance on discretionary judgment in interpreting student conduct. Schools that were in-person with safety measures maintained more continuous oversight and greater opportunity for relationship-building but still functioned under broader conditions of stress and uncertainty that shaped both institutional capacity and interactional dynamics. These differences suggest that schools experienced variation not only in their ability to enforce rules, but also in how behavior was interpreted and responded to across different modalities, leaving them unevenly positioned as they began to return to in-person instruction during the 2021 – 2022 academic year. The return to in-person schooling can therefore be understood as a process of reestablishing institutional authority while also renegotiating these relational dynamics. When routines and relationships have been disrupted, behaviors that were previously managed informally may be more likely to be formally

sanctioned. In schools where monitoring structures are being reasserted, schools may rely more heavily on visible and standardized forms of discipline to signal order and control (Pane et al. 2008; Ward et al. 2008). This creates conditions under which both the overall use of exclusionary discipline and the interpretation of student behavior may shift, particularly in schools emerging from greater disruption.

These shifts in institutional and relational conditions are not racially neutral. A substantial body of research documents that discretionary disciplinary decisions are shaped by racialized perceptions of student behavior, with Black students more likely to be perceived as threatening or defiant and to receive formal sanctions for subjective infractions such as disrespect or noncompliance (Skiba, Chung, et al. 2014; Skiba et al. 2002; Welch and Payne 2010). These patterns reflect not only individual bias but institutionalized interpretive schemas through which student behavior is evaluated. When teacher-student relationships are strong and educators have individualized knowledge of students, these schemas may be partially buffered by contextual understanding. When relational ties are weakened, as occurred unevenly across learning modalities during the pandemic, disciplinary decisions may rely more heavily on generalized perceptions rather than individualized context. Under these conditions, the threshold for formal disciplinary action may shift, and because Black students are already evaluated through racialized lenses of threat and defiance (Payne and Welch 2023; Skiba et al. 2002; Welch and Payne 2010, 2012), that shift is unlikely to be applied equally across student groups. Disrupted relational contexts therefore do not simply increase discipline broadly, they may amplify existing racial inequalities by removing the relational buffers that sometimes constrain discretionary judgment. This framework does not assume a uniform response across schools. Because learning modalities structured the extent to which both monitoring capacity and relational dynamics were

disrupted during the 2020 – 2021 academic year, they also likely shaped how schools reestablished discipline in 2021 – 2022. Schools emerging from prolonged virtual or highly fragmented hybrid contexts may differ from those that maintained more consistent in-person interaction in how they interpret behavior and apply discipline.

Summary

A substantial body of research demonstrates that exclusionary discipline operates as a central mechanism of racialized social control in American schools (Anderson and Ritter 2017; Cribb Fabersunne et al. 2023; Welch and Payne 2012; Welsh and Little 2018a). Black students are disproportionately suspended and expelled, particularly for subjective infractions such as defiance or disruption, even after accounting for behavioral differences and school-level characteristics. These disparities reflect institutional processes embedded within the everyday functioning of schools, where disciplinary outcomes are shaped not only by student behavior, but by how that behavior is interpreted through discretionary decision-making. While this literature has documented persistent racial disparities under relatively stable institutional conditions (Rocque and Paternost 2024, 2024; Skiba et al. 2002; Welch and Payne 2010, 2012), less is known about how these processes operate when the organizational conditions of schooling are disrupted.

The COVID-19 pandemic introduced a distinct form of disruption that was both rapid and prolonged. Rather than pausing and resuming normal operations, schools reorganized through varied learning modalities during the 2020 – 2021 academic year. These modalities altered not only the formal mechanisms of discipline, but also the relational contexts through

which student behavior is observed and interpreted. This distinction is critical because exclusionary discipline depends on both institutional capacity and relational dynamics. The pandemic weakened these conditions unevenly. Schools operating virtually experienced constrained surveillance and limited opportunity for sustained interaction, altering both the ability to enforce discipline and the context for interpreting behavior. Hybrid learning fragmented routines and relationships, increasing inconsistency in both monitoring and behavioral expectations. Schools operating in-person with safety measures maintained greater continuity, but still functioned under conditions of stress and reduced capacity (Barik et al. 2022; Baum and Jacob 2024; Becker et al. 2022). As a result, schools entered the process of returning to in-person instruction from uneven starting points.

Prior research on localized disruptions suggests that when systems of order are destabilized, institutions often respond by reasserting control through increased reliance on formal sanctions (Kirk 2009; Sacerdote 2012). Emerging evidence from the COVID-19 pandemic suggests a similar overall pattern, with declines in discipline during the 2020 – 2021 academic year followed by increases as schools returned to in-person instruction (Welsh 2022). However, existing research largely treats this return as uniform and does not account for how variation in learning modality may have shaped these patterns. These shifts are not only about the volume of discipline, but about the conditions under which behavior is interpreted and managed. When institutional routines are disrupted and relational ties are weakened, disciplinary decisions may rely more heavily on discretionary judgment under conditions of uncertainty. Research on racialized school discipline further suggests that these processes of reestablishing control may be unevenly applied. When institutional authority is perceived as weakened or challenged, mechanisms of social control may intensify in ways that disproportionately target

minoritized groups. In schools, Black students are more likely to be perceived through racialized interpretations of behavior (Ferguson [2000] 2000; Payne and Welch 2023; Skiba et al. 2002; "Trey" Marchbanks et al. 2018), meaning that shifts in how behavior is interpreted, particularly under conditions of weakened relationships and increased ambiguity, may contribute to disproportionate increases in exclusionary discipline. These dynamics are therefore not simply a function of changes in student behavior, but of how behavior is interpreted within changing institutional and relational contexts.

This study positions the COVID-19 pandemic as a natural experiment in the disruption and reconfiguration of school-based social control. Rather than treating the pandemic as a singular shock, I focus on learning modality as a key mechanism structuring variation in both the disruption and reestablishment of disciplinary systems. By examining how exclusionary discipline patterns in 2021 – 2022 vary across prior learning modalities, and how these patterns differ by race, this study assesses how institutional responses to crisis may reproduce or reconfigure existing inequalities in education. Specifically, this study addresses the following questions:

1) How did exclusionary discipline change following the return to more traditional in-person schooling in the 2021 – 2022 academic year?

    H1: Exclusionary discipline increased in the 2021 – 2022 academic year relative to prior trends, reflecting the reestablishment of school-based systems of monitoring and control following pandemic-related disruption.

2) To what extent did changes in exclusionary discipline vary across prior learning modalities?

H2: Increases in exclusionary discipline were greatest in schools that experienced greater disruption to both monitoring capacity and relational contexts during the 2020 – 2021 academic year (e.g., virtual or hybrid modalities), compared to schools that maintained more continuous in-person interaction.

3) Are there racial differences in exclusionary discipline rates by learning modality?

H3a: Black students will experience higher suspension and expulsion rates than White students across all modalities in 2021 – 2022. Modality-associated increases in suspension will be concentrated among White students rather than Black students, as Black student suspension rates are already higher in ways that are embedded and modality-specific relational disruption cannot move them further.

H3b: The Black-White suspension gap will not widen significantly by modality once pre-pandemic baselines are controlled, reflecting the racial structure of exclusionary discipline is determined primarily by pre-existing structural conditions rather than learning modalities in 2020 – 2021.

DATA AND METHOD

This chapter utilizes nationally representative, school-level secondary data to examine how exclusionary disciplinary practices in U.S. public schools shifted following the COVID-19 pandemic and whether these patterns varied by pandemic-era instructional modality. The analysis draws primarily on data from the Civil Rights Data Collection (CRDC), supplemented with school-level demographic and contextual information from the National Center for Education

Statistics (NCES). Together, these data sources allow for a comprehensive examination of disciplinary practices across institutional contexts and student populations over time.

The primary data source for this study is the CRDC, a biennial survey administered by the U.S. Department of Education's Office for Civil Rights. The CRDC collects detailed information from nearly all U.S. public K-12 schools on a wide range of topics, including disciplinary actions, academic programming, and access to educational services. Importantly for this study, the CRDC provides school-level counts of exclusionary disciplinary outcomes disaggregated by race. This level of detail makes the CRDC particularly well suited for examining racialized patterns of exclusionary social control within schools. To contextualize disciplinary outcomes within broader institutional characteristics, this study incorporates additional school-level data from the NCES. Specifically, I use the Common Core of Data (CCD) to obtain information on school enrollment, racial and gender composition, grade level, and eligibility for free or reduced-price lunch, which serves as a proxy for socioeconomic disadvantage. I also draw on the Education Demographic and Geographic Estimates (EDGE) dataset to classify schools by locale. The NCES datasets were merged with the CRDC using stable NCES school identifiers, ensuring consistent linkage across data sources and over time.

This study utilizes seven waves of CRDC data: 2009 – 2010, 2011 – 2012, 2013 – 2014, 2015 – 2016, 2017 – 2018, 2020 – 2021, and 2021 – 2022, along with corresponding CCD and EDGE data for each wave. The five pre-pandemic waves (2009 – 2010 through 2017 – 2018) are used to establish baseline patterns and long-term trends in exclusionary discipline prior to COVID-19. These waves provide critical context for understanding how suspension and expulsion operated under relatively stable instructional conditions. The 2021 – 2022 CRDC wave captures disciplinary outcomes following the widespread return to in-person schooling

after the most disruptive phase of the pandemic. This wave serves as the primary outcome period for the analysis, allowing for an assessment of how exclusionary discipline in the post-pandemic period compares to pre-pandemic trends and varies across prior instructional arrangements. The 2017 – 2018 wave serves an additional role in the analysis as the source of lagged dependent variables.

The 2020 – 2021 CRDC wave occupies a distinct role in this study. During this academic year, schools experienced unprecedented disruption due to COVID-19, including prolonged closures and rapid shifts between instructional formats. While the CRDC collected suspension and expulsion data during this period, these measures are not used as outcomes in the present analysis due to substantial distortion from remote instruction and uneven reporting. Instead, the 2020 – 2021 wave is used exclusively to measure schools' learning modality during the height of the pandemic. This wave uniquely includes information on schools' primary learning modality, allowing schools to report whether instruction occurred fully in-person with safety measures, in a hybrid format, fully virtual, or with no change. Restricting the use of the 2020 – 2021 data to learning modality allows this study to leverage the novel institutional information introduced during the pandemic while avoiding measurement artifacts that would otherwise confound estimates of exclusionary discipline.

Dependent Variables

Following prior work on exclusionary discipline, this study examines two school-level outcomes capturing formal exclusionary disciplinary practices (i.e., suspension and expulsion rates). Both outcomes are constructed using school-level counts from the CRDC and

standardized by enrollment to generate rates per 100 students. Standardizing outcomes by enrollment facilitates comparison across schools of varying size and allows coefficients to be interpreted as differences in rates rather than raw counts.

Suspension

Suspension is operationalized as the total out-of-school suspension rate, measured as the combined number of students receiving one or more first or multiple out-of-school suspensions per 100 students enrolled in a school. Suspension represents a formal exclusionary disciplinary response and captures the extent to which schools rely on temporary removal from instructional settings to manage student behavior. Suspension rates are calculated for all students and disaggregated by race (Black and White students) to assess racial disparities in exclusionary discipline.

Expulsion

Expulsion is measured as the number of students expelled per 100 students enrolled in a school. The expulsion measure aggregates across three CRDC expulsion categories: expulsions under zero-tolerance policies, expulsions with educational services, and expulsions without educational services. Expulsion represents a more severe form of exclusionary discipline, involving longer-term or permanent removal from the school environment. Although expulsions occur less frequently than suspensions, they reflect a heightened institutional reliance on exclusion and provide an important indicator of the most punitive form of school-based

discipline. Like suspension rates, expulsion rates are examined for all students and disaggregated by race to evaluate racial disparities in severe exclusionary outcomes.

Independent Variables

Learning Modality

Learning modality is the key independent variable and captures the primary organizational structure of schooling during the 2020 – 2021 academic year. Because instructional format shapes opportunities for supervision and behavioral enforcement, and because it also structured the relational context through which teachers observed and interpreted student behavior, learning modality represents a key institutional condition through which exclusionary discipline may have been restructured following the pandemic. Learning modality is operationalized as a four-category nominal variable derived from the 2020 – 2021 CRDC: no change in instructional delivery (reference category), in-person with safety measures, fully virtual instruction, and hybrid instruction. To establish temporal ordering, learning modality is measured in 2020 – 2021 and used to predict suspension and expulsion rates in the 2021 – 2022 academic year. By restricting the outcome measures to the post-pandemic year, this design evaluates whether pandemic-era instructional arrangements are associated with subsequent variation in exclusionary discipline.

School-Level Controls

All multivariate models include a set of school-level covariates designed to account for differences in student composition and institutional context that prior research has shown to influence disciplinary practices. These controls include racial composition (percent Black enrollment), gender composition (percent male enrollment), socioeconomic disadvantage (percent of students eligible for free or reduced-price lunch), total student enrollment, school locale (urban, suburban, town, or rural, with urban as the reference category). The binary school level variable distinguishes elementary from secondary schools but does not differentiate between middle and high schools, which represent distinct institutional environments with meaningfully different disciplinary patterns. Including these control variables allows the analysis to isolate the association between learning modality and post-pandemic suspension and expulsion rates by accounting for demographic and contextual factors known to structure school discipline. In doing so, the models distinguish modality-associated variation in exclusionary discipline from longer-standing institutional inequalities embedded within school contexts.

Analytic Sample

The analytic sample includes all U.S. public K-12 schools that reported complete data across the relevant CRDC waves and could be consistently linked using NCES school identifiers. Restricting the sample to schools that appear in all seven waves ensures comparability over time and allows for the examination of both pre-pandemic trends and post-pandemic outcomes within the same institutional units. Schools with missing data on key variables were excluded from the analysis. Both elementary and secondary schools are included to capture variation in how exclusionary discipline operates across grade levels, and school level is controlled for in all

multivariate models. It is important to note that the binary elementary/secondary classification used here collapses meaningful variation within the secondary category: middle schools and high schools differ substantially in disciplinary practices, organizational structure, and student developmental context. Additionally, alternative schools, which typically serve students with prior disciplinary involvement and tend to have elevated discipline rates, were not separately identified in this analysis. Future work should examine how their inclusion affects modality-specific estimates. After applying these inclusion criteria, the final analytical sample consists of 42,988 schools.

ANALYTICAL PLAN

I begin with descriptive analyses to establish baseline levels of exclusionary discipline and document post-pandemic changes. Specifically, I examine school-level suspension and expulsion rates across six waves of nationally linked administrative data (CRDC 2009 – 2010 through 2017 – 2018 and 2021 – 2022), excluding the 2020 – 2021 wave from trend figures due to substantial measurement distortion during the pandemic year. Mean rates per 100 students are presented for all students and separately for Black and White students, as well as the racial gaps between Black and White students within schools. These descriptive statistics provide a foundation for understanding both the overall and the racially stratified patterns of suspension and expulsion surrounding the pandemic. Prior to multivariate modeling, pairwise t-tests are used to assess whether mean suspension and expulsion rates differ significantly across learning modalities, using the no-change category as the reference. These tests are conducted separately

for total, Black student, and White student rates for both suspension and expulsion outcomes. Results are reported in Table 2.2.

To assess the relationship between pandemic-era instructional arrangements and subsequent exclusionary disciplinary outcomes, I estimate cross-sectional ordinary least squares (OLS) regression models predicting school-level suspension and expulsion rates in the 2021 – 2022 academic year. Schools' dominant learning modality during the 2020 – 2021 academic year is included as a lagged explanatory variable, ensuring temporal ordering between instructional modality and post-pandemic disciplinary outcomes. To assess change in disciplinary outcomes rather than levels, each regression model also includes the school's corresponding discipline rate from the 2017 – 2018 academic year as a lagged dependent variable. This approach controls for each school's pre-existing disciplinary patterns before the pandemic, allowing the modality coefficients to be interpreted as the association between learning modalities and the change in discipline rates in 2021 – 2022 relative to pre-pandemic baselines. Schools without a 2017 – 2018 match are excluded from regression models but retained in descriptive analyses. Following model estimation, predictive margins are used to generate adjusted predicted rates of suspension and expulsion across learning modalities, providing a clear illustration of the practical magnitude of modality differences net of school-level controls.

To evaluate racial disparities, I estimate race-stratified models for Black and White students separately, as well as models predicting the Black-White gap in suspension and expulsion rates within schools. The racial gap is operationalized as the difference between Black and White student rates within each school (Black rate minus White rate), such that positive values indicate higher rates for Black students and negative values indicate higher rates for White students. Each gap model also includes the corresponding 2017 – 2018 racial gap as a

lagged dependent variable, controlling for pre-existing racial disparities in discipline prior to the pandemic. These analyses test whether the association between learning modality and disciplinary outcomes differs for Black and White students, directly addressing the research questions concerning the intersection of pandemic-era schooling and racialized patterns of exclusionary discipline. The full regression models are expressed as:

$$Y_i = \alpha + \beta_1 MODALITY_i + \beta_2 Y_{i,2018} + \beta_3 SCHOOLCHAR_i + \varepsilon_i$$

where Y_i represents the rate of suspensions or expulsions per 100 students in school i in 2021–2022, $MODALITY_i$ is a matrix of dummy variables representing the school's dominant learning modality during the 2020–2021 academic year (with no change as the reference category), $Y_{i,2018}$ is the corresponding school-level discipline rate in 2017–2018, $SCHOOLCHAR_i$ is a matrix of school-level demographic controls, α is the intercept, and ε_i is the error term. Models are estimated using OLS with standard errors clustered at the district level to account for non-independence among schools operating within the same administrative context. This analytic approach allows for a comprehensive examination of both overall and racially stratified disciplinary outcomes in 2021–2022, while accounting for pre-pandemic discipline levels and ensuring robust, interpretable estimates of the association between pandemic-era learning modalities and post-disruption exclusionary discipline. All analyses are conducted using Stata 19.

RESULTS

Descriptive Statistics

On average, schools enroll approximately 556 students. Across schools, 15.47% of students are Black, and 48.67% qualify for free or reduced-price lunch, indicating that many schools in the sample serve populations experiencing socioeconomic disadvantage. Suspension rates average 4.83 per 100 students overall, though Black students experience disproportionately higher rates (8.64 per 100 students) than White students (4.31 per 100 students). Expulsion rates are lower overall, averaging 0.26 per 100 students, with similar racial disparities: Black students are expelled at higher rates (0.44 per 100) than White students (0.21 per 100). Schools varied substantially in instructional delivery during the 2020 – 2021 academic year. Hybrid instruction was by far the most common model, reported by 92.66% of schools, while smaller shares reported fully virtual instruction (3.96%), in-person with safety measures (3.09%), or no change in instructional delivery (0.30%). Most schools in the sample are elementary schools (62.82%), with the remainder classified as secondary schools (37.18%). Schools are distributed across geographic locales, including urban (31.02%), suburban (37.46%), town (11.18%), and rural (20.33%). Additional school characteristics are summarized in Table 2.1

Table 2.1. Descriptive Statistics

Variable	Mean	SD
Suspension Rate (per 100 students)		
Total	4.83	12.08
Black Students	8.64	18.76
White Students	4.31	25.33
Expulsion Rate (per 100 students)		
Total	0.26	3.50
Black Students	0.44	7.30
White Students	0.21	2.87
Learning Modality		

No Change	0.30%	
In-Person w/ Safety	3.09%	
Virtual Only	3.96%	
Hybrid	92.66%	
School Characteristics		
Percent Black	15.47	22.32
Percent Male	51.82	5.26
Percent Free/Reduced Lunch	48.70	29.38
Total Enrollment	556.10	486.12
Elementary	62.82%	
Secondary	37.18%	
School Locale		
Urban	30.49%	
Suburban	37.89%	
Town	11.07%	
Rural	20.54%	

Note: N = 42,988. Descriptive statistics pooled across all seven waves.

Descriptive statistics are also organized by learning modality. These instructional arrangements represent distinct institutional contexts that structured opportunities for student supervision, interaction, and behavioral monitoring during the COVID-19 pandemic. Organizing descriptive statistics by learning modality allows for an initial assessment of how schools differed across key characteristics prior to modeling disciplinary outcomes. Differences in means across modalities were assessed using pairwise t-tests comparing each modality to the no-change reference category. Table 2.2 presents descriptive statistics by learning modality, highlighting variation in suspension rates, expulsion rates, school demographics, enrollment, and geographic context across instructional formats. Across modalities, suspension rates are substantially higher than expulsion rates, reflecting the more severe and less frequently used nature of expulsions.

Racial disparities in exclusionary discipline are evident across instructional contexts. For Black students, suspension rates range from 7.26 per 100 students in schools reporting no change in instructional delivery to 9.14 in fully virtual schools, compared to rates of 3.21 – 4.95 per 100 students for White students. A similar pattern appears for expulsions, with Black students consistently experiencing higher expulsion rates than White students across learning modalities (0.34 – 0.72 for Black students, 0.21 – 0.23 for White students).

School demographic composition also varies across learning modalities. Schools operating fully virtual during the 2020 – 2021 academic year served the highest average proportion of Black students (17.79%), followed by hybrid schools (15.61%), compared to schools reporting no change (9.20%) or in-person instruction with safety measures (9.38%). Similarly, the proportion of students qualifying for free or reduced-price lunch was highest in fully virtual schools (56.43%) and lowest in schools with no change in learning modality (38.61%). Hybrid instruction was the most common learning modality during the pandemic (92.66% of schools), consistent with national patterns of partial reopening strategies. Schools also differed across modalities in terms of enrollment and geographic context. Fully virtual schools and hybrid schools tended to enroll more students on average (589 and 556 students, respectively) than schools reporting no change (398 students) or in-person with safety measures (334). In terms of school level, elementary schools were most common among hybrid (63%) and virtual schools (63%), while no-change schools had a higher proportion of secondary schools (54%). Geographic distribution also varied: schools reporting no change were disproportionately rural (58%), in-person with safety schools were similarly rural-heavy (48%), while fully virtual schools were more likely to be urban (28%) or suburban (51%), and hybrid schools were primarily urban (31%) or suburban (38%).

In sum, these descriptive patterns reveal that schools did not enter the 2020 – 2021 academic year from equivalent institutional positions, and modality was not randomly distributed across school contexts. Fully virtual schools disproportionately served higher proportions of Black students and students experiencing economic disadvantage, and were concentrated in urban and suburban areas. Schools reporting no change in instructional delivery were predominantly rural and served less disadvantaged populations. Hybrid schools were compositionally similar to the full sample average. These pre-existing differences in student composition and institutional context underscore the importance of controlling for school-level characteristics when examining how learning modality shaped subsequent disciplinary outcomes.

Table 2.2. Descriptive Statistics by Learning Modality

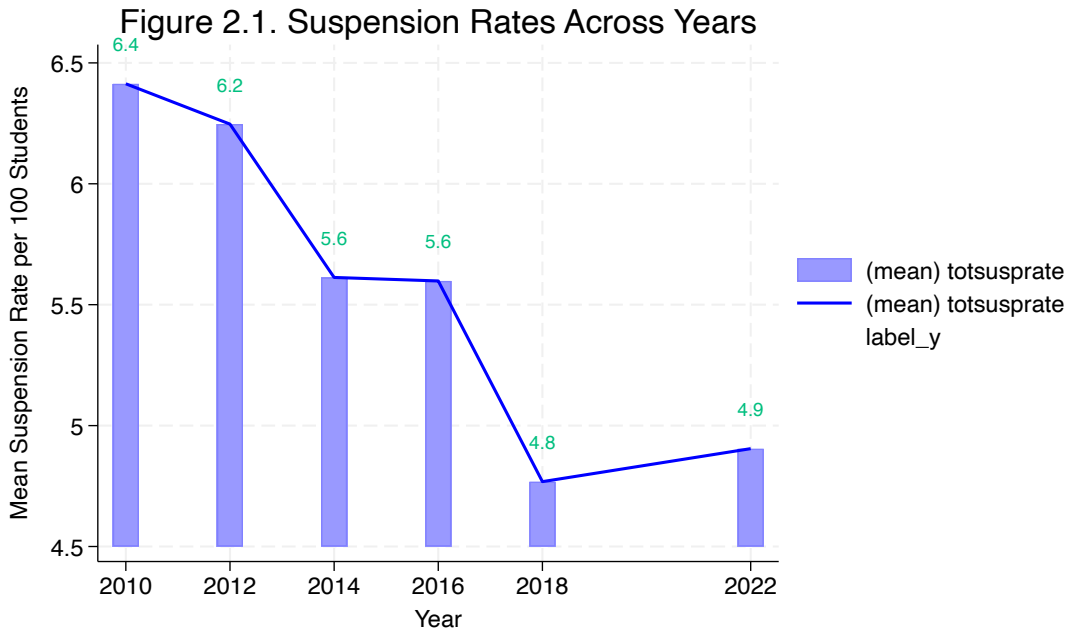
	No Change		In-Person w/ Safety		Virtual Only		Hybrid	
Variable	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**	**Mean**	**SD**
Suspension Rate (per 100 Students)								
Total	3.51	6.96	4.14†	10.09	5.29††	10.11	4.84†	12.24
Black Students	7.26	19.28	8.27	20.29	9.14	17.76	8.63	18.14
White Students	3.21	8.57	3.51†	10.11	4.95†	12.25	4.31††	26.14
Expulsion Rate (per 100 Students)								
Total	0.35	2.83	0.33	2.92	0.12†	1.06	0.27	3.57
Black Students	1.04	9.60	0.56	4.40	0.30†	2.86	0.47	4.42
White Students	0.18	1.25	0.26	2.81	0.13	1.64	0.20	1.94
School Characteristics								
Percent Black	9.20	21.86	9.38	17.03	17.79	27.01	15.61	22.23
Percent Male	51.69	9.36	52.67	8.11	51.90	5.33	51.79	5.12
Percent Free/Reduced Lunch	39.18	27.17	44.55	26.18	56.23	30.27	48.54	29.40
Total Enrollment	397.60	1055.29	333.75	349.86	589.28	547.04	562.60	482.78
Elementary	46%		60%		63%		63%	
Secondary	54%		40%		37%		37%	
Locale								
Urban	6%		12%		28%		31%	
Suburban	15%		16%		51%		38%	
Town	21%		24%		8%		11%	
Rural	58%		48%		13%		20%	

Note: Descriptive statistics pooled across all waves. T-test significance versus No Change reference category: †p<0.05; ††p<0.01. T-tests conducted on 2021–22 wave only.

Descriptive Trends in Exclusionary Discipline

Suspensions

Figure 2.1 displays the mean school-level suspension rates per 100 students across six waves of nationally linked administrative data spanning the pre-pandemic and post-disruption periods (2009 – 2010 through 2021 – 2022). Rates are averaged across schools in each wave, excluding the 2020 – 2021 academic year to avoid conflating emergency remote instruction with longer-term disciplinary patterns. Across the pre-pandemic period, suspensions per 100 students, which decreased to 6.2 in 2011 – 2012, and further declined to 5.6 in both 2013 – 2014 and 2015 – 2016. By 2017 – 2018, the mean suspension rate reached 4.8 per 100 students, representing a substantial decline relative to the beginning of the decade. In 2021 – 2022, suspension rates increased modestly to 4.9 per 100 students. While this represents a slight uptick relative to 2017 – 2018, rates remain well below levels observed in earlier waves. The 2017 – 2018 rate serves as the pre-pandemic baseline for the regression models that follow, making the comparison between 2017 – 2018 and 2021 – 2022 levels particularly relevant for interpreting modality effects. Overall, these descriptive trends confirm that school-level suspension rates followed a generally declining trajectory across the decade, with the 2021 – 2022 period representing a modest uptick from an already reduced baseline rather than a return to earlier levels. These patterns provide important context for the regression analyses, which assess whether variation in 2020 – 2021 learning modality is associated with changes in suspension rates in 2021 – 2022 relative to pre-pandemic baselines.

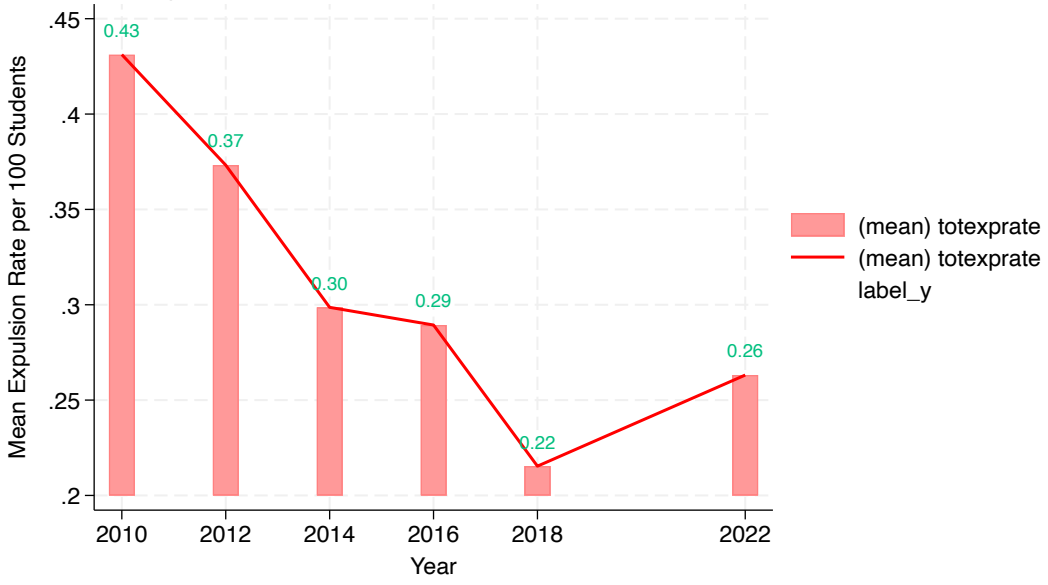


Expulsions

Figure 2.2 presents mean school-level expulsion rates per 100 students across the same six analytical waves. As with suspension rates, values are averaged across schools within each year and exclude the 2020 – 2021 academic year. Expulsion rates declined across the pre-pandemic period, though they remain substantially lower in absolute terms than suspension rates. In 2009 – 2010, schools averaged 0.49 expulsions per 100 students, which decreased to 0.45 in 2011 – 2012, 0.38 in 2013 – 2014, and 0.34 in 2015 – 2016, before reaching 0.25 in 2017 – 2018, pandemic baseline used in regression models. The pre-pandemic trend thus reflects a gradual but consistent reduction in the use of expulsion as a disciplinary response. In 2021 – 2022, expulsion rates show a modest increase to 0.30 per 100 students. Although this represents an uptick relative to the 2017 – 2018 baseline, expulsion rates remain well below levels observed at the start of the decade. The direction of change differs slightly from suspension: while both measures increased

from their 2017 – 2018 baselines, expulsion shows a proportionally larger increase relative to its lower starting point. These trends provide contextual grounding for the regression analyses examining whether variation in 2020 – 2021 learning modality is associated with post-disruption disciplinary outcomes and racial disparities.

Figure 2.2. Expulsion Rates Across Years



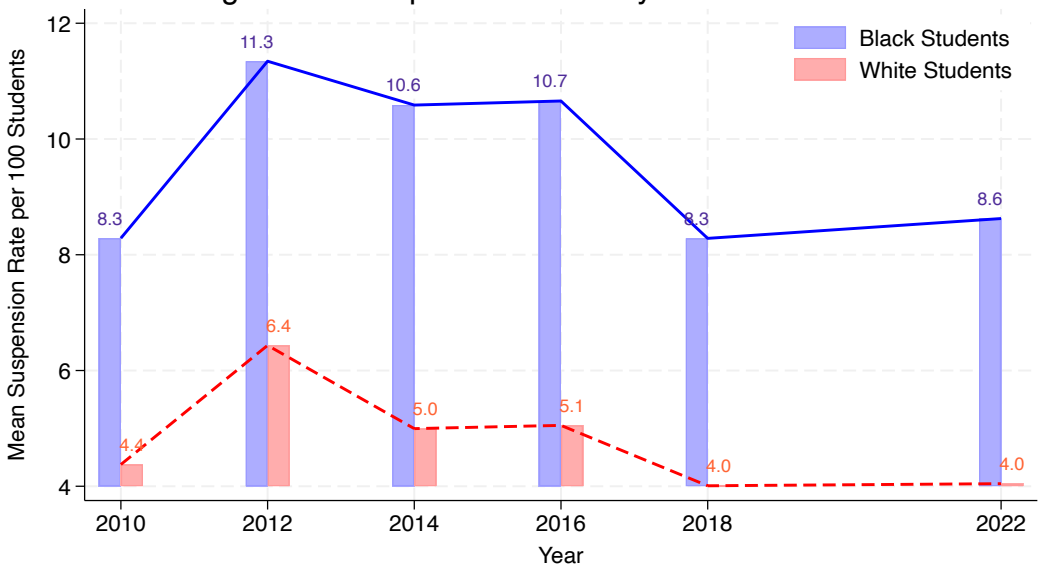
Descriptive Trends in Suspension and Expulsion by Race

Suspension

Figure 2.3 displays mean school-level suspension rates per 100 students by race across six waves, excluding 2020 – 2021. Black students experienced substantially higher suspension rates than White students throughout all six waves, demonstrating the persistence of racial disparities in exclusionary discipline. In 2009 – 2010, Black students had a mean suspension rate of 8.3 per 100 students, compared to 4.4 for White students, a ratio of approximately 1.9 to 1. Black students' rates increased to 11.3 in 2011 – 2012 and remained elevated at 10.6 in 2013 –

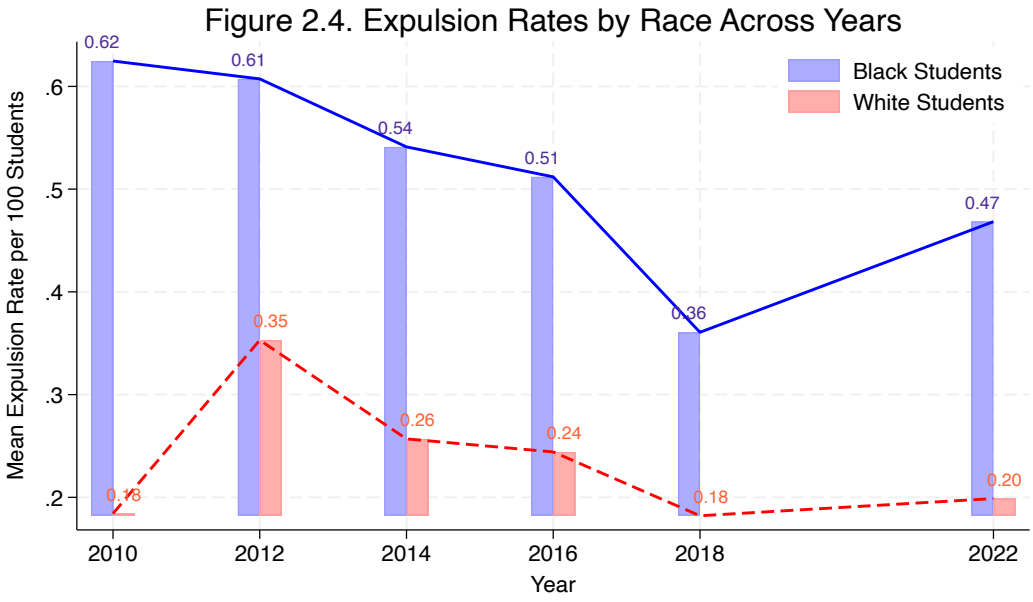
2014 and 10.7 in 2015 – 2016 before declining to 8.3 in 2017 – 2018. White students' rates followed a similar but consistently lower trajectory, rising from 4.4 in 2009 – 2010 to 6.4 in 2011 – 2012, stabilizing around 5.0 in 2013 – 2014 and 2015 – 2016, and declining to 4.0 in 2017 – 2018. In 2021 – 2022 suspension rates were 8.6 per 100 students for Black students and 4.0 for White students, a ratio of roughly 2.2 to 1. The Black-White suspension gap thus widened slightly in the post-disruption period relative to the 2017 – 2018 baseline, where the gap stood at 4.3 percentage points. By 2021 – 2022 the gap had grown to 4.6 percentage points. This widening is modest but substantively meaningful, it suggests that the return to in-person schooling did not reduce racial disparities in suspension and may have slightly amplified them. The magnitude of this gap, and whether it varied across prior learning modalities, is a central question addressed in the regression analyses that follow. While suspension rates for both racial groups declined over time relative to the early 2010s peak, the structure of racial inequality in exclusionary discipline remained intact across both pre-pandemic and post-disruption contexts.

Figure 2.3. Suspension Rates by Race Across Years



Expulsion

Figure 2.4 presents the mean school-level expulsion rates per 100 students by race across the same six analytic waves. Although expulsion rates are substantially lower in magnitude than suspension rates, racial disparities remain evident. In 2009 – 2010, Black students experienced a mean expulsion rate of 0.62 per 100 students, compared to 0.18 for White students, a ratio of approximately 3.4 to 1. Black students' rates remained elevated at 0.61 in 2011 – 2012, while White students' rates increased to 0.35. Expulsion rates declined for both groups. By 2013 – 2014 and 2015 – 2016, Black students' rates had fallen to 0.54 and 0.51 respectively, while White students' rates declined to 0.26 and 0.24. In 2017 – 2018, expulsion rates reached their lowest observed levels for Black students (0.36) and White students (0.18), a ratio of 2.0 to 1. In 2021 – 2022, expulsion rates increased modestly for both groups. Black students' rates rose to 0.47 per 100 students and White students' rates increased to 0.20, a ratio of 2.4 to 1. The Black-White expulsion gap was 0.18 percentage points in 2017 – 2018 and widened to 0.27 percentage points in 2021 – 2022, suggesting that Black students experienced a proportionately larger increase in expulsion rates relative to their White peers following the return to in-person schooling. As with suspension, the magnitude and modality-specific variation of this gap are examined in subsequent regression analyses. Racial disparities in the most severe form of exclusionary discipline persisted across both pre-pandemic and post-disruption periods, with the gap widening modestly in 2021 – 2022. Together, these descriptive trends establish the empirical foundation for regression analyses assessing whether pandemic-era learning modalities are associated with post-disruption disciplinary outcomes and racial disparities.



Multivariate Regression Results

Suspension Rates by Learning Modality

Table 2.3 presents results from an OLS regression estimating school-level suspension rates per 100 students in 2021 – 2022. The primary independent variable is learning modality during the 2020 – 2021 academic year, with no-change schools as the reference category. All models include the school's 2017 – 2018 suspension rate as a lagged dependent variable, controlling for pre-pandemic disciplinary baselines and allowing the modality coefficients to be interpreted as associations with change in suspension rates relative to where schools started before the pandemic. Models also control for school level, racial composition, gender composition, socioeconomic disadvantage, total enrollment and locale. After accounting for pre-pandemic suspension levels, learning modality during the pandemic year is associated with

suspension rates in 2021 – 2022, though the pattern is more modest than models without the lagged control. Schools that utilized hybrid models experienced suspension rates 1.45 incidents per 100 students higher than no change schools ($p = 0.037$). In-person with safety modification schools showed a marginally significant positive association ($b = 1.37$, $p = 0.057$). Finally, schools that utilized virtual-only modalities did not differ significantly from no-change schools ($b = 0.69$, $p = 0.344$). These findings provide partial support for H2, that suspension rates in 2021 – 2022 varied by prior learning modality, but only schools that utilized hybrid learning showed a clear and statistically significant association after controlling for pre-pandemic levels. The non-significant virtual coefficient suggests that the higher raw suspension rates observed in virtual schools in the descriptive statistics largely reflect pre-existing characteristics of those schools rather than modality-specific effects on disciplinary change. It is important to note that the unequal distribution of schools across the learning modalities, with hybrid schools comprising 92.66% of the analytic sample, means that the comparisons involving smaller learning modality groups, virtual and in-person with safety measures, are underpowered. The null findings for schools that were virtual or in-person with safety measures should be interpreted with caution as the low significance may be due to the overshadowing but not of the absence of a true association.

The lagged 2017 – 2018 suspension rate is a strong predictor of 2021 – 2022 rates ($b = 0.67$, $p < 0.001$), confirming that prior disciplinary patterns explain substantial variation in post-disruption outcomes. Among the remaining controls, school level is the strongest predictor with secondary schools having suspension rates 2.65 per 100 students higher than elementary schools ($p < 0.001$). Racial composition is positively associated with suspension showing that for each percentage point increase in Black student enrollment corresponds to a 0.04 increase in

suspension rates ($p < 0.001$). Male enrollment is also positively associated ($b = 0.11$, $p < 0.01$). Socioeconomic disadvantage, total enrollment, and locale do not reach significance after accounting for pre-pandemic levels and other controls. These findings indicate that pandemic-era learning modality is associated with post-disruption exclusionary discipline even after controlling for where schools started, though the effects are smaller and less consistent across modalities than models without the lagged control suggest. The hybrid modality shows the clearest association with elevated 2021 – 2022 suspension rates, while virtual and in-person with safety measure schools do not differ significantly from no-change schools once pre-pandemic baselines are accounted for.

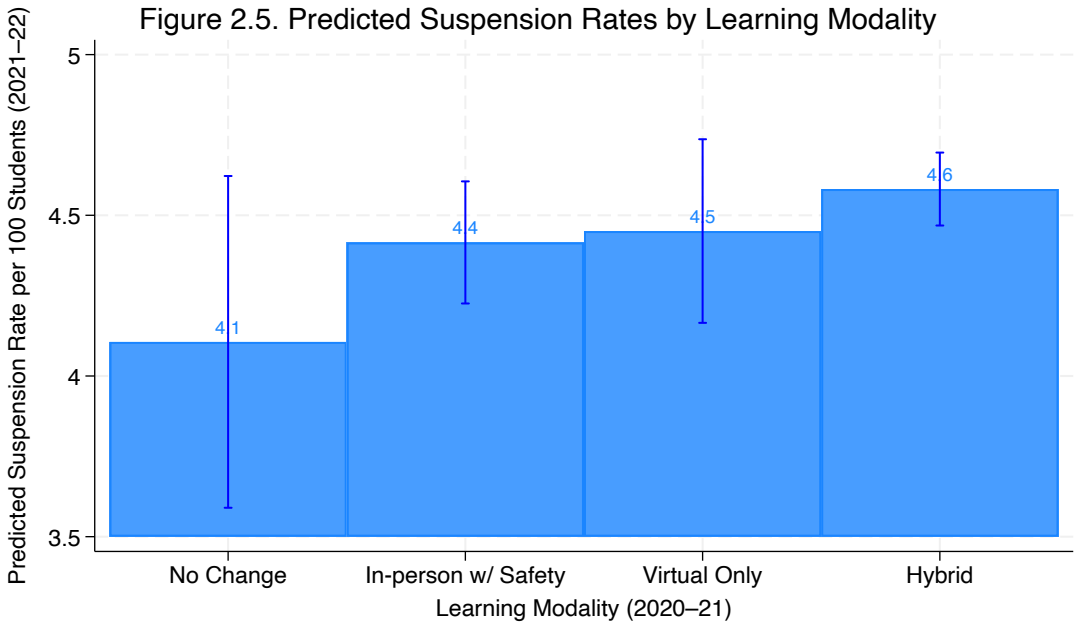
Table 2.3. OLS Regression of Suspension Rates in 2021–2022 by Learning Modality Utilized in 2020–2021

Variable	Suspension (per 100 Students)
Learning Modality (No Change Reference)	
In-Person w/ Safety	1.37
	(0.72)
Virtual Only	0.69
	(0.73)
Hybrid	1.45*
	(0.69)
Pre-Pandemic Control	
Suspension Rate (2017–18)	0.67***
	(0.05)
School Characteristics	
Percent Black Enrollment	0.04***
	(0.01)
Percent Male Enrollment	0.11**
	(0.04)
Percent Free/Reduced Lunch	0.00

	(0.00)
Total Enrollment	-0.00
	(0.00)
School Level (Elementary Reference)	
Secondary	2.65***
	(0.32)
Locale (Urban Reference)	
Suburban	-0.05
	(0.21)
Town	0.28
	(0.26)
Rural	0.06
	(0.25)

Note: N = 41,687. Robust standard errors clustered at district level in parentheses. $R^2 = 0.383$.
*p<0.05; **p<0.01; ***p<0.001

Figure 2.5 displays the adjusted predicted suspension rates by learning modality. After holding all covariates at their observed values, schools reporting no change due to learning modalities had a predicted suspension rate of 3.3 per 100 students. Predicted rates were higher for schools that utilized in-person with safety measures (4.7), virtual-only (4.0), and hybrid (4.8). The difference between hybrid and no-change schools is statistically significant, the others are not. These predicted values are higher than those from models without the lagged dependent variable because they reflect adjusted levels rather than pure change estimates, but they tell a consistent story, that schools that utilized hybrid learning showed the largest modality-associated increase in suspension rates in 2021 – 2022.



Expulsion Rates by Learning Modality

Table 2.4 presents the OLS regression results estimating school-level expulsion rates in 2021 – 2022, using the same specification as the suspension models with the addition of the 2017 – 2018 expulsion rate as a lagged control. Learning modality during the 2020 – 2021 is not significantly associated with post-disruption expulsion rates across any modality. Relative to schools that indicated no-change, in-person with safety measures (b = 0.15), virtual-only (b = -0.01), and hybrid schools (b = 0.11) do not differ significantly in expulsion rates in 2021 – 2022. These null findings are consistent with results from models without the lagged control and reinforce the conclusion that expulsion was not systematically reshaped by the learning modalities utilized in the 2020 – 2021 academic year. The lagged 2017 – 2018 expulsion rate is a significant predictor (b = 0.20, $p < 0.001$), confirming persistence in expulsion patterns over time. School level remains a strong predictor, secondary schools have expulsion rates 0.36 per 100 students higher than elementary schools ($p < 0.001$). Racial composition (b = 0.004, p <

0.001), male enrollment (b = 0.02, p < 0.001), and socioeconomic disadvantage (b = 0.001, p < 0.05) are all positively associated with expulsion. Rural schools have significantly higher expulsion rates than urban schools (b = 0.10, p < 0.01), while suburban and town schools do not differ significantly from urban schools after accounting for pre-pandemic levels. These results confirm that learning modalities during the 2020 – 2021 academic year had no measurable association with post-disruption expulsion practices. The contrast with the suspension findings underscores that these two forms of exclusionary discipline respond differently to institutional disruption, routine suspension is more sensitive to the relational and organizational changes introduced by different modalities, while expulsion, as a more extreme and discretionary measure, appears to be largely unaffected.

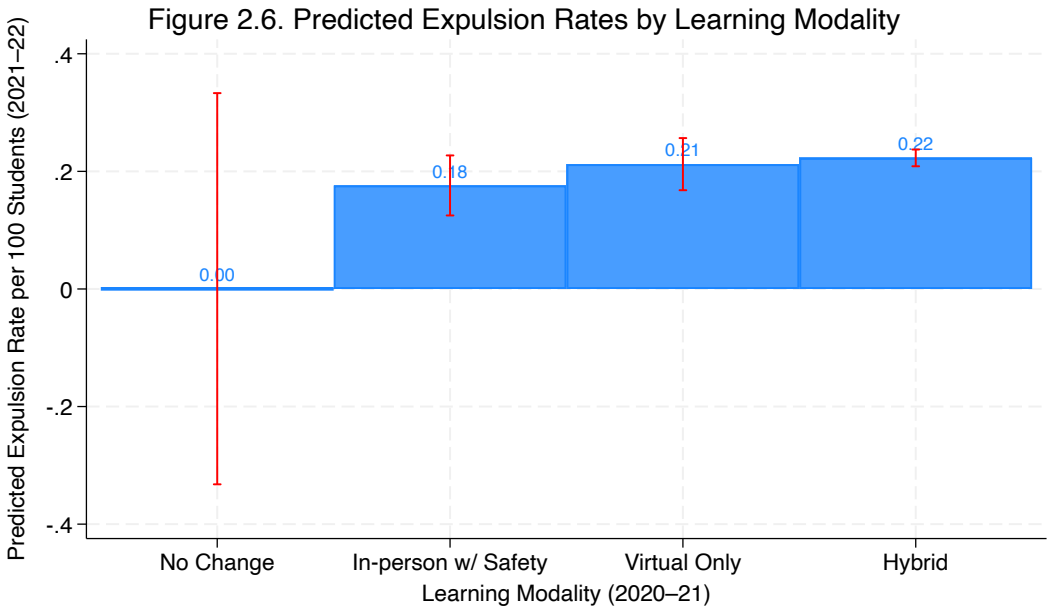
Table 2.4. OLS Regression of Expulsion Rates in 2021 – 2022 by Learning Modality Utilized in 2020 - 2021

Variable	Expulsion (per 100 Students)
Learning Modality (No Change Reference)	
In-Person w/ Safety	0.15
	(0.28)
Virtual Only	-0.01
	(0.26)
Hybrid	0.11
	(0.26)
Pre-Pandemic Control	
Expulsion Rate (2017–18)	0.20***
	(0.05)
School Characteristics	
Percent Black Enrollment	0.00***
	(0.00)
Percent Male Enrollment	0.02***
	(0.01)
Percent Free/Reduced Lunch	0.00*

	(0.00)
Total Enrollment	-0.00
	(0.00)
School Level (Elementary Reference)	
Secondary	0.36***
	(0.03)
Locale (Urban Reference)	
Suburban	0.04
	(0.03)
Town	0.06
	(0.04)
Rural	0.10**
	(0.04)

Note: N = 41,687. Robust standard errors clustered at district level in parentheses. $R^2 = 0.046$. No modality coefficients are statistically significant. *p<0.05; **p<0.01; ***p<0.001

Figure 2.6 displays adjusted predicted expulsion rates by modality. Schools that did not change their learning have a predicted rate of 0.11 per 100 students. Predicted rates for other modalities are 0.26 for in-person with safety measures, 0.10 for schools that were virtual, and 0.23 for schools that utilized hybrid learning. None of these differences are statistically distinguishable from the no-change reference group, consistent with the regression results.



Learning Modality and Race

Table 2.5 presents OLS regression results estimating suspension and expulsion rates separately for Black and White students in 2021 – 2022, with each model including the corresponding race-specific 2017 – 2018 rate as a lagged control. These analyses directly address whether the association between pandemic-era learning modality and post-disruption discipline differed by student race. For Black students, none of the modality coefficients for suspension reach conventional levels of statistical significance after accounting for pre-pandemic rates. Schools that were hybrid show the largest positive association (b = 2.90), but is not significant. Schools that were in-person with safety measures (b = 2.63) and virtual (b = 2.28) are also not significant. The lagged 2017 – 2018 Black suspension rate is a strong predictor (b = 0.40), $p < 0.001$), suggesting that pre-existing disciplinary patterns account for much of the variation in Black student suspension rates in 2021 – 2022. Modality is not significantly associated with Black student expulsion rates for any learning modality.

For White students, the modality pattern is more clear. After controlling for pre-pandemic White student suspension rates, all three learning modalities are significantly associated with higher 2021 – 2022 suspension rates relative to schools that did not change their learning due to the pandemic, Schools that were in-person with safety measures ($b = 1.84$), virtual ($b = 1.75$) and hybrid ($b = 2.23$), are all statistically significant. White student expulsion rates also show significant modality associations with in-person with safety measure schools ($b = 0.31$), and hybrid ($b = 0.24$) are statistically significant while virtual-only schools were not. This pattern, modality effects significant for White students but not for Black students, is an important finding that warrants careful interpretation. It does not mean Black students were unaffected by modality. The descriptive statistics show Black students had higher raw suspension rates in every modality. Rather, the regression results suggest that once pre-pandemic Black student suspension rates are controlled, the modality-specific change is not statistically distinguishable across modalities. Black students' suspension rates were already elevated before the pandemic and remained elevated after it, with less modality-specific variation in the change. White students, by contrast, show modality-associated increases in suspension rate above and beyond their pre-pandemic baselines, suggesting that the return to in-person schooling after different pandemic modalities was associated with increases in White student suspension that go beyond pre-existing patterns.

School-level controls are significant across both racial groups. Secondary schools have substantially higher suspension rates for both Black ($b = 7.92$, $p < 0.001$) and White students ($b = 3.65$, $p < 0.001$). Racial composition, male enrollment, and socioeconomic disadvantage are all positively associated with both groups' suspension rates, though coefficients are smaller after adding the lagged control. School size is negatively associated with Black student suspension ($b = -0.001$, $p < 0.01$) and White student suspension ($b = -0.001$, $p < 0.001$).

Table 2.5. OLS Regression of Suspension and Expulsion Rates in 2021–2022 by Learning Modality and Race

	Black Students		White Students	
Variable	**Suspension**	**Expulsion**	**Suspension**	**Expulsion**
Learning Modality (No-Change Reference)				
In-Person w/ Safety	2.63	-1.21	1.84***	0.31**
	(3.37)	(1.86)	(0.50)	(0.12)
Virtual Only	2.28	-1.33	1.75**	0.15
	(3.34)	(1.85)	(0.56)	(0.08)
Hybrid	2.90	-1.22	2.23***	0.24**
	(3.30)	(1.85)	(0.45)	(0.07)
Pre-Pandemic Controls				
Corresponding 2017–18 Rate	0.40***	0.14**	0.36***	0.09**
	(0.04)	(0.05)	(0.03)	(0.03)
School Characteristics				
Percent Black Enrollment	0.05***	0.00	0.04***	0.00*
	(0.01)	(0.00)	(0.00)	(0.00)
Percent Male Enrollment	0.24***	0.03**	0.15***	0.02***
	(0.07)	(0.01)	(0.03)	(0.01)
Percent Free/Reduced Lunch	0.01**	0.00**	0.01***	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)
Total Enrollment	-0.00**	-0.00	-0.00***	-0.00†
	(0.00)	(0.00)	(0.00)	(0.00)
School Level (Elementary Reference)				
Secondary	7.92***	0.72***	3.65***	0.32***
	(0.59)	(0.07)	(0.26)	(0.03)
Locale (Urban Reference)				
Suburban	-0.01	0.07	-0.12	0.02
	(0.50)	(0.06)	(0.25)	(0.03)
Town	0.90	0.21*	0.53	0.07
	(0.64)	(0.09)	(0.31)	(0.04)
Rural	0.32	0.24**	0.05	0.06
	(0.62)	(0.09)	(0.29)	(0.03)

Note: N = 37,965 (Black); N = 41,105 (White). Robust standard errors clustered at district level in parentheses. No modality coefficients are statistically significant for Black students. *p<0.05; **p<0.01; ***p<0.001

Predicted margins further illustrate the racial patterns. For Black students, predicted suspension rates are 5.8 in schools that did not change their learning modality, 8.4 in schools that were in-person with safety measures, 8.0 in virtual-only schools, and 8.7 in hybrid schools. While the rank ordering is consistent with higher rates in schools that had different learning modalities, none of these differences from no-change schools are statistically significant after accounting for pre-pandemic levels. For White students, predicted suspension rates are 1.7 in no-change schools, 3.6 in schools that were in-person with safety measures, 3.5 in virtual schools, and 4.0 in schools that were hybrid which were all significantly higher than no-change schools. Across all modalities, predicted suspension rates remain consistently and substantially higher for Black students than for White students, reinforcing the persistence of racial disparities in post-disruption discipline regardless of instructional context. For expulsion, predicted margins show minimal variation by modality for both groups, with most predicted values near or below 0.5 per 100 students. Black student predicted expulsion rates are 1.6 in no-change schools and range from 0.3 to 0.4 in the other learning modalities, consistent with the non-significant and negative modality coefficients. White student predicted expulsion rates range from near zero in no-change schools to approximately 0.24 in in-person with safety measures schools. These low values reflect the rarity of expulsion and reinforce that modality had little measurable association with expulsion for either group.

Figure 2.7. Black Student Suspension by Learning Modality

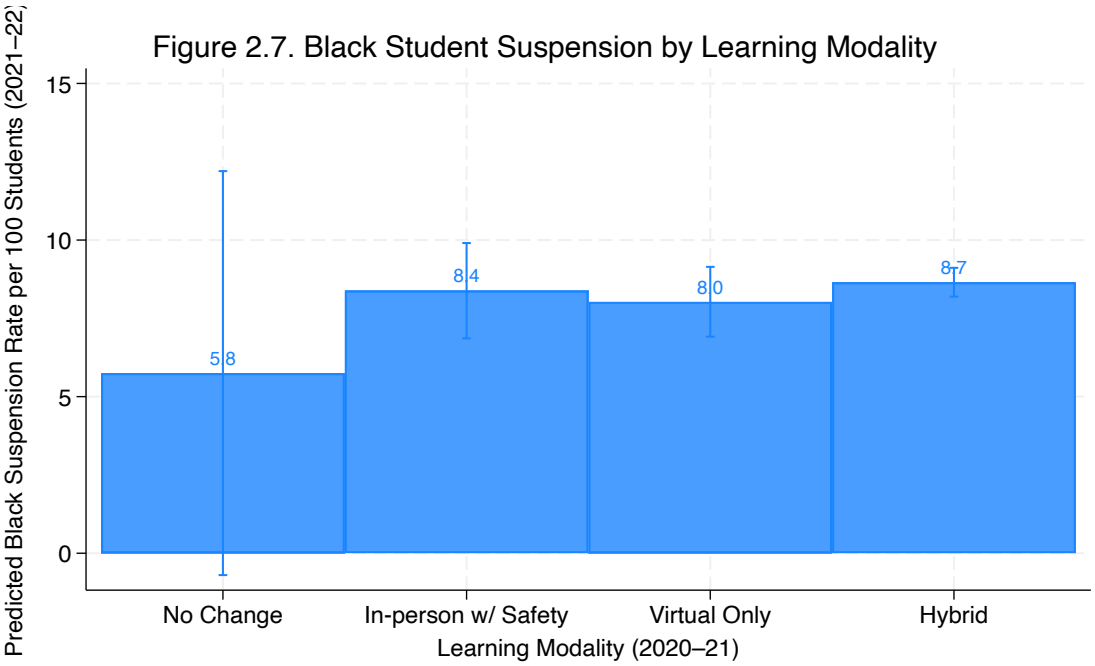
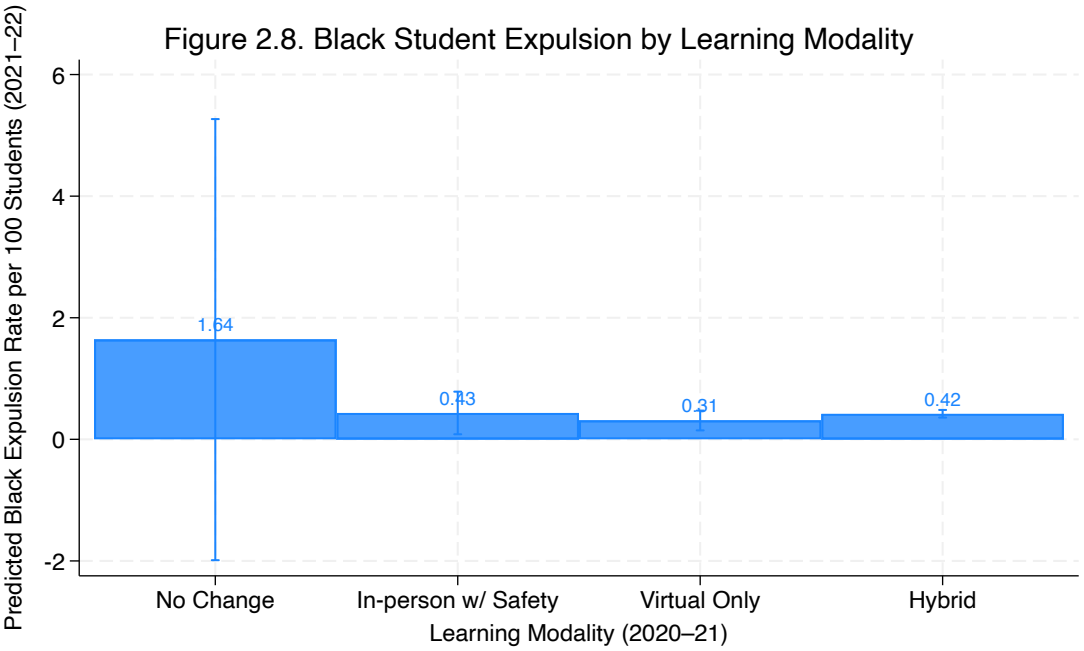


Figure 2.8. Black Student Expulsion by Learning Modality



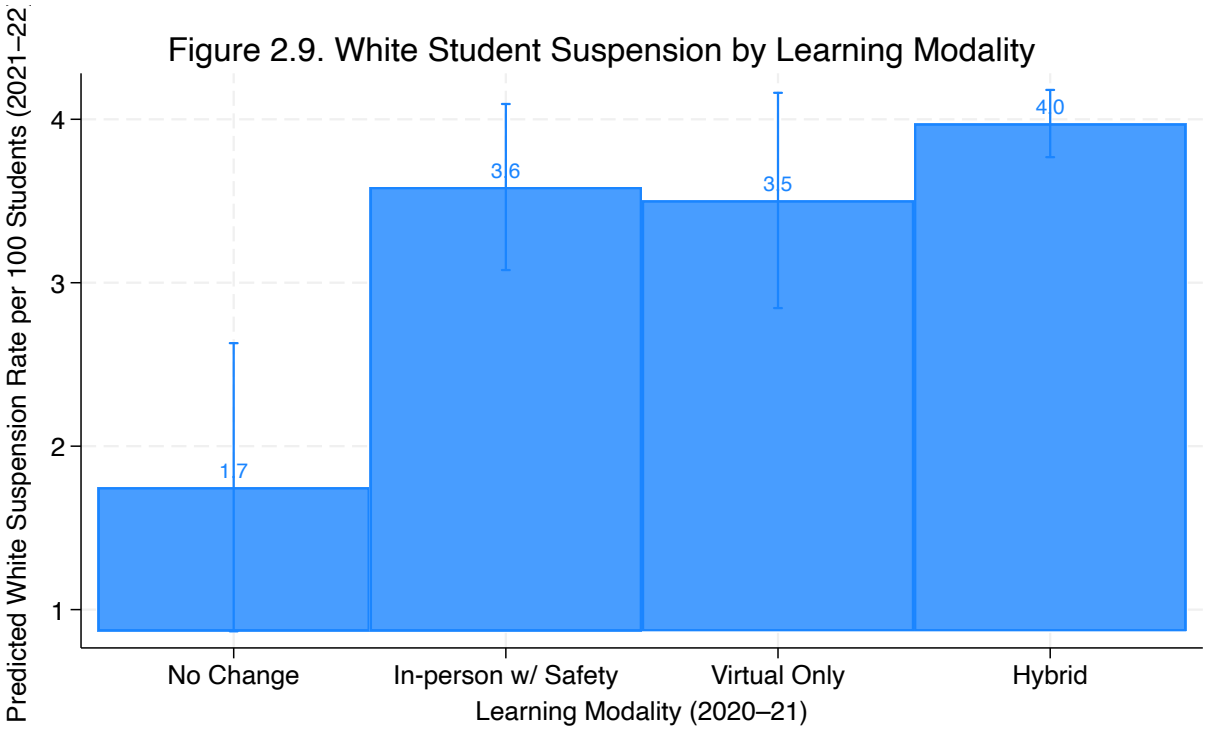


Figure 2.9. White Student Suspension by Learning Modality
Predicted White Suspension Rate per 100 Students (2021–22
4
3
2
1
1.7
3.6
3.5
4.0
No Change
In-person w/ Safety
Virtual Only
Hybrid
Learning Modality (2020–21)

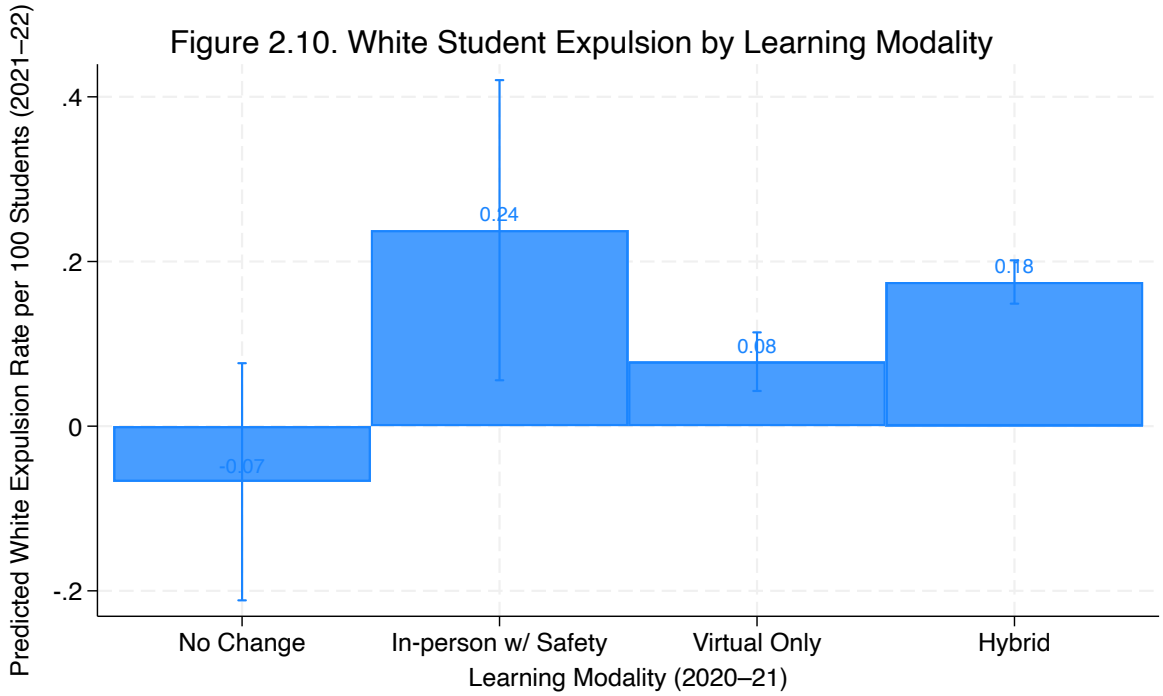


Figure 2.10. White Student Expulsion by Learning Modality
Predicted White Expulsion Rate per 100 Students (2021–22)
.4
.2
0
-.2
-0.07
0.24
0.08
0.18
No Change
In-person w/ Safety
Virtual Only
Hybrid
Learning Modality (2020–21)

Black-White Gaps in Discipline

Table 2.6 presents the OLS regression results estimating the Black-White gap in suspension and expulsion rates in 2021 – 2022, with the corresponding 2017 – 2018 racial gap included as a lagged control. The gap is operationalized as the Black student rate minus the White student rate within each school, such that positive values indicate higher rates for Black students. After accounting for pre-pandemic racial disparities, learning modality during the 2020 – 2021 is not significantly associated with the Black-White suspension gap in 2021 – 2022. All three learning modality coefficients are positive and small, with no statistical significance. Similarly, learning modality is not significantly associated with the Black-White expulsion gap with all modality coefficients negative and non-significant. These null findings are important and differ from models without the lagged control, which showed apparent modality effects on the gap. Once pre-existing racial disparities are controlled, pandemic-era instructional modality does not explain variation in how much the Black-White discipline gap changed in 2021 – 2022. The pre-pandemic gap is itself a significant predictor of the 2021 – 2022 gap ($b = 0.12$. $p < 0.001$ for suspension), underscoring that schools with larger pre-existing racial disparities tended to maintain larger disparities after the disruption, regardless of modality.

School characteristics continue to shape racial gaps independently of modality. Secondary schools have substantially larger Black-White suspension gaps than elementary schools ($b = 5.72$, $p < 0.001$), indicating that racial disparities in suspension widen considerably at higher grade levels. Higher percentages of Black students ($b = 0.03$, $p < 0.001$), and male students ($b = 0.13$, $p < 0.05$) are all associated with wider suspension gaps. For expulsion gaps, rural schools show significantly larger Black-White disparities than urban schools ($b = 0.16$, $p <$

0.05), while school level again predicts larger gaps in secondary schools (b = 0.45, p < 0.001). These results indicate that structural features of schools are more consequential for the magnitude of racial disciplinary disparities than pandemic-era instructional modality, once pre-pandemic disparities are considered.

Table 2.6. OLS Regression of Black-White Gaps in Suspension and Expulsion

Variable	Suspension Gap	Expulsion Gap
Learning Modality (No-Change Reference)		
In-Person w/ Safety	0.10	-1.48
	(3.26)	(1.91)
Virtual Only	0.23	-1.39
	(3.24)	(1.91)
Hybrid	0.36	-1.37
	(3.20)	(1.90)
Pre-Pandemic Controls		
Corresponding 2017–18 Gap	0.12***	0.08†
	(0.02)	(0.04)
School Characteristics		
Percent Black Enrollment	0.03***	0.00
	(0.01)	(0.00)
Percent Male Enrollment	0.13*	0.02
	(0.06)	(0.01)
Percent Free/Reduced Lunch	0.01	0.00
	(0.00)	(0.00)
Total Enrollment	-0.00	-0.00
	(0.00)	(0.00)
School Level (Elementary Reference)		
Secondary	5.72***	0.45***
	(0.36)	(0.06)
Locale (Urban Reference)		
Suburban	-0.05	0.03
	(0.36)	(0.04)

Town	0.41	0.13†
	(0.48)	(0.08)
Rural	-0.05	0.16*
	(0.44)	(0.07)

Note: N = 37,623. Gap = Black rate minus White rate (positive = higher for Black students). Robust standard errors clustered at district level in parentheses. No modality coefficients are statistically significant. *p<0.05; **p<0.01; ***p<0.001

DISCUSSION

This chapter examined whether the learning modalities schools utilized during 2020 – 2021 shaped exclusionary discipline rates in 2021 – 2022, and whether those patterns differed by race. The findings indicate that modality mattered, but only selectively. Suspension proved more responsive to modality-related disruption than expulsion, racial disparities persisted regardless of instructional context, and the modality-specific changes that did occur were concentrated among White students rather than Black students. Suspension rates were more sensitive to the learning modalities than expulsion rates which was consistent with H1 and H2. Suspension is fast and discretionary and does not require the formal process that expulsion demands. As schools began to return to more traditional in-person learning in 2021 – 2022, teachers and administrators were reestablishing behavioral expectations in buildings that had operated very differently the year before. In schools that had been hybrid or in-person with safety measures, behavioral norms during the disruption year were inconsistent and fragmented. Hybrid schools did not eliminate the in-person contact, it was just disrupted between being virtual sometimes and in-person others. Because of this, students and teachers interacted inconsistently, which made it harder to develop the individualized relational knowledge that normally mediates between behavior and formal sanction. When those schools returned to full in-person instruction, teachers were

reestablishing authority in still unknown contexts as the pandemic was still having an impact on society even in the 2021 – 2022 academic year.

Suspension may have functioned as the quickest mechanism for reasserting that behavioral expectation because it does not require knowing a student well, just deciding that behavior warrants removal. Virtual schools were different. Students who had been fully remote had no in-person behavioral baseline to return to. This means schools could establish the expectations from scratch rather than reasserting norms that had been inconsistently enforced. Starting from scratch is not the same as reestablishing something that had been fragmented, and that difference may explain why virtual schools do not show the same suspension rates as hybrid schools or schools that were in-person with safety measures. Expulsions remained largely stable across all modalities. Expulsion requires some more steps and investment and may come after a couple rounds of school suspension. When schools began to return to in-person and the behavioral expectations needed to be reinstated, the immediate formal mechanism of suspension may be the first step taken to reestablish social control.

H3a predicted that modality-associated increases in suspension would be concentrated among White students rather than Black students and results support this hypothesis. All three learning modalities are significantly associated with higher suspension rates for White students only while Black students show no significant modality effects. This does not mean that Black students were unaffected by the reestablishment of social control, because Black students still had higher rates of both suspension and expulsion than White students across every modality. What it means is that Black student suspension rates are structurally embedded in ways that changes to learning modality cannot impact. The relational buffers that learning modalities impacted such as the individualized teacher knowledge through daily contact that may foster

more informal resolutions to behavior, were already less operative for Black students before the pandemic. When those buffers are weakened by the disruption, it matters more for White students who had previously relied on them. For Black students, whose behavior was already more likely to reach formal sanction before the educational disruption and implementation of learning modalities, the additional weakening of these bonds did not change the outcome. The pandemic did not amplify the racial disparities in exclusionary discipline through modality. If anything, learning modalities narrowed the gap but only because White students were being punished more, not because Black students were being punished less. That is not progress toward equity.

The racial gaps can be further understood and addressed directly through the models for H3b. After controlling for pre-pandemic racial disparities, learning modality is not significantly associated with the Black-White suspension or expulsion gap, consistent with the hypothesis that the racialized structure of exclusionary discipline is determined by embedded structural conditions. The racial gap is not a product of which modality schools utilized. It is a structural feature of how schools have historically managed Black and White student behavior, embedded deeply enough that a disruption as large as the COVID-19 pandemic could not move it. Prior research on racially punitive school climates show how schools serving higher proportions of Black students adopt punitive disciplinary cultures that operate independently of specific triggering events, not because of anything about those students, but because of how institutional context shapes disciplinary culture over time (Payne and Welch 2023; Welch and Payne 2010). The pandemic was large, but not large enough to disrupt the structural patterns that govern how schools manage student behavior.

These findings extend the theoretical framework in an important way. The racial asymmetry in modality effects suggests that the mechanisms linking disruption to formal sanction are themselves racialized. The pandemic did not produce more punishment generally; it simply removed relational buffers that differentially protected White students from punitive response. For Black students, the relational disruption mattered less because they were already operating with fewer relational buffers in place. Relational ties function as a protective factor for White students in ways they do not for Black students, and that asymmetry became visible when those ties were disrupted. Future work should examine how these relational buffers form and whether they can be built more equitably across racial groups, particularly in schools returning from disruption.

From a policy standpoint, organizational disruptions to schooling, even large and sustained ones, do not on their own disrupt the racial structures of discipline embedded within them. The racial structure of exclusionary discipline proved resistant to a disruption as large and sustained as the COVID-19 pandemic. If a disruption of that magnitude could not move these structures, targeted policy change is required. This means investment in teacher-student relationship building to create the relational buffers that currently function as a protective factor only for White students. It means professional development on implicit bias and discretionary decision-making so that teachers are aware of how racialized perceptions shape their responses to behavior. And it means explicit attention to how referral processes for suspension and expulsion are structured and monitored across racial groups. Restorative justice approaches are also worth continued implementation as an alternative framework that addresses behavior without relying on the exclusionary defaults that these findings show are so deeply embedded in how schools operate.

Limitations and Future Directions

This study has some limitations. The measure of suspension and expulsion are based on school-level administrative data, meaning the decision-making process behind each disciplinary event is not observable. Suspension and expulsion rates reflect the aggregate outcomes but cannot distinguish between events that differ in severity or institutional response. The data are also at the school level, so it is not possible to track whether the same individual students are subject to repeated discipline or whether patterns vary within schools across classrooms or teachers. Future research using student-level administrative data would allow more direct examination of how modality shapes individual disciplinary trajectories and whether that varies by race. There is also a substantial imbalance across modality groups with over 92% of schools reporting hybrid learning. This limits the statistical power for comparisons involving smaller modality groups. Null findings for virtual and in-person with safety measures schools should be interpreted as inconclusive rather than as evidence of no effect. Schools were also only able to report one dominant learning modality for 2020 – 2021, but many shifted between formats throughout the year as public health conditions evolved. These within-year shifts likely also impacted the relational buffers that shape discipline in ways this analysis cannot capture.

Additionally, the binary elementary/secondary classification collapses variation within the secondary category, as middle and high schools differ substantially in disciplinary practices and organizational structure. Alternative schools, which typically serve students with prior disciplinary involvement, were also not separately identified. Future work should examine how disaggregating school level and accounting for alternative school placements affects modality-

specific estimates. This analysis also focuses on 2021 – 2022, a year when many schools had only just begun returning to more traditional in-person instruction. This year continued with different learning modalities, but at a smaller scale. Some students never fully returned to in-person learning, and schooling itself may look permanently different than it did before the pandemic. So future research should continue adding waves as we move further into these new teaching contexts to determine if these patterns persist or change as we get further from the original disruption.

CONCLUSION

This chapter examined whether the learning modalities schools utilized during 2020 – 2021 shaped exclusionary discipline when students returned to in-person instruction, and whether those patterns differed by race. The findings indicate that modality mattered, but selectively. Hybrid schools showed the clearest association with elevated suspension in 2021 – 2022 while virtual schools did not differ significantly from no-change schools, a pattern that points to the type of relational disruption mattering more than the degree of disruption alone. Expulsion remained largely stable across all modalities, consistent with the argument that procedurally intensive sanctions are more insulated from short-term relational disruption than routine suspension. The racial findings in this study also complicate the original predictions in ways that are theoretically meaningful. Black students experienced higher discipline rates across every modality and context, consistent with the durability of racialized discipline. Modality-associated changes in suspension were concentrated among White students, not Black students. The relational buffers that modality disruption weakens were already less operative for Black

students before the pandemic. Their disciplinary patterns are structurally anchored in ways that modality-level change could not move. The Black-White gap in both suspension and expulsion did not vary significantly by modality once pre-pandemic disparities were controlled. The racial structure of exclusionary discipline is determined by the conditions that predate any disruption.

Schools are durable institutions. Even a disruption as large and sustained as the COVID-19 pandemic did not fundamentally reorganize the structure of exclusionary discipline. What the pandemic revealed is how quickly and selectively these systems reassert themselves when routine conditions are restored, and how resistant the racialized logic of school discipline is to institutional disruption. Addressing that logic requires more than changing how learning is organized. It requires sustained attention to the interpretive processes through which student behavior is perceived and labeled, and to the structural conditions that make those processes so durable.

CHAPTER THREE

Learning Modality, Locale, and Post-Pandemic Exclusionary Discipline

This chapter examines whether the learning modalities schools utilized during the 2020 – 2021 academic year shaped exclusionary discipline rates in 2021 – 2022, and whether those patterns differed across urban, suburban, and rural schools. Prior research on school discipline following educational disruptions has documented increases in suspension and expulsion as schools return to in-person instruction, but that research treats the return as a uniform event and does not account for geographic context (Meyers and Thomasson 2021; Pane et al. 2008; Sacerdote 2012). Schools are embedded in their communities and reflect the demographic and economic characteristics of the areas they serve (Logan and Burdick-Will 2017; A. L. Noltemeyer and Mcloughlin 2010; Shabazian 2015). Urban, suburban, and rural schools already differed in how they exercised exclusionary discipline before the pandemic. The COVID-19 disruption did not hit those contexts the same way, and the learning modalities schools utilized during 2020 – 2021 were not evenly distributed across locales. This chapter argues that both of those differences mattered for how exclusionary discipline was reestablished as schools began returning to more traditional in-person instruction in 2021 – 2022.

The COVID-19 pandemic disrupted every school in the country, but not in the same way. Urban areas faced prolonged closures and elevated public health risks that kept many schools remote well into the 2020 – 2021 academic year (Callaghan et al. 2021). Suburban areas frequently adopted hybrid learning modalities that were shaped by parental pressure and local policy debates (Kitchen et al. 2021; Randolph and Liu 2022). Rural areas often returned to in-

person instruction more quickly, though limited broadband access and constrained staffing shaped what that looked like in practice (Monnat 2021). Because the learning modality schools utilized may have varied by school locale, the degree of the disruption to the two conditions that school-based social control depend on (institutional monitoring capacity and teacher-student relational ties) was structured by place. Research documents declines in formal disciplinary reporting during the disruption year (Nunez et al. 2023; Welsh 2022), but little is known about how exclusionary discipline was reestablished as schools began returning to more traditional in-person instruction in 2021 – 2022, or whether the modality schools came from shaped that process differently across school locales.

This chapter uses the learning modality schools used during 2020 – 2021 as the key institutional variable linking the main disruption year to exclusionary discipline when schools began to return to more traditional teaching in 2021 – 2022 across geographic contexts. I examine whether schools operating in virtual, hybrid, or in-person with safety measures modalities during 2020 – 2021 experienced different suspension and expulsion rates in 2021 – 2022, and whether those patterns differed across urban, suburban, and rural schools. Learning modality is not just a structural feature of how instruction was delivered; it shaped the relational and supervisory conditions through which student behavior was observed and responded to. Because those conditions were disrupted differently depending on the school locale, the reestablishment of exclusionary discipline beginning in 2021 – 2022 was likely shaped by both where a school was and the learning modality they utilized.

Pandemic Disruption Across Locales

The COVID-19 pandemic forced every school district in the country into remote emergency teaching in March or April 2020 (Becker et al. 2020; Hodges et al. 2020). Schools had to shift instructional delivery almost overnight, in some cases over a single weekend or spring break. What made this disruption different from prior educational crises was its sustained nature. Schools could not simply recover and resume. They had to continue navigating changing public health mandates and local epidemiological conditions for months and, in many cases, years (Aguliera and Nightengale-Lee 2020; Becker et al. 2022; Ryan 2023). By shifting from traditional schooling to remote, hybrid, or in-person with safety measures, schools changed how students were supervised and how social control was maintained. Students were no longer uniformly embedded in classrooms governed by traditional school routines. Instead, exposure to institutional supervision became uneven and highly contingent on local decision-making in response to the ever-changing pandemic (Hoofman and Secord 2021; Ryan 2023; Welsh 2022). Schools are embedded in their communities and reflect the structural conditions of the areas they serve. As local governments continuously adapted policies in response to the pandemic, schools absorbed those changes alongside their own institutional adjustments (Barik et al. 2022; Bozkurt et al. 2022). Across urban, suburban, and rural areas, crisis responses reflected preexisting structural inequalities such as demographic composition, fiscal capacity, technological infrastructure, political pressures, and governance all of which shape how different communities responded (Callaghan et al. 2021; Oster et al. 2021; Shabazian 2015). The pandemic did not produce a single educational experience. It generated locale-specific alterations in how learning was organized during 2020 – 2021, with consequences for the disciplinary conditions schools faced as they began returning to more traditional in-person instruction in 2021 – 2022.

Urban school districts were among the first to close in spring 2020 and maintained prolonged periods of remote instruction into the following academic year (Aguliera and Nightengale-Lee 2020; Callaghan et al. 2021). Higher population density and elevated COVID-19 case rates, combined with reliance on public transportation, contributed to cautious reopening strategies not seen in suburban and rural areas (Kitchen et al. 2021). Because urban districts disproportionately serve low-income students and students of color, which are both populations heavily affected by both the health and economic consequences of the pandemic, had virtual instruction for extended periods. These prolonged absences from in-person schooling substantially reduced students' exposure to formal disciplinary systems and the routine institutional monitoring of traditional schooling (Barik et al. 2022; Nunez et al. 2023; Welsh 2022).

Suburban school districts managed the pandemic differently. Suburban districts frequently adopted hybrid models that alternated between in-person and virtual instruction (Kitchen et al. 2021). Reopening decisions were often shaped by intense parental and political debate regarding mask mandates and the instructional quality impacted by the safety protocols (Randolph and Liu 2022). Hybrid schedules did not eliminate institutional oversight but fragmented it, introducing intermittent exposure to classroom routines and behavioral expectations. Students experienced fluctuating levels of supervision that potentially complicated the reestablishment of consistent disciplinary norms as schools began returning to more traditional in-person instruction (Darling-Hammond et al. 2023; Rochon n.d.).

Rural school districts often returned to in-person instruction sooner than urban and suburban districts, reflecting lower early COVID-19 incidence in some regions and community attitudes less supportive of restrictive mitigation policies (Callaghan et al. 2021). However,

longstanding structural limitations, such as limited broadband access and constrained staffing capacity, shaped the effectiveness of whatever remote instruction rural schools did implement (Monnat 2021). Although rural districts may have experienced less prolonged interruption to in-person schooling, they still operated within a changing landscape of safety measures and community health pressures that affected how they responded to the pandemic strain, even when it did not directly alter their learning modality.

The learning modality schools utilized during 2020 – 2021 was not merely a pedagogical adjustment, it was a structural reconfiguration of education shaped by local context (Blackwell and Young 2021; Oster et al. 2021). Schools with remote instruction reduced opportunities for formal disciplinary referral. Hybrid learning produced inconsistent exposure to supervision and behavioral expectations. Schools that returned to in-person instruction earlier reinstated routine oversight sooner (Aguliera and Nightengale-Lee 2020; Becker et al. 2020, 2022). Because these modalities were unevenly distributed across locales, students' exposure to traditional disciplinary systems during the pandemic was structured by place. As schools began returning to more traditional in-person instruction in 2021 – 2022, they did so under continued strain from both the ongoing pandemic and from institutional pressures at the school level. Districts faced staffing shortages and pressure for academic recovery, particularly in high-poverty communities that had relied most heavily on virtual learning (Callaghan et al. 2021). Teachers and administrators were tasked with rebuilding classroom routines and reasserting behavioral expectations after a year when those expectations had been unclear or inconsistently enforced. Because the magnitude and duration of disruption varied across urban, suburban, and rural districts, the institutional conditions under which exclusionary discipline was administered in 2021 – 2022 were shaped by these uneven disruptions.

Exclusionary Discipline by Locale

Exclusionary discipline, often operationalized by suspension and expulsion, removes students from their educational environments, resulting in reduced instructional time, weakened attachment to school, and increased likelihood of academic failure and dropout (Camacho et al. 2024; Cribb Fabersunne et al. 2023; Hirschfield 2008; Skiba et al. 2011). The consequences of this extend beyond the school itself. Exclusionary discipline is associated with elevated risk of juvenile justice contact, illustrating the continuity between school-based punishment and broader systems of social control, a process described as the school-to-prison pipeline (Hirschfield 2008; Skiba, Arredondo, et al. 2014; "Trey" Marchbanks et al. 2018). These patterns highlight the perpetual disadvantages faced by under-resourced communities, where exclusionary discipline compounds existing structural inequality (Brent 2016; "Trey" Marchbanks et al. 2018). However, these patterns do not operate in a vacuum. Schools reflect their broader communities, and the geographic and institutional context in which a school is embedded shapes how disciplinary systems work. Beyond commonly studied individual-level characteristics like race and gender, school-level factors such as enrollment size, resource availability, administrative capacity, and geographic locale shape disciplinary risk in important ways (A. L. Noltemeyer and Mcloughlin 2010). Urban schools consistently report the highest overall rates of suspension and expulsion, particularly in larger schools serving racially and socioeconomically diverse populations in high-poverty areas (Blackmon, Robison, and Rhodes 2016; Logan and Burdick-Will 2017; Tefera et al. 2022). These schools operate under conditions of concentrated disadvantage and heightened safety concerns that push disciplinary systems toward

formalization. Many urban schools employ school resource officers and formal surveillance mechanisms that reinforce exclusionary discipline as a tool of social control (Hirschfield 2008; Skiba et al. 2011). Noltemeyer and Mcloughlin (2010) found that major urban, high-poverty school districts consistently demonstrated higher disciplinary rates per 100 students than any other school type which they described as disciplinary hotspots. These patterns show the interplay between structural conditions of urban areas and the institutional mechanisms through which social control is enacted.

Rural schools tend to report the lowest rates of formal suspension and expulsion. In the same study, Noltemeyer and Mcloughlin (2010) found that rural districts with small student populations and low poverty consistently demonstrated the fewest disciplinary actions per 100 students of any school type. Rural schools typically rely more on relational and informal approaches to discipline, though limited staffing and constrained access to behavioral health infrastructure can restrict alternatives to suspension when escalation does occur (Logan and Burdick-Will 2017). Geographic isolation and reduced access to behavioral specialists constrain the adoption of interventions like restorative justice or counseling-based approaches (Boggs 1971; Logan and Burdick-Will 2017; Velez 2021). Rural schools also serve populations with poverty rates that can rival or exceed those in some urban districts, which adds some complexity to their disciplinary context. During the disruption, many rural districts returned to in-person instruction earlier than urban or suburban schools and maintained more consistent exposure to traditional disciplinary structures. However, the structural limitations shape both how they responded to the disruption and what options they had when students began to return (Kitchen et al. 2021; Monnat 2021).

Suburban schools occupy a different position. Better-resourced suburban districts generally report lower overall exclusionary discipline rates than urban schools and have greater access to alternative disciplinary interventions (Noltemeyer and Mcloughlin 2010). However, in rapidly diversifying suburban districts, disciplinary decisions often rely on discretionary and subjective enforcement shaped by parental expectations, local norms, and implicit biases about which students require formal sanctions, and those mechanisms can reproduce racial and socioeconomic inequities even when overall rates appear moderate (Logan and Burdick-Will 2017; Shabazian 2015; Tefera et al. 2022). During the COVID-19 disruption of the 2020 – 2021 academic year, suburban schools frequently implemented hybrid instructional models alternating between in-person and virtual learning. This intermittent exposure to school routines may have introduced ambiguity in behavioral enforcement, complicating the reestablishment of consistent disciplinary norms as schools began returning to more traditional in-person learning in 2021 – 2022.

School-based social control does not operate the same way everywhere. Urban, suburban, and rural schools rely on different formal and informal mechanisms of discipline based on the structural conditions of the communities they serve. Because each locale was impacted differently by the pandemic, whether that be the learning modalities and the organizational capacities to respond to the ever-changing pandemic, the conditions schools faced when reestablishing behavioral authority in 2021 – 2022 were not the same. These locale-based differences are not just background context. They are the mechanisms through which pandemic-era disruption may have shaped exclusionary discipline in the 2021 – 2022 differently across geographic settings.

Theoretical Framework

School-based social control depends on two interrelated conditions: the institutional capacity to monitor and enforce behavioral expectations, and the relational ties between teachers and students that shape how behavior is interpreted before it reaches formal sanction(Alter et al. 2013; Brandmiller et al. 2020; Chen et al. 2021). When these conditions are working, schools handle most behavioral challenges informally. Teachers who know their students can contextualize behavior and resolve problems before they become disciplinary events. When relational bonds are weak or routines are disrupted, that informal buffering breaks down and formal mechanisms become more central (Morris and Perry 2016; Skiba et al. 2011). The central mechanism linking the disruption to exclusionary discipline when schools began to return to in-person is not because students behaved worse after the disruption. It was the institutional conditions under which teachers and administrators perceive and respond to student behavior changed. Disciplinary decisions are shaped as much by the interpretive context of the teacher-student relationships by what students actually do (Alter et al. 2013; Brandmiller et al. 2020; Chen et al. 2021; Weathers 2023). When those relationships are strong and consistent, ambiguous behavior gets interpreted and managed within the classroom. When those relationships are weak or newly formed, the same behavior is more likely to be read as defiance and escalated to formal sanction. Virtual and hybrid instruction reduced the daily contact through which teachers develop individualized knowledge of students. Without that context, behavior gets evaluated through more generalized perception, and defaults to formal punishment.

Schools also maintain order through structured supervision and consistent daily routines that embed students in environments with clear expectations (Welsh and Little 2018b). when

both relational contact and supervisory structure are disrupted, as they were during remote and hybrid instruction, the institutional capacity for informal behavioral management weakens across both dimensions. The return to more traditional in-person instruction in 2021 – 2022 required schools to reestablish both. When informal controls are not yet functioning, schools tend to rely more heavily on formal visible sanctions to signal that order has been restored (Barik et al. 2022; Ryan 2023; Welsh 2022). The degree to which that happened depended on how severely each school's relational and supervisory conditions had been disrupted and what organizational capacity was available to respond otherwise. Locale shapes both of those dimensions, making it not just background context but a theoretical mechanism.

Urban schools experienced the longest disruptions to in-person contact and already operated within the most formalized disciplinary cultures before the pandemic (Aguliera and Nightengale-Lee 2020; Blackmon et al. 2016). With weakened teacher-student relationships and formalized systems already in place, urban schools were most likely to rely on suspension to reassert behavioral norms. But because those formalized cultures were already operating at a high baseline, urban schools may show the largest descriptive differences across modalities while not showing the clearest modality-specific effects once school composition is controlled. Suburban schools were disrupted through fragmentation rather than prolonged absence and had more organizational flexibility, so modality effects may be more moderate and less consistent (Becker et al. 2022). Rural schools had more instructional continuity but their structural constraints, like geographic isolation and limited staffing that leaves few alternatives to suspension, mean that when behavioral challenges arise, suspension may be the primary available response regardless of how long the prior disruption lasted (Aguliera and Nightengale-Lee 2020; Monnat 2021; Velez 2021). These processes are not racially neutral. The discretionary

judgments through which teachers interpret student behavior as requiring formal sanction are already shaped by racialized perceptions (Skiba et al. 2002; Skiba, Arredondo, et al. 2014; Welch and Payne 2010). When relational bonds are weakened and teachers have less individualized knowledge of students, those generalized perceptions become more central to disciplinary actions.

Summary

Existing research demonstrates that exclusionary discipline functions as a central mechanism of school-based social control, with well-documented academic, developmental, and legal consequences. These practices vary systematically across school contexts. Urban schools typically report the highest rates of formal exclusion, suburban schools exhibit discretionary disparities despite greater resources, and rural schools operate under distinct structural constraints. Yet despite this body of work, comparatively little research has examined how exclusionary discipline responds to large-scale institutional disruption, or how that response may vary across geographic locales. The COVID-19 pandemic represents an opportunity to understand the relationship between institutional disruption and the reassertion of formal social control by geographic locale. Because instructional modality varied across urban, suburban, and rural districts, the disruption to school-based social control was unevenly distributed. What remains unclear is how exclusionary discipline was reestablished once schools returned to in-person instruction in 2021 – 2022. Building on social control theory and organizational perspectives, this study examines how structural context conditioned the restoration of exclusionary discipline following pandemic-era disruption. Both theories point to the same

mechanism: when relational bonds and supervisory structures are disrupted, schools reestablishing institutional authority rely more heavily on formal punitive discipline. How much they rely on it, and in what form, depends on the organizational conditions of each locale. Specifically, this study addresses the following research questions:

1) How did exclusionary discipline rates vary across urban, suburban, and rural schools in 2021 – 2022 relative to pre-pandemic trends?

    H1: Urban schools will report the highest suspension and expulsion rates across all waves, followed by suburban and rural schools, consistent with pre-pandemic structural patterns. These locale differences will persist in 2021 – 2022, and the magnitude of exclusionary discipline in 2021 – 2022 increases may be most pronounced in urban schools.

2) Within each locale, how did the dominant learning modality during 2020 – 2021 shape suspension and expulsion rates in 2021 – 2022?

    H2a – Urban Schools: among urban schools, those that were virtual or hybrid during 2020 – 2021 will show higher post-disruption suspension rates than urban schools reporting no change, reflecting the most severe disruption to monitoring structures and relational bonds and the highest institutional pressure to reestablish formal control.

    H2b – Suburban Schools: Among suburban schools, hybrid models will be most strongly associated with post-disruption suspension rates, reflecting fragmentation of routines and relational inconsistency introduced by alternating schedules, though the association will be more modest than in urban schools given greater organizational flexibility.

H2c – Rural Schools: Among rural schools, modality will show modest associations with suspension rates, with effects concentrated in suspension rather than expulsion and smaller in magnitude than urban schools, reflecting greater instructional continuity and structural constraints on alternative disciplinary responses.

By situating exclusionary discipline within this integrated framework of social control and organizational capacity, this chapter contributes to understanding how geographic context shapes the reestablishment of school-based social control following large-scale institutional disruption. The findings have implications for equitable discipline policy across structurally different educational settings and for how institutions respond to crises that do not affect all communities the same way.

DATA AND METHOD

This chapter utilizes nationally representative, school-level administrative data to examine how school locale structures patterns of exclusionary discipline across time and following the COVID-19 pandemic. The analysis draws primarily on data from the Civil Rights Data Collection (CRDC), administered by the U.S. Department of Education's Office for Civil Rights, and is supplemented with school-level demographic and contextual information from the National Center for Education Statistics (NCES). Together, these sources allow for a comprehensive examination of disciplinary practices across institutional contexts and geographic settings over time. The primary data source for this chapter is the CRDC, a biennial census of nearly all U.S. public K-12 schools. The CRDC collects detailed school-level counts of out-of-

school suspensions and expulsions, which are used to construct school-level rates per 100 students enrolled, as described in the Dependent Variables section below. To contextualize disciplinary outcomes within broader institutional characteristics, additional school-level data are drawn from NCES. Specifically, the Common Core of Data (CCD) provides information on total enrollment, school grade levels, and socioeconomic disadvantage, measured as the percentage of students eligible for free or reduced-price lunch (FRL). The Education Demographic and Geographic Estimates (EDGE) program provides detailed locale classifications. For analytic clarity, schools categorized as "town" are combined with rural schools to create a three-category locale variable: urban, suburban, and rural. The CRDC and NCES datasets were merged using stable NCES school identifiers to ensure consistent linkage across waves.

This study uses seven waves of CRDC data: 2009–2010, 2011–2012, 2013–2014, 2015–2016, 2017–2018, 2020–2021, and 2021–2022. The five pre-pandemic waves establish baseline trends in school-level exclusionary discipline across school locales, while the 2021–2022 wave serves as the primary post-disruption period. The 2017–2018 wave serves an additional role as the source of lagged dependent variables, as described in the Analytical Plan. The 2020–2021 wave is used exclusively to measure schools' dominant learning modality during the height of pandemic-related instructional disruption. By restricting outcomes to 2021–2022 and using 2020–2021 modality as a predictor, the analysis ensures clear temporal ordering between instructional arrangements and post-disruption disciplinary outcomes. The analytic sample includes all U.S. public K-12 schools with complete data across all seven waves and consistent NCES identifiers. Specifically, a school is included only if it appears in all seven CRDC waves, meaning if a school is missing from any single wave, it is excluded entirely from all analyses, not just from the wave where data are absent. Schools without a 2017 – 2018 match are excluded

from regression models but retained in descriptive trend analyses. Both elementary and secondary schools are included to capture variation in how exclusionary discipline operates across grade levels. After applying these criteria, the final analytic regression sample consists of 42,988 schools. School characteristics vary substantially in enrollment size, socioeconomic composition, and geographic locale, providing meaningful variation for both descriptive and regression analyses.

One covariate warrants attention regarding sample coverage. The percentage of students eligible for free or reduced-price lunch (FRL), drawn from the CCD, is missing for a non-trivial share of schools in some CRDC waves. In the 2021 – 2022 wave, 16,479 schools (about 28% of the sample) are missing FRL data. Missingness is distributed relatively proportionally across locales, suggesting the missingness is not systematically concentrated in any single geographic context. Schools missing FRL data are excluded from regression models that include this control. Future work should formally assess whether the exclusion of schools with missing FRL data affects the representativeness of regression estimates prior to publication.

Dependent Variables

Two dependent variables are examined in this chapter: school-level suspension rates and school-level expulsion rates, each measured per 100 students enrolled. Standardizing both outcomes by total enrollment allows for meaningful comparisons across schools of varying size and ensures that coefficients reflect differences in rates rather than raw counts. These measures serve as indicators of the degree to which schools rely on punitive mechanisms to manage student behavior.

Suspension

Suspension is operationalized as the total out-of-school suspension rate and is the combined number of students receiving one or more out-of-school suspensions per 100 students enrolled. This measure captures how heavily schools rely on temporary removal from instructional settings to manage student behavior. Suspension rates are examined overall and disaggregated by locale to assess geographic variation in exclusionary discipline.

Expulsion

Expulsion is measured as the number of students expelled per 100 students enrolled. The measure combines three CRDC expulsion categories. These include expulsions under zero-tolerance policies, expulsions with educational services, and expulsions without educational services. Expulsion represents the most severe form of exclusionary discipline as it involves long-term or permanent removal from the school environment. Although expulsions occur less frequently than suspensions, they reflect a heightened institutional reliance on exclusion and provide an important indicator of the most punitive form of school-based discipline.

Independent Variables

The key independent variables for this chapter are school locale and dominant learning modality during the 2020 – 2021 academic year. School locale captures geographic context and

institutional environment, categorized as urban, suburban, or rural (with town schools combined with rural for analytic clarity). Dominant learning modality reflects the primary instructional arrangement during the most disruptive phase of the COVID-19 pandemic, capturing whether schools delivered instruction primarily in-person with safety measures, in a hybrid format, fully virtually, or with no change. Learning modality is operationalized as a four-category nominal variable with no-change schools as the reference category. It is treated as a temporally ordered predictor of post-disruption disciplinary outcomes, given that school discipline during 2020 – 2021 was substantially distorted by pandemic-specific conditions.

School-Level Controls

All regression models include a set of school-level covariates to account for differences in composition and structural characteristics that prior research suggests influence disciplinary practices. Controls include racial composition (percent Black enrollment), gender composition (percent male enrollment), socioeconomic disadvantage (percent of students eligible for free or reduced-price lunch), total student enrollment, and school level (elementary versus secondary). The 2017 – 2018 school-level discipline rate is also included as a lagged dependent variable in all primary regression models. Including these covariates ensures that observed differences across locales and instructional arrangements are not attributable to pre-existing compositional or structural differences between schools.

ANALYTICAL PLAN

I begin with descriptive analyses to establish baseline levels of exclusionary discipline and document changes across the pre- and post-disruption periods. Specifically, I examine school-level suspension and expulsion rates across six waves of nationally linked administrative data (CRDC 2009–2010 through 2017–2018 and 2021–2022), excluding the 2020–2021 wave from trend figures due to substantial measurement distortion during that year. Mean rates per 100 students are presented by school locale, allowing for visualization of temporal trends and geographic variation in disciplinary practices. These descriptive statistics establish the empirical baseline for understanding how urban, suburban, and rural schools differed in both pre-pandemic discipline levels and post-disruption changes. Prior to multivariate modeling, pairwise t-tests are used to assess whether mean suspension and expulsion rates differ significantly across locales and across learning modalities within each locale. These tests are conducted for 2021–2022 outcomes using no-change schools as the reference modality category. Differences in modality distribution across locales are also assessed using t-tests comparing suspension and expulsion rates between modality groups within each locale.

To assess the relationship between pandemic-era instructional arrangements and post-disruption disciplinary outcomes, I estimate cross-sectional ordinary least squares (OLS) regression models predicting school-level suspension and expulsion rates in the 2021–2022 academic year. Schools' dominant learning modality during the 2020–2021 academic year is included as a lagged explanatory variable, ensuring temporal ordering between instructional modality and post-disruption outcomes. To assess change in disciplinary outcomes rather than levels, each regression model also includes the school's corresponding discipline rate from the 2017–2018 academic year as a lagged dependent variable. This approach controls for each school's pre-existing disciplinary patterns before the pandemic, allowing modality and locale

coefficients to be interpreted as associations with change in discipline rates in 2021–2022 relative to pre-pandemic baselines. Schools without a 2017–2018 match are excluded from regression models but retained in descriptive analyses. All primary models adjust for school-level covariates including racial composition, gender composition, socioeconomic disadvantage, total enrollment, and school level. Post-estimation margins are used to generate adjusted predicted rates of suspension and expulsion across learning modalities. Models are estimated using OLS with standard errors clustered at the district level to account for non-independence among schools operating within the same administrative context.

To evaluate the overall association between locale, modality, and post-disruption discipline, I first estimate main effects models that include locale and modality as separate predictors without an interaction term. These models establish the direct association of each variable net of the other and provide a baseline for interpreting the interaction results. I then estimate interaction models that include a locale-by-modality interaction term, allowing for an assessment of whether the association between learning modality and post-disruption discipline varies across urban, suburban, and rural contexts. Both the main effects and interaction model results are presented in the same table to allow direct comparison. To further explore geographic variation, additional analyses are conducted separately within each school locale. These locale-stratified models examine the direct association between learning modality and post-disruption discipline within urban, suburban, and rural schools. To assess whether associations between learning modality and locale and post-disruption discipline exist independently of school composition, I also estimate a set of robustness models that include the lagged 2017 – 2018 baseline but exclude school-level controls. These models allow for an evaluation of whether modality and locale are associated with post-disruption discipline before racial composition,

gender composition, socioeconomic disadvantage, enrollment, and school level are accounted for. The full regression models are expressed as:

$$Y_i = \alpha + \beta_1 MODALITY_i + \beta_2 LOCALE_i + \beta_3 Y_{i,2018} + \beta_4 SCHOOLCHAR_i + \varepsilon_i$$

where Y_i represents the school-level suspension or expulsion rate per 100 students in school i in 2021–2022, $MODALITY_i$ is a vector of dummy variables representing the school's dominant learning modality during 2020–2021 (with no-change as the reference category), $LOCALE_i$ is a vector of dummy variables for school locale (with urban as the reference category), $Y_{i,2018}$ is the corresponding school-level discipline rate in 2017–2018, $SCHOOLCHAR_i$ is a vector of school-level covariates (racial composition, gender composition, socioeconomic disadvantage, enrollment, and school level), α is the intercept, and ε_i is the error term. Interaction models additionally include a LOCALE × MODALITY term to assess whether modality effects vary by geographic context. Robustness models exclude SCHOOLCHAR to evaluate raw modality and locale associations prior to compositional controls. All analyses are conducted using Stata 19.

RESULTS

Descriptive Statistics

Table 3.1 presents descriptive statistics for key variables by school locale. Suspension rates are highest in urban schools, averaging 5.58 per 100 students compared with 4.13 in suburban schools and 4.94 in rural schools. Expulsion rates remain low across all locales, with urban schools at 0.34, rural schools at 0.37, and suburban schools slightly lower at 0.22 per 100

students. School characteristics vary across locale: urban schools serve the highest proportion of Black students (23%) and students eligible for free or reduced-price lunch (58%), compared with suburban schools (14% Black; 41% FRL) and rural schools (10% Black; 49% FRL). Gender composition is relatively consistent across locales, with approximately 52% male students in each category. Average total enrollment is largest in suburban schools (644 students), followed by urban schools (587 students) and smallest in rural schools (422 students). School level composition differs, with urban and suburban schools having higher proportions of elementary schools (68% and 65%, respectively) relative to rural schools (56%). Pandemic-era instructional arrangements were overwhelmingly hybrid across all locales. Hybrid learning dominated, with 95% of urban, 93% of suburban, and 90% of rural schools utilizing this model. Fully in-person instruction with safety modifications was relatively rare, ranging from 1–7% across locales, while virtual-only instruction was slightly more common in suburban schools (5%) than urban (4%) or rural (3%) schools. Very few schools reported no change in instructional modality during the 2020–2021 academic year. Pairwise t-tests confirm that suspension rates differ significantly across all three locale pairs. Within each locale, modality-specific differences in suspension rates are significant for selected pairwise comparisons as indicated in Tables 3.2, 3.4, 3.6, and 3.8.

Table 3.1 Descriptive Statistics by Locale

	Urban		Suburban		Rural	
Variable	Mean	SD	Mean	SD	Mean	SD
Suspension Rate (per 100 Students)						
Total	5.58	13.97	4.13	11.64	4.94	10.40
Expulsion Rate (per 100 Students)						
Total	0.34	5.70	0.22	2.31	0.37	2.78
School Characteristics						
Percent Black	22.99	26.58	13.90	19.60	10.01	18.56
Percent Male	51.71	5.99	51.88	4.70	51.85	5.11
Percent Free Reduced Lunch	57.87	30.63	41.42	28.69	48.61	26.38
Total Enrollment	587.09	505.27	643.54	531.39	421.64	366.93
Elementary	68%		65%		56%	
Secondary	32%		35%		44%	
Learning Modality						
No Change	0.1%		0.2%		0.7%	
In-Person w/ Safety	1.1%		1.3%		7.0%	
Virtual	3.6%		5.3%		2.7%	
Hybrid	95.2%		93.2%		89.5%	

Note: Pairwise t-tests indicated significant differences across locale pairs for suspension (all comparisons $p < .01$) and for expulsion between urban/suburban and rural schools ($p < .001$). See Table 3.2 for full t-test results.

Descriptive Trends of Exclusionary Discipline by Locale

Figure 3.1 displays mean school-level suspension rates per 100 students across six waves of nationally linked administrative data (2009–2010 through 2021–2022), disaggregated by urban, suburban, and rural locales. The 2020–2021 academic year is excluded to avoid conflating emergency pandemic conditions with longer-term disciplinary trends. Across the pre-pandemic period, suspension rates declined across all locales, though levels and trajectories differed modestly. In 2009–2010, urban schools reported the highest average suspension rate at 8.4 per 100 students, compared to 5.3 in suburban schools and 5.9 in rural schools. By 2011–2012, suspension rates declined in urban schools to 7.3 per 100 students, while suburban and rural schools showed slight increases to 5.6 and 6.0, respectively. By 2013–2014, rates declined across all three locales, with urban schools averaging 6.8, suburban schools 4.7, and rural schools 5.6. This gradual downward trend continued through the mid-2010s. In 2015–2016, urban schools averaged 6.6 suspensions per 100 students, while suburban schools remained stable at 4.7 and rural schools reported 5.7. By 2017–2018, suspension rates declined further across all locales, with urban schools averaging 5.6, suburban schools 4.0, and rural schools 4.9. In the post-disruption wave (2021–2022), suspension rates increased modestly across all locales relative to 2017–2018. Urban schools reported an average of 5.5 suspensions per 100 students, suburban schools 4.3, and rural schools 5.1. Suburban schools consistently exhibited the lowest suspension rates across every wave. Importantly, post-disruption suspension rates remained well below the levels observed at the beginning of the decade, suggesting that the return to in-person schooling did not reverse the longer-term decline in exclusionary discipline but rather produced a modest uptick from a lower baseline.

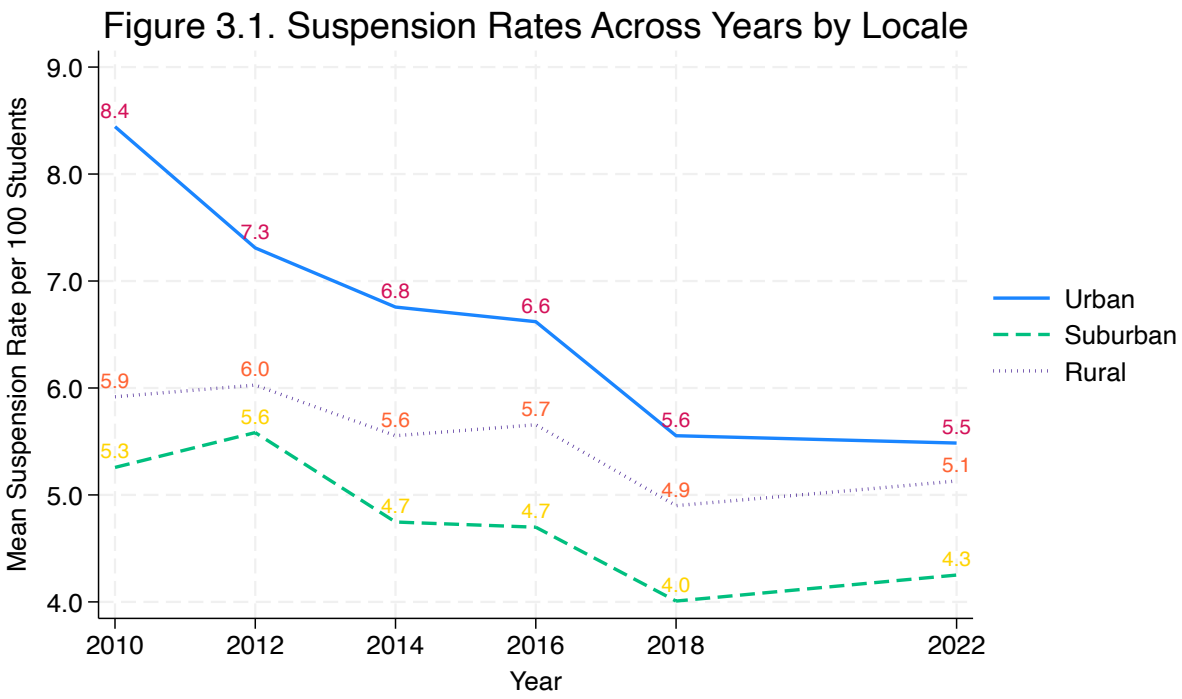
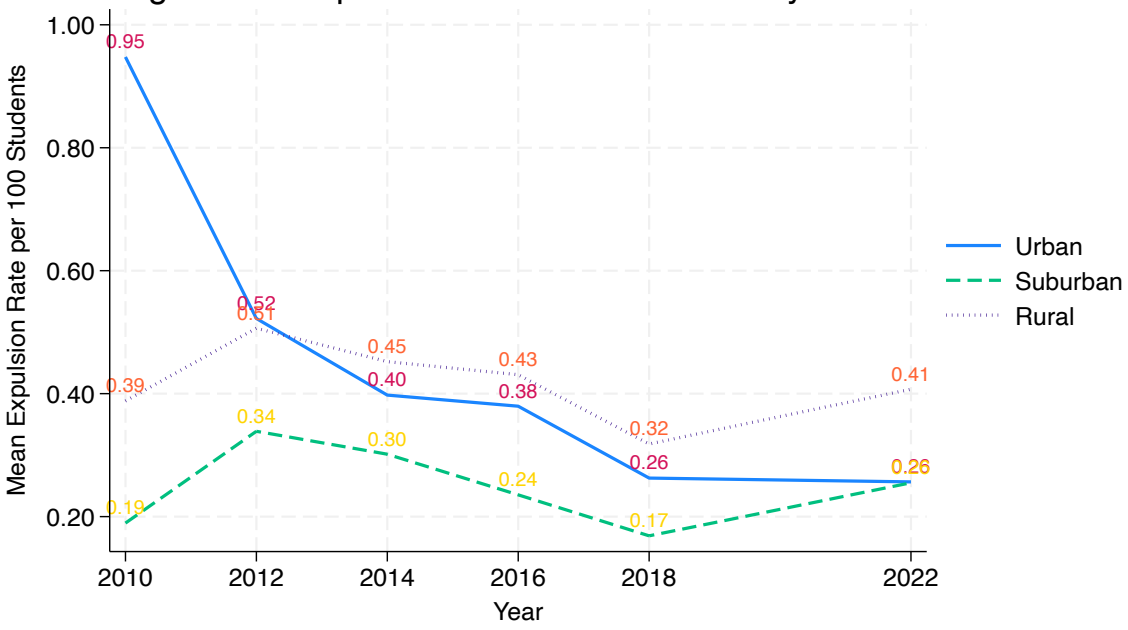


Figure 3.2 presents mean school-level expulsion rates per 100 students across the same six waves, disaggregated by locale. Expulsion rates are substantially lower in magnitude than suspension rates but exhibit meaningful variation across locales and years. In 2009–2010, urban schools reported the highest expulsion rate at 0.95 per 100 students, compared to 0.19 in suburban schools and 0.39 in rural schools. This disparity narrowed substantially by 2011–2012, when urban expulsion rates fell sharply to 0.52, while suburban and rural rates were 0.34 and 0.51, respectively. Across the remaining pre-pandemic waves, expulsion rates fluctuated modestly. In 2013–2014, rates averaged 0.40 in urban schools, 0.30 in suburban, and 0.45 in rural schools. By 2017–2018, expulsion rates reached their lowest observed levels — 0.26 for urban, 0.17 for suburban, and 0.31 for rural schools. In the post-disruption wave (2021–2022), expulsion rates increased modestly. Urban schools reported 0.26 expulsions per 100 students, suburban schools 0.26, and rural schools 0.41. Rural schools exhibited the highest expulsion

rates in the most recent wave, a pattern consistent with several earlier years. Taken together, these descriptive patterns confirm that suspension and expulsion rates vary by locale, with urban schools historically reporting the highest suspension rates and rural schools reporting the highest expulsion rates in recent waves. Both outcomes declined substantially across the pre-pandemic decade and remained comparatively low following the return to in-person instruction.

Figure 3.2. Expulsion Rates Across Years by Locale



Differences in Exclusionary Discipline Across Locales

Table 3.2 presents the results of pairwise t-tests comparing mean suspension and expulsion rates across school locales in the 2021–2022 academic year. For suspension, all three pairwise comparisons are statistically significant. Urban schools had significantly higher suspension rates than suburban schools (mean difference = 1.23, $t = 10.09$, $p < .001$) and

significantly higher rates than rural schools (mean difference = 0.35, t = 2.98, p = .003). Suburban schools had significantly lower suspension rates than rural schools (mean difference = −0.88, t = −9.53, p < .001), confirming that suburban schools report the lowest suspension rates of any locale in 2021–2022. For expulsion, the pattern differs. Urban and suburban schools did not differ significantly from each other in expulsion rates (mean difference = 0.00, t = 0.06, p = .951). However, both urban and suburban schools had significantly lower expulsion rates than rural schools — urban versus rural (mean difference = −0.15, t = −5.00, p < .001) and suburban versus rural (mean difference = −0.15, t = −4.51, p < .001). These findings confirm that while urban schools lead in suspension rates, rural schools show the highest expulsion rates — a pattern consistent with the descriptive trends and with the structural arguments in the theoretical framework.

Table 3.2 Results of T-tests of School-Based Suspension and Expulsion and School Locales in SY 2021-22

Outcome	Comparison	Mean (Group 1)	Mean (Group 2)	Mean Difference	t	p	95% CI
Suspension	Urban vs. Suburban	5.49	4.25	1.23	10.09	<0.001	0.99 – 1.47
	Urban vs. Rural	5.49	5.13	0.35	2.98	0.003	0.12 – 0.59
	Suburban vs. Rural	4.25	5.13	-0.88	-9.54	<0.001	-1.06 – -0.70
Expulsion	Urban vs. Suburban	0.26	0.26	0.00	0.06	0.951	-0.05 – 0.05
	Urban vs. Rural	0.26	0.41	-0.15	-5.00	<0.001	-0.21 - -0.09
	Suburban vs. Rural	0.26	0.41	-0.15	-4.51	<0.001	-0.22 - -0.09

Overall Locale and Modality Effects

Table 3.3 presents OLS regression results for the full sample, showing both a main effects model and a locale-by-modality interaction model side by side. In the main effects model, in-person with safety measures ($b=1.38$, $p < 0.05$) and hybrid schools ($b = 1.45$, $p < 0.05$) are significantly associated with higher suspension rates relative to no-change schools. Virtual schools are not significant. Rural schools show significantly higher expulsion rates than urban schools ($b=0.11$, $p < 0.01$) but locale is not significant for suspension. In the interaction model, none of the locale-by-modality interaction terms reach statistical significance for either suspension or expulsion, indicating that modality did not operate differently across urban, suburban, and rural contexts in any statistically significant way. Across both models, school-level structural characteristics are the strongest predictors with secondary schools reporting substantially higher suspension ($b = 2.74$, $p < 0.001$) and expulsion rates ($b = 0.40$, $p < 0.001$), and racial composition, gender composition, and socioeconomic disadvantage are all positively associated with both outcomes. The robustness models without school-level controls in Tables 3.3b and 3.3c confirm that in-person with safety measures and hybrid modalities show significant associations with suspension before composition is controlled, and that these effects are not concentrated in any locale.

Table 3.3 OLS Regression of Locale and Learning Modality Interaction on Suspension and Expulsion in 2021 – 2022.

	Suspension		Expulsion		Suspension		Expulsions	
Learning Modality (No-Change Reference)	B	SE	B	SE	B	SE	B	SE
In-person w/ Safety	1.38*	(0.65)	0.15	(0.27)	1.69	(1.87)	0.40	(0.33)
Virtual Only	0.67	(0.66)	0.01	(0.26)	-0.00	(1.39)	-0.09	(0.15)
Hybrid	1.45*	(0.62)	0.12	(0.26)	0.22	(1.31)	-0.00	(0.14)
Locale (Urban Reference)								
Suburban	-0.07	(0.21)	0.04	(0.04)	-0.20	(1.63)	-0.30	(0.21)
Rural	0.18	(0.24)	0.11**	(0.04)	-1.18	(1.50)	0.01	(0.33)
Controls								
Lagged 2017 – 18 Rate	0.65***	(0.05)	0.23***	(0.05)	0.65***	(0.05)	0.23***	(0.05)
School Characteristics								
Percent Black Enrollment	0.04***	(0.01)	0.00***	(0.00)	0.04***	(0.01)	0.00***	(0.01)
Percent Male Enrollment	0.11**	(0.04)	0.02**	(0.01)	0.11**	(0.04)	0.02*	(0.01)
Percent Free Reduced Lunch	0.01***	(0.00)	0.00	(0.00)	0.01***	(0.01)	0.00	(0.00)
Total Enrollment	-0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)	0.00	(0.00)
School Level								
Secondary	2.74***	(0.30)	0.40***	(0.04)	2.74***	(0.30)	0.40***	(0.04)
Interaction *(locale#modality)*								
Suburban*In-Person w/ Safety					-1.04	(2.10)	-0.09	(0.37)
Suburban*Virtual					-0.43	(1.69)	0.31	(0.21)
Suburban*Hybrid					0.17	(1.62)	0.35	(0.21)
Rural*In-person w/ Safety					-0.46	(1.99)	-0.33	(0.46)
Rural*Virtual					0.24	(1.62)	0.09	(0.35)
Rural*Hybrid					1.44	(1.47)	0.11	(0.33)

Note: N = 41,609. Standard errors clustered at district level. Lagged 2017 – 2018 discipline rate included as control. *p < 0.05, ** p < 0.01, ***p < 0.001. Interaction terms in Model 2 are none statistically significant. Urban is the locale reference category; No Change is the modality reference category.

Table 3.3b OLS Regression of Learning Modality and Locale on Suspension and Expulsion in 2021–2022 Without School-Level Controls (Robustness Check)

	Full Sample		Urban Only	Suburban Only	Rural Only
	Suspension	Expulsion	Suspension	Suspension	Suspension
Learning Modality (No-Change Reference)					
In-Person w/ Safety	1.12*	0.01	1.42	1.44	0.94
	(0.51)	(0.22)	(1.20)	(1.01)	(0.62)
Virtual Only	0.58	-0.10	1.06	0.60	0.06
	(0.55)	(0.21)	(0.71)	(1.00)	(0.76)
Hybrid	1.30**	0.05	0.93*	1.53	1.44*
	(0.48)	(0.21)	(0.40)	(0.96)	(0.59)
Locale (Urban Reference)					
Suburban	-0.08	0.03			
	(0.18)	(0.05)			
Rural	0.13	0.14**			
	(0.17)	(0.05)			
Lagged 2017 – 18 Rate	0.77***	0.25***	0.75***	0.87***	0.68***
	(0.04)	(0.05)	(0.06)	(0.09)	(0.04)

Note: Models include lagged 2017 – 18 discipline rate but exclude school-level controls. Standard errors in parentheses. Standard errors clustered at district level. These models serve as robustness checks to assess whether modality and locale associations exist prior to controlling for school composition. Expulsion not shown for locale-stratified models as no modality effects reached significance. *p < 0.05; **p < 0.01; ***p < 0.001.

Table 3.3c OLS Regression Interaction Model Without School-Level Controls — Full Sample, 2021–2022 (Robustness Check)

	Suspension		Expulsion	
	b	SE	b	SE
Learning Modality (No-Change Reference)				
In-Person	1.22	(1.18)	1.02*	(0.42)
Virtual Only	0.93	(0.67)	0.10**	(0.03)
Hybrid	0.81*	(0.38)	0.19***	(0.03)
Locale (Urban Reference)				
Suburban	-0.75	(0.98)	0.13	(0.11)
Rural	-0.32	(0.65)	0.31	(0.25)
Locale X Modality Interaction				
Suburban x In-Person w/ Safety	0.24	(1.53)	-1.08*	(0.44)
Suburban x Virtual Only	-0.23	(1.15)	-0.16	(0.12)
Suburban x Hybrid	0.72	(1.00)	-0.10	(0.12)
Rural x In-Person w/ Safety	-0.22	(1.30)	-1.13*	(0.50)
Rural x Virtual Only	-1.07	(0.97)	-0.27	(0.27)
Rural x Hybrid	0.52	(0.67)	-0.15	(0.25)
Lagged 2017 – 18 Rate	0.77***	(0.04)	0.25***	(0.05)

Note: Models include lagged 2017 – 18 discipline rate but exclude school-level controls. Standard errors clustered at district level. Significant expulsion interaction terms indicate that the elevated expulsion associated with in-person with safety modality is concentrated in urban schools, suburban and rural in-person schools do not differ significantly from no-change schools on expulsion. These interactions are no longer significant once school-level controls are added (see Table 3.3). *p < 0.05; **p < 0.01; ***p < 0.001.

Urban Schools

Table 3.4 presents t-test results for urban schools. No-change schools had the lowest suspension rates, while in-person with safety measures schools showed significantly higher rates than both virtual and hybrid schools. These descriptive differences are not sustained in the regression. Table 3.5 shows that after accounting for pre-pandemic baselines and school composition, no modality coefficient reaches statistical significance for suspension or expulsion in urban schools. The null findings suggest that the descriptive differences across modalities in urban schools largely reflect pre-existing compositional differences between school types rather than modality-specific effects on disciplinary change.

Table 3.4 T-Test results of suspension and expulsion and learning modality in 2020 – 2021 for Urban schools only

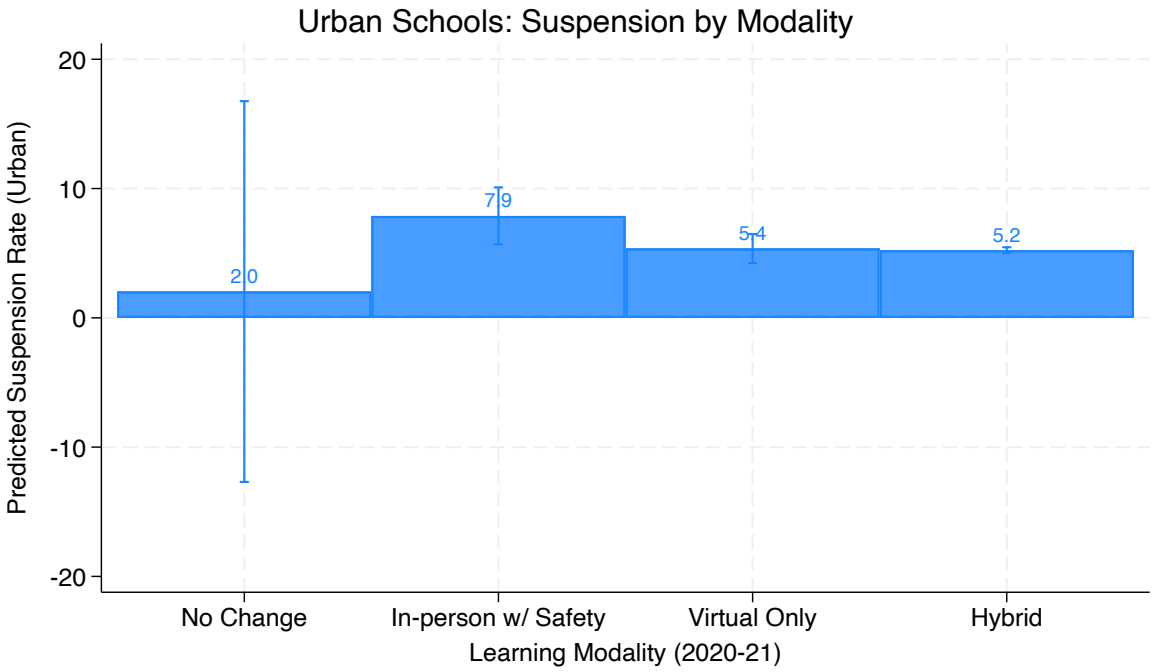
Outcome	Comparison	Mean (Group 1)	Mean (Group 2)	Mean Difference	t	P	95% CI
Suspension	No Change vs. In-person w/ Safety	0.61	8.55	-7.94	-9.21	<0.001	-9.64 - -6.23
	No Change vs. Virtual	0.61	6.15	-5.54	-10.05	<0.001	-6.64 - -4.44
	No Change vs. Hybrid	0.61	5.43	-4.82	-13.83	<0.001	-5.59 - -4.05
	In-person w/ Safety vs. Virtual	8.55	6.15	2.40	2.64	<0.010	0.61 – 4.19
	In-person w/ Safety vs. Hybrid	8.55	5.43	3.12	3.88	<0.001	1.53 – 4.70
	Virtual vs. Hybrid	6.15	5.43	0.72	1.58	0.113	-0.17 – 1.60
Expulsion	No Change vs. In-person w/ Safety	0.00	1.15	-1.15	-2.92	<0.010	-1.92 - -0.37
	No Change vs. Virtual	0.00	0.12	-0.12	-6.40	<0.001	-0.16 - -0.09

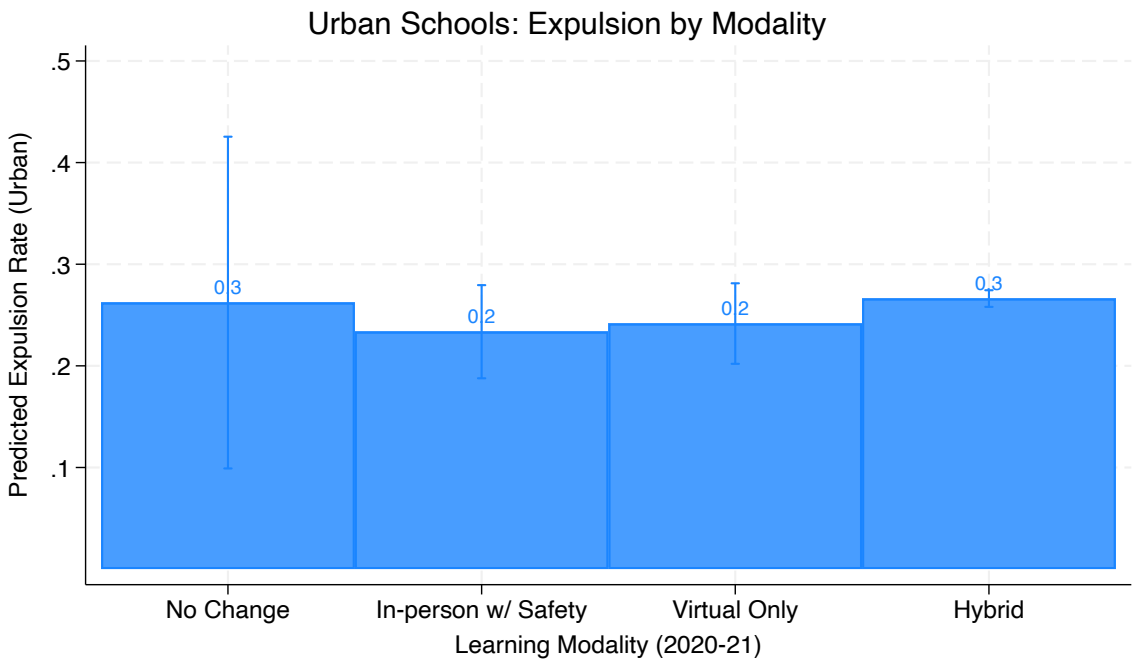
No Change vs. Hybrid	0.00	0.25	-0.25	-19.56	<0.001	-0.28 - -0.23
In-person w/ Safety vs. Virtual	1.15	0.12	1.02	2.60	<0.010	0.25 – 1.80
In-person w/ Safety vs. Hybrid	1.15	0.25	0.90	2.28	0.023	0.12 – 1.67
Virtual vs. Hybrid	0.12	0.25	-0.13	-5.41	<0.001	-0.17 – -0.08

Table 3.5 OLS Regression of Suspension and Expulsion Rates in 2021 – 2022 by Learning Modality in Urban Schools Only.

Learning Modality in 2021 (No-Change Reference Category)	Suspension (per 100 students)	Expulsion (per 100 students)
In-Person w/ Safety	1.20	0.53
	(2.40)	(0.32)
Virtual Only	-0.35	0.01
	(1.86)	(0.12)
Hybrid	-0.08	0.11
	(1.73)	(0.12)
Controls		
Lagged 2017 – 18 Rate	0.66***	0.12*
	(0.09)	(0.05)
School Characteristics		
Percent Black Enrollment	0.04***	0.12***
	(0.01)	(0.05)
Percent Male Enrollment	0.14	0.02**
	(0.08)	(0.01)
Percent Free Reduced Lunch	0.01*	-0.00
	(0.01)	(0.00)
Total Enrollment	0.00	0.00
	(0.00)	(0.00)
School Level (Elementary Reference Category)		
Secondary	3.23***	0.45***
	(0.28)	(0.02)

Note: N=12,880, Standard errors in parentheses. Standard errors clustered at district level. Lagged 2017 – 18 discipline rate included. No modality coefficients are statistically significant after accounting for pre-pandemic baselines. *p<0.05; **p<0.01; ***p<0.001


Urban Schools: Suspension by Modality
Predicted Suspension Rate (Urban)
20
10
0
-10
-20
2.0
7.9
5.4
5.2
No Change
In-person w/ Safety
Virtual Only
Hybrid
Learning Modality (2020-21)


Urban Schools: Expulsion by Modality
Predicted Expulsion Rate (Urban)
.5
.4
.3
.2
.1
0.3
0.2
0.2
0.3
No Change
In-person w/ Safety
Virtual Only
Hybrid
Learning Modality (2020-21)

Suburban Schools

Table 3.6 presents t-test results for suburban schools. No suspension comparison involving no-change schools reaches significance. Virtual schools show higher suspension rates than hybrid schools ($p < 0.001$) but do not differ significantly from no-change schools. No expulsion comparisons involving no-change schools are significant. Table 3.7 shows that no modality coefficient reaches significance for suspension in suburban schools after controls. Hybrid schools show a marginally significant association with expulsion ($b = 0.33$, $p < 0.05$), but given the number of comparisons this should be interpreted cautiously. Suburban schools are the most consistently null locale across all model specifications, consistent with the theoretical prediction that greater organizational flexibility moderates the relationship between modality and post-disruption discipline.

Table 3.6 T-Test results of suspension and expulsion and learning modality in 2020 – 2021 for Suburban schools only

Outcome	Comparison	Mean (Group 1)	Mean (Group 2)	Mean Difference	t	P	95% CI
Suspension							
	No Change vs. In-person w/ Safety	2.72	4.41	-1.69	-1.47	0.152	-4.04 – 0.66
	No Change vs. Virtual	2.72	4.19	-1.49	-1.34	0.192	-3.72 – 0.79
	No Change vs. Hybrid	2.72	4.25	-1.52	-1.43	0.166	-3.73 – 0.68
	In-person w/ Safety vs. Virtual	4.41	4.19	0.22	0.43	0.667	-0.80 – 1.24
	In-person w/ Safety vs. Hybrid	4.41	4.25	0.17	0.37	0.713	-0.72 – 1.06
	Virtual vs. Hybrid	4.19	4.25	-0.06	-0.21	-0.21	-0.60 – 0.48

Expulsion

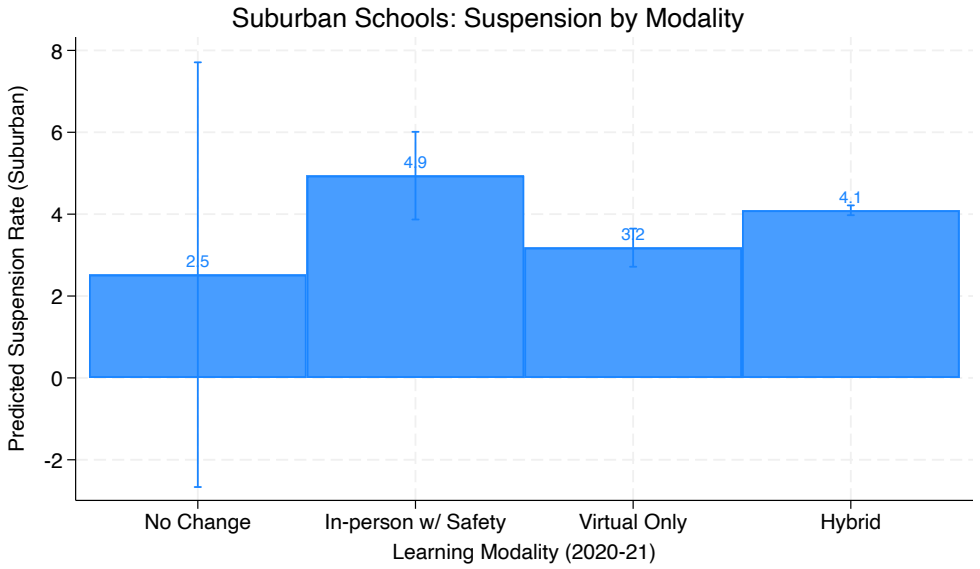
No Change vs. In-person w/ Safety	0.17	0.20	-0.03	-0.18	0.855	-0.32 – 0.27
No Change vs. Virtual	0.17	0.12	0.05	0.48	0.633	-0.17 – 0.28
No Change vs. Hybrid	0.17	0.26	-0.09	-0.85	0.402	-0.32 – 0.13
In-person w/ Safety vs. Virtual	0.20	0.12	0.08	0.76	0.448	-0.13 – 0.29
In-person w/ Safety vs. Hybrid	0.20	0.26	-0.07	-0.63	0.531	-0.27 – 0.14
Virtual vs. Hybrid	0.12	0.26	-0.15	-4.36	<0.001	-0.21 - -0.08

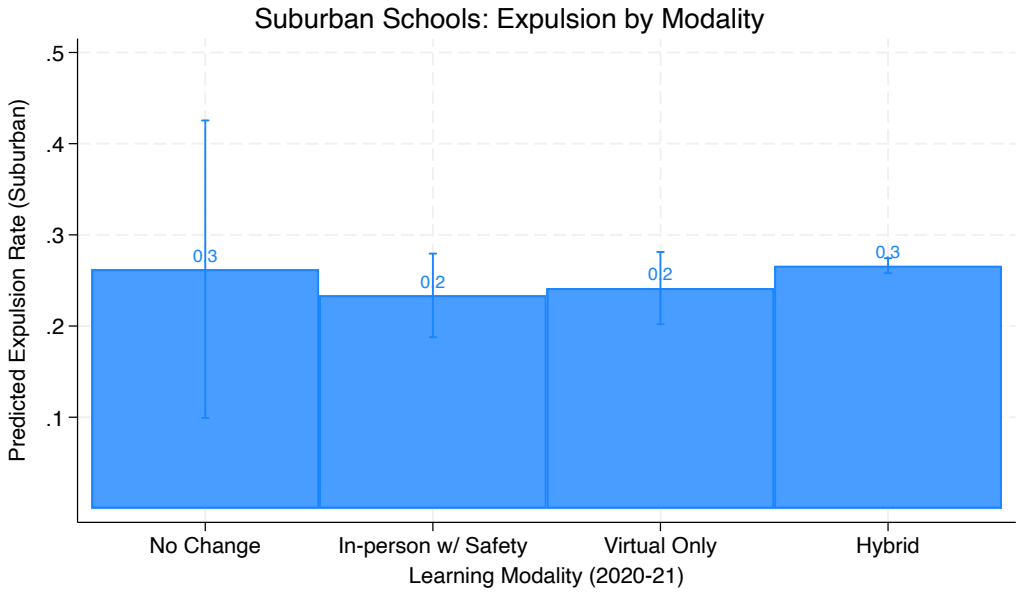
Table 3.7 OLS Regression of Suspension and Expulsion Rates in 2021 – 2022 by Learning Modality in Suburban Schools Only.

Learning Modality in 2021 (No-Change Reference Category)	Suspension (per 100 students)	Expulsion (per 100 students)
In-Person w/ Safety	0.19	0.20
	(1.18)	(0.13)
Virtual Only	-0.74	0.20
	(1.14)	(0.12)
Hybrid	0.06	0.33*
	(1.12)	(0.13)
Controls		
Lagged 2017 – 18 Rate	0.73***	0.39***
	(0.08)	(0.09)
School Characteristics		
Percent Black Enrollment	0.02*	0.002
	(0.01)	(0.01)

Percent Male Enrollment	0.03	0.01*
	(0.03)	(0.01)
Percent Free Reduced Lunch	0.01***	0.01*
	(0.00)	(0.00)
Total Enrollment	-0.00	-0.00
	(0.00)	(0.00)
School Level (Elementary Reference Category)		
Secondary	2.22***	0.32***
	(0.43)	(0.05)

Note: N=16,228, Standard errors in parentheses. Standard errors clustered at district level. Lagged 2017 – 18 discipline rate included. No suspension modality coefficients are statistically significant. Hybrid schools show a significant association with expulsion. *p<0.05; **p<0.01; ***p<0.001.





Rural Schools

Table 3.8 presents t-test results for rural schools. No-change schools had significantly higher suspension rates than in-person with safety measures schools but lower rates than virtual and hybrid schools. Hybrid schools showed the highest suspension rates, significantly higher than both no-change and in-person with safety measures schools. No expulsion comparisons involving no-change schools reach significance. Table 3.9 presents the only statistically significant modality effect on suspension in any locale-stratified model. Hybrid schools in rural areas show significantly higher suspension rates than no-change schools after controlling for pre-pandemic baselines and school composition ($b=1.66$, $p < 0.05$). In-person with safety measures and virtual modalities are not significant. No modality reaches significance for expulsion. This finding holds in the no-control robustness model as well ($b = 1.44$, $p < 0.05$), confirming that the hybrid effect in rural schools is not an artifact of school composition. The pattern is theoretically interpretable with rural hybrid schools fragmented relational contact in institutional contexts that

already had limited alternatives to suspension, making suspension the default response when behavioral expectations needed to be reestablished upon return.

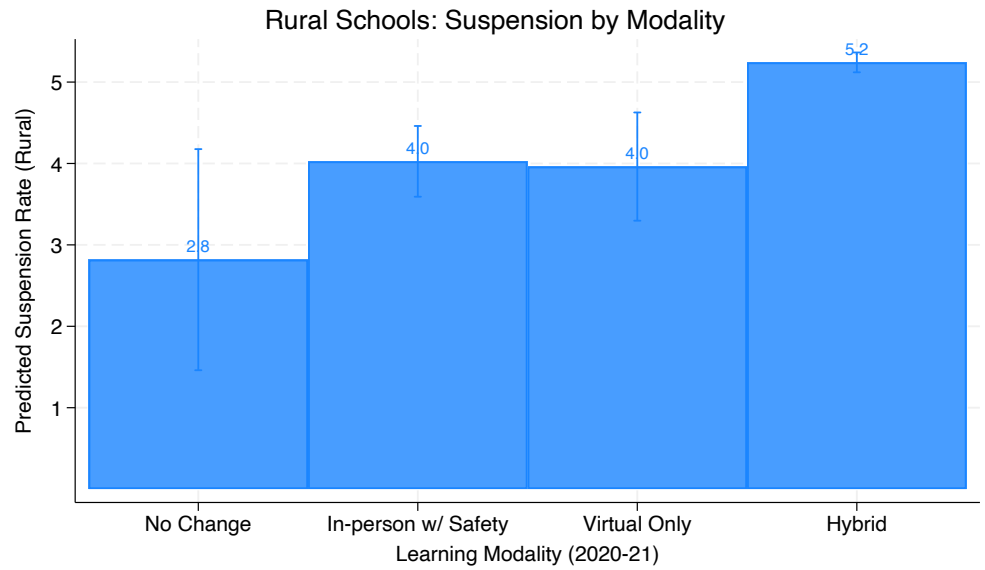
Table 3.8 T-Test results of suspension and expulsion and learning modality in 2020 – 2021 for Rural schools only

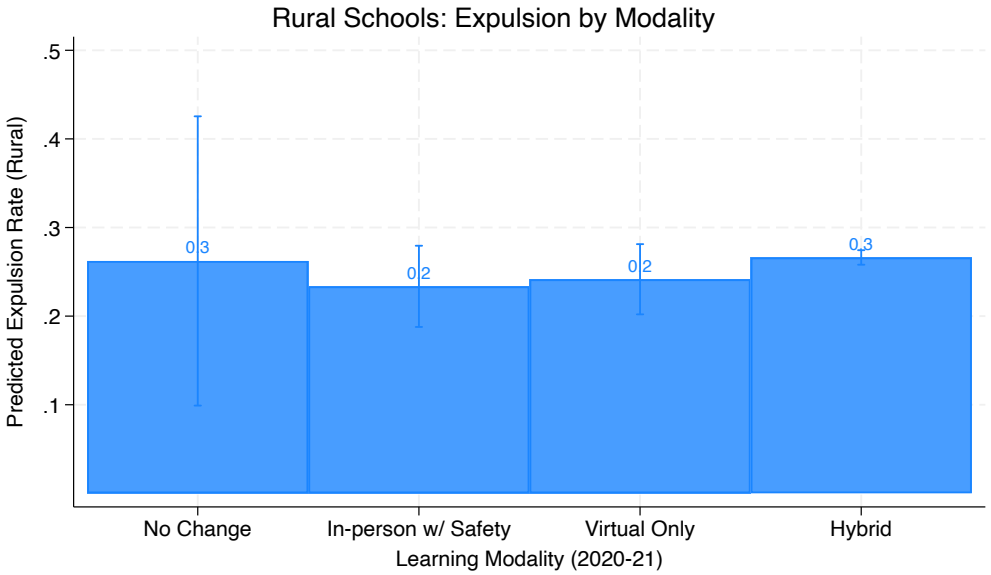
Outcome	Comparison	Mean (Group 1)	Mean (Group 2)	Mean Difference	t	P	95% CI
Suspension	No Change vs. In-person w/ Safety	3.05	3.50	-0.45	-0.80	0.427	-1.58 – 0.67
	No Change vs. Virtual	3.05	4.53	-1.48	-2.37	0.019	-2.71 - -0.25
	No Change vs. Hybrid	3.05	5.29	-2.24	-4.11	<0.001	-3.32 - -1.16
	In-person w/ Safety vs. Virtual	3.50	4.53	-1.03	-2.82	<0.010	-1.74 - -0.31
	In-person w/ Safety vs. Hybrid	3.50	5.29	-1.79	-9.26	<0.001	-2.17 - -1.41
	Virtual vs. Hybrid	4.53	5.29	-0.76	-2.35	0.019	-1.39 - -0.13
Expulsion	No Change vs. In-person w/ Safety	0.48	0.26	0.22	0.91	0.364	-0.25 – 0.68
	No Change vs. Virtual	0.48	0.23	0.25	1.04	0.300	-0.22 – 0.72
	No Change vs. Hybrid	0.48	0.42	0.06	0.25	0.805	-0.39 – 0.50
	In-person w/ Safety vs. Virtual	0.26	0.23	0.03	0.27	0.789	-0.20 – 0.26
	In-person w/ Safety vs. Hybrid	0.26	0.42	-0.16	-1.83	0.067	-0.33 – 0.01
	Virtual vs. Hybrid	0.23	0.42	-0.19	-2.13	0.034	-0.37 - -0.01

Table 3.9 OLS Regression of Suspension and Expulsion Rates in 2021 – 2022 by Learning Modality in Rural Schools Only.

Learning Modality in 2021 (No-Change Reference Category)		Suspension (per 100 students)	Expulsion (per 100 students)
In-Person w/ Safety		1.13	0.08
		(0.64)	(0.31)
Virtual Only		0.08	-0.03
		(0.31)	(0.31)
Hybrid		1.66**	0.09
		(0.63)	(0.29)
Controls			
Lagged 2017 – 18 Rate	0.51***	0.23*	
	(0.05)	(0.11)	
School Characteristics			
Percent Black Enrollment	0.07***	0.01**	
	(0.01)	(0.00)	
Percent Male Enrollment	0.13**	0.04***	
	(0.04)	(0.00)	
Percent Free Reduced Lunch	0.01**	0.04***	
	(0.00)	(0.00)	
Total Enrollment	0.00	0.01	
	(0.00)	(0.01)	
School Level (Elementary Reference Category)			
Secondary	3.13***	0.42***	
	(0.23)	(0.06)	

Note: N=12,787, Standard errors in parentheses. Standard errors clustered at district level. Lagged 2017 -18 discipline rate included. Hybrid schools show the only statistically significant modality effect on suspension. *p<0.05; **p<0.01; ***p<0.001





DISCUSSION

This chapter examined whether the learning modalities schools utilized during 2020 – 2021 shaped exclusionary discipline rates in 2021 – 2022, and whether those patterns differed

across urban, suburban, and rural schools. The findings indicate that modality mattered, but modestly and selectively. Suspension proved more responsive to modality-related disruption than expulsion, locale-based differences in discipline persisted but did not fundamentally change, and the one clear modality effect, hybrid schools in rural areas, points to something specific about how disruption interacted with structural constraints rather than a general pattern across all locales.

Suspension rates across all three locales followed the long-term pre-pandemic decline and did not surge dramatically upon return, consistent with H1. Urban schools reported the highest suspension rates across every wave, suburban schools the lowest, and rural schools fell between. These patterns persisted in 2021 – 2022 without dramatic change. Expulsion followed a different pattern with rural schools showing the highest expulsion rates in the most recent wave, a reversal of the earlier urban dominance that reflects the structural constraints of rural disciplinary systems rather than a pandemic-specific shift. Neither outcome showed a sharp post-disruption spike, suggesting the return to in-person schooling produced modest adjustments within pre-existing patterns rather than a fundamental reorganization of exclusionary discipline.

The overall regression models address H2 directly. In the main effects model, in-person with safety measures and hybrid schools show significantly higher suspension rates than no-change schools. But the locale-by-modality interaction terms are not significant for either suspension or expulsion. This means modality did not operate differently across urban, suburban, and rural contexts in any statistically detectable way. The robustness models without school-level controls confirm that in-person with safety measures and hybrid modalities show associations with suspension before composition is controlled, but those effects do not concentrate in any particular locale. The pattern is consistent and showed that modality mattered

for suspension overall, but locale did not change how it operated. The locale-stratified models address H2a through H2c and tell a more specific story about why. Urban schools showed the largest descriptive differences across modalities, with in-person with safety measures schools reporting the highest suspension rates. But none of those differences survived controls. Once pre-pandemic baselines and school composition are accounted for, no modality is significantly associated with suspension or expulsion in urban schools. This is not because urban schools were unaffected by the disruption, it could be because urban schools already operated within the most formalized disciplinary cultures before the pandemic. The structural conditions of urban schools, being higher proportions of Black students, concentrated poverty, and institutionalized surveillance systems, are the dominant drivers of discipline in those contexts. Those conditions were not moved by a disruption year because they are too solidified to be altered by changes in instructional format. The modality differences that appear descriptively in urban schools reflect who those schools were serving before the pandemic, not something modality specifically did to discipline.

Suburban schools are the most consistently null locale across every model specification, consistent with H2b's prediction that greater organizational flexibility moderates the modality-discipline relationship. No suspension modality effect reaches significance in suburban schools in any specification. This makes theoretical sense. Suburban schools had more resources, such as counseling staff, more behavioral specialists, more parental advocacy for non-punitive responses, which gave them the institutional capacity to rebuild relational bonds and manage behavior informally when students returned. When hybrid instruction fragmented relational contact in suburban schools, those schools had enough organizational flexibility to respond without defaulting to suspension. The disruption interacted with an institutional context that could absorb

it. Hybrid shows a marginal association with expulsion but given the number of comparisons this should be interpreted cautiously and is not the central finding.

The most substantively important finding in this chapter is the rural hybrid effect, and it is the finding that most clearly confirms the theoretical framework. Hybrid schools in rural areas show significantly higher suspension rates than no-change schools after controlling for pre-pandemic baselines and school composition, and this holds in the no-controls robustness model as well. No other modality reaches significance in rural schools and expulsion shows no modality effects anywhere. This finding was not what H2c predicted, the prediction was that rural schools would show minimal modality effects given greater instructional continuity. But hybrid learning introduced something specific in rural contexts that the prediction did not anticipate. Rural schools are geographically isolated and serve communities with more constrained tax bases and fewer institutional resources. They have limited staffing, constrained access to behavioral specialists, and fewer alternatives to suspension when behavioral challenges arise. When hybrid instruction fragmented relational contact, which produced a year of inconsistent teacher-student interaction, rural schools returned to in-person instruction with teachers who had less individualized knowledge of students and no additional infrastructure to respond to behavior through anything other than formal sanction. Suspension was the default because it was the only fast tool available. This is the two-condition framework playing out in its clearest form. The disruption weakened relational ties, and the institutional capacity to respond otherwise was not there. Urban schools had formalized systems already in place. Suburban schools had resources and flexibility. Rural hybrid schools had neither, nor the result was elevated suspension upon return. This finding extends the theoretical argument by showing that the effect of disruption is not just about how severely conditions were disrupted but about what

exists to fill the gap when those conditions break down. Suspension drove nearly all the observed variation across locales and modalities. Expulsion rates were low and largely stable regardless of modality, locale, or school composition. This is consistent with the argument that suspension is fast and discretionary while expulsion requires formal documentation and procedural investment. When schools are reestablishing behavioral authority after disruption, suspension is the mechanism they reach for first. Expulsion is not.

Across all models, school-level structural characteristics remain the dominant predictors of disciplinary outcomes. The lagged 2017 – 2018 discipline rates are among the strongest predictors in every model. Secondary schools consistently report higher suspension and expulsion rates than elementary schools. Racial composition, gender composition, and socioeconomic disadvantage are all positively associated with suspension across all locales. The pandemic introduced variation through modality, but it did not alter the structural patterns through which exclusionary discipline operates. Schools adapted within the existing system rather than transforming it. The modality does matter, but what matters more is the structural context schools were operating in before the disruption began.

From a policy standpoint, these findings reinforce that changes to instructional format do not address the underlying conditions that produce disciplinary inequality. The structural factors that predict suspension, such as school level, racial composition, socioeconomic disadvantage, were not moved by the pandemic disruption. The rural hybrid finding points specifically to the need for investment in alternative disciplinary infrastructure in rural schools, where structural constraints already limit the ability to respond to behavioral challenges through anything other than formal exclusion. Restorative practices, behavioral specialists, and counseling capacity matter more in contexts where suspension is the default, and they matter most in the schools that

have the fewest of them. Building that capacity is not just a post-disruption recommendation. It is what the structural conditions of rural schooling have always required.

Limitations and Future Directions

This study has limitations worth noting. The measures of suspension and expulsion are based on school-level administrative data, which captures reported outcomes rather than the behavioral events or decision-making processes that produced them. The absence of individual-level data limits the ability to examine the interpretive processes through which discipline decisions are made across different modality and locale contexts. The data are also at the school level, so it is not possible to track whether the same individual students are subject to repeated suspension or whether patterns vary within schools across classrooms or teachers. Learning modality is measured as the dominant format schools reported for 2020 – 2021, but many schools shifted formats throughout the year as local policies evolved. The broad modality categories likely encompass wide variation within them, two schools both classified as hybrid may have operated very differently in terms of schedule structure and the degree of in-person relational contact students experienced. This within-category variation is not captured in the analysis and may attenuate modality effects. Additionally, modality was not evenly distributed across locales, which limits statistical power for detecting interaction effects, particularly for the smaller modality groups like in-person with safety measures and no-change schools. Null findings for those groups should be interpreted as inconclusive rather than as evidence of no effect.

The binary elementary/secondary classification also collapses meaningful variation within the secondary category, as middle and high schools differ substantially in disciplinary practices and organizational structure. Alternative schools, which typically serve students with prior disciplinary involvement and tend to have elevated discipline rates, were not separately identified in this analysis. Future work should examine how disaggregating school level and accounting for alternative school placements affects locale-specific and modality-specific estimates. The analysis also focuses on 2021 – 2022, a year when many schools had only just begun returning to more traditional in-person instruction. Some students never fully returned, and schooling itself may look permanently different than it did before the pandemic. Future research should continue adding waves to determine whether the rural hybrid effect documented here persisted or dissipated as schools stabilized further from the disruption. Future research should also examine whether the alternative disciplinary infrastructure that rural schools lacked, such as behavioral specialists, restorative programs, counseling capacity, has been built in the years since and whether that investment changed the relationship between modality and discipline.

CONCLUSION

This chapter examined how the learning modalities schools utilized during 2020 – 2021 shaped exclusionary discipline across and within urban, suburban, and rural schools as they began returning to more traditional in-person instruction. The findings show that schools largely continued the patterns established before the pandemic with suspension and expulsion rates remaining low relative to earlier decades, locale-based differences persisted, and structural

school characteristics remained the dominant drivers of disciplinary outcomes. The pandemic did not fundamentally reorganize how exclusionary discipline operates across geographic contexts. What the pandemic did reveal is that modality mattered selectively, and where a school was located mattered more than which modality it utilized. Hybrid schools in rural areas showed the clearest and most consistent modality effect on suspension. This is not because hybrid instruction was uniquely disruptive in rural areas, but because those schools returned from a year of fragmented relational contact without the institutional resources to respond to behavior through anything other than formal exclusion. Urban schools showed descriptive differences across modalities that disappeared once composition was controlled, confirming that the structural conditions of urban schools are more powerful than any single year of disruption. Suburban schools, with more resources and organizational flexibility, absorbed the disruption without significant changes to disciplinary outcomes. The two-condition framework holds across all three locales, but what it reveals is that the capacity to respond when relational ties are disrupted is unevenly distributed across geographic contexts in ways that predate the pandemic entirely.

Suspension, not expulsion, was the primary mechanism through which schools reestablished behavioral authority following the disruption. Schools are durable institutions. Even a disruption as large and sustained as the COVID-19 pandemic did not transform the underlying systems through which exclusionary discipline operates. What it did was interact with those systems, amplifying the reliance on suspension in contexts where alternatives were already limited and leaving relatively stable the contexts with more organizational flexibility. Understanding that interaction matters not because it changes what we know about exclusionary discipline, but because it shows exactly where the investment needs to go.

CHAPTER FOUR

Criminalization or Care? Racialized Pathways of Post-Pandemic Behavioral Control

This chapter examines how the COVID-19 pandemic shaped the ways schools exert social control over students through the dual mechanisms of criminalization and medicalization. Prior research has documented racial disparities in criminalization and medicalization under stable institutional conditions but less is known about how large-scale educational disruptions shaped these pathways when schools returned to in-person instruction. Building on David Ramey's conceptualization of criminalization and medicalization as concurrent racialized systems of school-based social control (Ramey 2015, 2018), I examine how these pathways operated following a major educational disruption. This chapter asks whether the balance between punitive and therapeutic responses to student behavior shifted as schools began to return to in-person schooling in 2021 – 2022 following a prolonged educational disruption, and whether the racialized patterns documented in prior research persisted or changed.

Research has established that schools rely on two dominant frameworks for interpreting and responding to student behavior (Ramey 2015, 2016, 2018). Criminalization frames misbehavior as willful deviance managed through punitive responses such as suspension (Duarte et al. 2023; Hirschfield 2008; Irby 2014; Theriot 2009). The other path, medicalization, interprets student misbehavior as a symptom of underlying conditions requiring diagnosis and placement in specialized educational programs (Conrad 1992; Rafalovich 2013, 2020; Ramey 2015). These approaches have expanded over the past several decades (Conrad 1992; Rafalovich 2020; Ramey 2018). Ramey (2015) has established that these pathways do not represent competing responses

to student behavior but rather a dual system of social control through which schools managed childhood deviance. Research finds that these pathways are not evenly applied across student populations. Race, gender, and socioeconomic position shape the likelihood that a student will be directed toward criminalization or medicalization (Anderson, Ritter, and Boyd 2015; Lehmann et al. 2022; Ramey 2018; Skiba, Arredondo, et al. 2014). For example, Black students are disproportionately subjected to exclusionary discipline (e.g., criminalization), while White students are more likely to receive medicalized responses such as special education placements (Conrad 1992; Marcucci 2020; Ramey 2015). Ramey connected both pathways to an institutional bias through which White student behavior is more readily perceived as treatable and redeemable, while Black student behavior is more likely to be interpreted as threatening or deviant (Ramey 2015, 2016, 2018).

Teacher perception of student behavior is what puts students on one pathway or the other, and it is that perception that the pandemic disrupted. School-based social control depends on the institutional capacity to monitor and enforce behavioral expectations, and the relational ties between teachers and students. Those relational ties shape how behavior is interpreted before it reaches formal mechanisms of school-based social control (Alter et al. 2013; Brandmiller et al. 2020; Chen et al. 2021). Through consistent in-person contact, teachers develop individualized knowledge of students that act as a buffer between perceived misbehavior and formal sanction (Brandmiller et al. 2020; Chen et al. 2021; Pas and Bradshaw 2014). When those relational ties are weakened or routines are disrupted, disciplinary decisions rely more heavily on generalized perception, and those perceptions are already shaped through racialized lenses that associate Black students with threat and deviance and White students with treatable conditions (Ferguson [2000] 2000; Skiba et al. 2002; Skiba, Arredondo, et al. 2014; Welch and Payne 2010). The

COVID-19 pandemic disrupted both conditions. The shift to remote and hybrid instruction reduced daily supervision and severed the routine contact through which teachers develop individualized knowledge of students. When schools began to return to in-person learning in 2021 – 2022, they were reestablishing behavioral authority under conditions where relational ties had been weakened or fragmented which created contexts in which discretionary judgment, and the racialized perceptions that shape it, may have become more central to whether student behavior was interpreted as requiring punishment or treatment. This chapter uses the learning modality schools utilized during the 2020 – 2021 academic year to examine whether the disruption altered how schools deployed these two pathways of social control, and whether the racialized patterns documented in prior research persisted or changed.

Criminalization and Medicalization as Social Control

Schools rely on formal mechanisms to manage student behavior that can be categorized into two pathways: criminalization and medicalization (Ramey 2015, 2016, 2018). These dual pathways of social control have been found to structure students' educational experiences and reproduce inequality across the life course (Cribb Fabersunne et al. 2023; Hirschfield 2008; Losen and Martinez 2020; Ramey 2018, 2020). David Ramey's work provides the primary framework for this chapter. Drawing on longitudinal data, Ramey (2016) demonstrates that punitive school discipline and therapeutic interventions shape distinct institutional trajectories with consequences for later involvement with the criminal justice and mental health systems. Importantly, these pathways are stratified by race. Consistent with overall school exclusionary

discipline, Ramey finds that Black students are more likely to experience criminalized responses to misbehavior, while White youth are more likely to be medicalized even for similar behavior (Ramey 2015, 2016). This chapter extends Ramey's framework by examining how these dual pathways operated following a major disruption to the traditional structure of schooling. Prior research established these patterns under stable institutional conditions, while the pandemic provides an opportunity to assess how criminalization and medicalization function when those conditions are disrupted.

Criminalization

Criminalization frames student misbehavior as deviant or dangerous that needs to be handled through punitive interventions that mirror practices in the juvenile and criminal justice systems (Hirschfield 2008; Ramey 2018; Skiba, Arredondo, et al. 2014; Theriot 2009). Within schools, this is enacted through suspensions, expulsions, referrals to law enforcement, and school-based arrests which are often responses to subjective student infractions like disrespect or classroom disruption (Hirschfield 2008; Ramey 2015, 2018). This underlying logic treats student misbehavior as willful deviance rather than something situational or developmental. Behaviors that were once addressed informally by teachers are increasingly routed through formal disciplinary systems that remove students from classrooms or result in heightened surveillance (Hirschfield 2008; Ramey 2018; Skiba, Arredondo, et al. 2014). These practices disrupt academic engagement and label certain students as troublemakers, reinforcing stigmatized identities that follow students throughout school.

Consistent with the broader punitive discipline literature, criminalization is unevenly applied across student populations. Black students are disproportionately subjected to exclusionary discipline and law enforcement referrals, even after accounting for behavior and other school characteristics (Brent 2016; Fissel et al. 2019; Hirschfield 2008; Irwin, Davidson, and Hall-Sanchez 2013; Skiba et al. 2002; "Trey" Marchbanks et al. 2018). When teacher-student relationships are weakened and behavioral monitoring is reduced, which occurred as schools utilized different learning modalities, disciplinary decisions rely more heavily on the generalized racialized perceptions rather than individualized knowledge of students. An educational disruption like COVID-19 does not change which students teachers perceive as threatening. Instead, it removes the relational buffers that normally influence how teachers perceive and respond to student behavior. Without those buffers, teachers may fall back on generalized perceptions of behavior which already put Black students at a disadvantage.

Being put on the path of criminalization has consequences that extend well beyond the initial disciplinary event. Exclusion from school increases academic disengagement and weakens school attachment, which raises the risk of subsequent contact with the juvenile and criminal justice systems (Fissel et al. 2019; Irwin et al. 2013; Ramey 2020; Skiba et al. 2002; "Trey" Marchbanks et al. 2018). Repeated suspensions are strongly associated with a higher likelihood of arrest and incarceration later in life, which reinforces the school-to-prison pipeline (Davison et al. 2022; Hirschfield 2008; "Trey" Marchbanks et al. 2018). This path of criminalization operates as an early institutional labeling process that shapes how students are perceived and treated across multiple social systems over time.

Medicalization

The other pathway of formal social control is medicalization, which has become increasingly common in schools. Medicalization reframes misbehavior as a symptom of underlying behavioral disorders (i.e., inattentiveness, impulsivity) rather than intentional misbehavior (Conrad 1992; Rafalovich 2013, 2020; Ramey 2015, 2018, 2020). On this path, misbehavior becomes a matter of diagnosis and treatment rather than punishment. Similarly to the way criminalization mirrors the criminal justice system, medicalization has expanded alongside the broader medical system's growing influence on behavior management. Over the past several decades, diagnoses of disorders like ADHD and oppositional defiant disorder (ODD) have increased, and schools have increasingly incorporated these frameworks into how they conceptualize and respond to student behavior (Conrad 1992; Rafalovich 2020; Ramey 2018). The medicalization path shifts behavior from something that needs to be punished to something that needs to be treated, moving the behavioral regulation from disciplinary offices to individualized education plans and counseling services. This is operationalized through formal mechanisms including special education placements and behavioral intervention plans (Conrad 1992). Like the criminalization path, medicalization in schools is reinforced through federal policy. For example, the Individuals with Disabilities Education Act (IDEA) mandates services for students with qualifying disabilities and requires schools to consider whether student behavior is a manifestation of an underlying disability before utilizing disciplinary mechanisms (Ramey 2018). As a result, schools actively label certain student behavior as something requiring diagnosis and treatment rather than punishment.

Like criminalization, access to medicalization is also unevenly distributed. These decisions are discretionary and rely on teacher perception, so they vary substantially across

schools and districts. Ramey (2015) finds that special education accommodations are more likely to be utilized in schools with higher White student composition, producing inequality in who receives therapeutic support versus punitive discipline. Medicalization, unlike criminalization, can improve classroom behavior and academic function. However, the label itself carries stigma that shapes students' self-concept and peer relationships over time (Ramey 2018). The disruption to teacher-student relationships and behavioral perception caused by the pandemic, which varied depending on the learning modality schools utilized, may have altered medicalization differently than criminalization. Unlike suspension, which can be enacted quickly, IDEA identification requires a formal evaluation process with documentation and institutional investment, which make it less immediately sensitive to these relational disruptions the pandemic caused. This distinction matters for understanding why criminalization and medicalization may have responded differently to the pandemic disruption.

Criminalization and medicalization are the dual pathways schools use to manage student behavior through formal social control. The decision to punish or treat is shaped by many factors such as institutional norms, perceived threat, the available resources, and the broader social inequalities in the school. (Ramey 2018, 2020). These pathways are not mutually exclusive because students can be subject to both criminalization and medicalization simultaneously. Prior research has documented that Black students are more likely to experience this overlap, meaning they are subject to greater institutional control regardless of which pathway is applied (Ramey 2015). This lays the foundation for examining how these pathways may have changed following the disruption year. This chapter seeks to understand how the learning modalities schools utilized during 2020 – 2021 may have impacted these pathways of social control as schools began to return to in-person instruction in 2021 – 2022.

Race, Social Control, and Learning Modalities

The COVID-19 pandemic altered not just where learning took place but also how student behavior was interpreted and labeled. Schools are traditionally designed for in-person instruction, and when they shifted to virtual, hybrid, or in-person with safety measures, the context through which teachers observed and interpreted student behavior changed with it (Becker et al. 2020, 2022; Brandmiller et al. 2020; Chen et al. 2021). The pandemic provides a rare opportunity to examine how institutionalized these pathways are, to see whether behavior was routed differently through criminalization and medicalization once schools began returning to in-person instruction in 2021 – 2022. Prior research shows these pathways differ by school racial composition and persist even under the appearance of race-neutral policies, because student behavior is interpreted through a racialized lens that shapes whether students are punished or treated based on race (Ramey 2015, 2016, 2018; Skiba, Arredondo, et al. 2014). The impact of different learning modalities on the reestablishment of these two pathways of social control has not previously been studied.

Each modality created different conditions for how student behavior could be observed and responded to. In virtual environments, the physical mechanisms of traditional discipline were largely unavailable as you cannot remove a student from a classroom they are not physically in (Jones 2021; Welsh 2022). Teacher-initiated referrals for IDEA identification were also harder to make because the daily observation that typically precedes referral was limited or absent (Naff et al. 2022). Hybrid instruction created a different problem. Fragmented schedules meant teachers

had inconsistent contact with students, making it harder to build the relational knowledge that normally informs how behavior is interpreted (Darling-Hammond et al. 2023; Welsh and Little 2018b). Schools that were in-person with safety measures maintained more consistent supervisory structures, even if masks and distancing changed how those structures operated (Adams and Gray 2023; Becker et al. 2022).

These modality-specific conditions matter differently for criminalization and medicalization. Suspension is fast and discretionary because a teacher can refer a student to the office and a principal can issue a suspension the same day. IDEA identification is the opposite. It requires formal evaluation with documentation for a professional referral and institutional investment over time (Rafalovich 2013; Ramey 2018). This means criminalization is more immediately sensitive to changes in relational contact and supervisory routine than medicalization is. When the relational buffers are disrupted, the threshold for formal punitive responses changes faster than the threshold for a formalized diagnostic process. These processes also remain racialized regardless of modality. Black students are more likely to be perceived as threatening or defiant, while White students are more likely to be interpreted as needing support or treatment, and that does not change based on whether instruction is virtual or in-person (Ferguson [2000] 2000; Ramey 2015; Skiba et al. 2002; Welch and Payne 2010). What modality changes is ability to create relational buffers, and when those buffers are removed the students most vulnerable to racialized judgment are the ones most affected.

Theoretical Framework

Schools are central sites of social control, and that control is operationalized through teacher perception and labeling of student behavior and the relational ties between teachers and students that shape those perceptions (Alter et al. 2013; Brandmiller et al. 2020; Chen et al. 2021). When these mechanisms are functioning, teachers know their students well enough to handle behavioral challenges informally rather than routing them through formal disciplinary or diagnostic processes. When those relationships are not formed or are disrupted teachers, are more likely to fall back on formal mechanisms. These could be either punitive responses, like suspension, or the beginning of a medicalization process like an IDEA referral. Both responses rely on subjective teacher judgment, but they operate on very different timelines. Suspension is immediate while IDEA requires formal evaluation (Rafalovich 2013; Ramey 2018), which means these two pathways may respond differently when the relational conditions that normally shape teacher perception are disrupted.

The COVID-19 pandemic disrupted those conditions through the learning modalities schools utilized during 2020 – 2021. Virtual instruction eliminated the daily in-person contact through which teachers build individualized knowledge of students. Hybrid learning fragmented the traditional routines and produced inconsistent relational contact that made it harder to form the kind of relationships that buffer behavior from formal responses. Even in-person with safety measures operated under altered supervisory dynamics. When schools began to return to in-person instruction in 2021 – 2022, teachers and administrators were reestablishing behavior expectations in environments where the relational ties had been weakened or never fully formed. In order to quickly reestablish social control in schools, student behavior may be handled through quicker suspension mechanisms rather than medicalization. However, these pathways may still continue to be perceived through racialized perceptions.

Criminalization is deeply racialized. Research consistently documents that the decision to treat student behavior as deviant rather than situational is shaped by racialized perceptions of threat and danger (Ferguson [2000] 2000; Ramey 2018; Skiba et al. 2002). Black students are disproportionately subjected to criminalized forms of social control beginning early in childhood, and biased cultural stereotypes frame Black students as aggressive and shape how authority figures perceive and respond to their behavior (Ferguson [2000] 2000; Hirschfield 2008; Ramey 2018; Welch and Payne 2010). Within schools, teachers are more likely to interpret Black students' behavior as intentional misbehavior rather than situational, increasing the likelihood of exclusionary discipline (Ferguson [2000] 2000; Skiba, Arredondo, et al. 2014). These patterns compound over time. Each disciplinary encounter increases the risk of subsequent contact with the juvenile and criminal justice systems, reinforcing cumulative disadvantage across the life course (Anderson and Ritter 2017; Brent 2016; Curran 2016; Hirschfield 2008; Skiba, Arredondo, et al. 2014; "Trey" Marchbanks et al. 2018; Welch and Payne 2012). The disruption of relational contact introduced by the learning modalities schools utilized during 2020 – 2021 is significant for criminalization because it weakens the individualized knowledge that sometimes buffers these racialized perceptions of behavior from formal sanctions. When teachers can get to know their students, they can contextualize behavior that might otherwise trigger a disciplinary response. However, when that relational knowledge is not there by the teacher, or by previous teachers, the default to punitive responses may be more likely and those operate through a racialized lens. It is not that the modality changed which students are perceived as threatening, but that it altered whether the relational conditions existed to check that perception before it became formal punishment.

Medicalization operates through a different set of mechanisms, but it is also deeply racialized. Black families have faced historical and ongoing discrimination within both the education system and the medical system, which produced well-documented skepticism toward diagnoses and treatment recommendations (Ramey 2016, 2018). This skepticism contributes to the distrust of behavioral diagnoses such as ADHD. It also creates skepticism in parents and school personal as they are less likely to attribute Black students' misbehavior to underlying treatable conditions (Ramey 2020). Even when treatment is sought out, there is limited access to medical care and behavioral health services which continue to add to the inequality in who reaches the medicalization pathway (Ramey 2016). White families are more often positioned to access the medicalization pathway. They often have greater familiarity with behavioral diagnoses and less institutional skepticism toward the medical system. White parents also have stronger capacity to advocate for the accommodations of their children which increase the likelihood that White students' behavior is interpreted as treatable rather than deviant (Conrad 1992; Ramey 2020). For all students, schools are often where referral to the medicalization pathway first occurs through teacher-initiated referrals that lead to behavioral evaluations and access to school-based specialists. The learning modalities in 2020 – 2021 disrupted this process. Remote instruction reduced the opportunities for teacher-initiated referrals because the daily observation that typically precedes referral was limited or absent. The expansion of telehealth during the pandemic unevenly benefited families with the resources to navigate digital systems, which potentially widened this gap rather than narrowing it (Naff et al. 2022; Pinkney 2021).

The racial dynamics in both criminalization and medicalization are not simply about which students misbehave more. They reflect the perceptions and mechanisms through which the same behavior gets routed differently depending on who the student is (Ramey 2015, 2018). The

COVID-19 pandemic did not create these differences, but it did alter the organizational conditions under which they operated. By disrupting the relational contact that sometimes buffers the racialized perception from formal response and formal evaluation processes through which medicalization occurs, the pandemic created conditions under which these established pathways of social control may have been reshaped. Understanding how each modality shaped those conditions is essential for examining whether criminalization and medicalization responded differently to the disruption, and whether the racial structure of each pathway persisted or changed when schools returned to in-person instruction in 2021 – 2022.

Summary

Schools are central sites of social control that shape students' trajectories through criminalization and medicalization. David Ramey's work (2015, 2016) has been influential in conceptualizing these as dual yet interconnected mechanisms through which schools perceive and label student behavior. Criminalization routes behavior toward punitive responses with consequences for later criminal justice involvement, while medicalization routes similar behavior toward therapeutic responses. Both pathways are racialized and unevenly distributed, creating what Ramey (2015) describes as a social control matrix in which the same behavior is labeled as dangerous when exhibited by Black students and treatable when exhibited by White students. Despite a strong body of evidence establishing these racialized patterns, prior work has examined them almost exclusively under stable institutional conditions. Less is known about how these pathways, particularly medicalization, operate when schooling itself is disrupted.

This chapter argues that criminalization and medicalization will respond differently to this large scale educational disruption. Criminalization, enacted through fast discretionary judgment, is more immediately sensitive to disruptions in relational contact and supervisory routine. Medicalization, which depends on formal evaluation processes and teacher-initiated referrals over time, is more insulated from short-term relational disruption but may still be affected when the daily observation that precedes referral is reduced or absent. Across both pathways, the racialized perceptions through which teachers perceive, and label behavior are expected to persist which mean Black students may experience elevated control through both criminalization and medicalization simultaneously, rather than being sorted cleanly between the two paths. This chapter uses the COVID-19 pandemic and the subsequent learning modalities schools utilized as a lens for examining how educational disruptions may shape these dual pathways of social control. This chapter addresses the following research questions:

1) How did rates of school-based criminalization (i.e., suspension) and medicalization (i.e., IDEA identification) in 2021 – 2022 compared to pre-pandemic trends?

    H1a: Suspension rates will be higher in 2021 – 2022 than before the pandemic, reflecting the reestablishment of punitive control following the disruption year.

    H1b: IDEA identification rates will continue the pre-pandemic upward trend in 2021 – 2022 without a disruption-specific spike, reflecting that formal evaluation processes are more insulated from short-term relational disruption than suspension.

2) How did the learning modalities during the 2020 – 2021-year shape suspension and IDEA identification rates in 2021 – 2022?

H2a: Increases in suspension will be concentrated in schools with the most relational fragmentation. Hybrid and in-person with safety measures schools will show higher suspension rates than no-change schools, while virtual schools will show a weaker association reflecting a complete break in relational contact rather than fragmentation.

H2b: IDEA identification rates will show modest variation across modalities, with virtual schools showing the lowest rates, reflecting reduced opportunities for teacher-initiated referral under remote instruction.

3) Did racial disparities in suspension and IDEA identification persist in 2021 – 2022, and how were they conditioned by prior learning modality?

H3a: Black students will experience higher suspension rates than White students across all modalities, and modality-associated increases will be concentrated among White students, as Black student suspension rates are already structurally elevated in ways modality-specific disruption cannot move further.

H3b: Black students will not experience substantially lower IDEA identification than White students in 2021 – 2022. The racial pattern in medicalization may show Black students subject to overlapping institutional control rather than simple sorting into separate pathways.

DATA AND METHOD

This chapter utilizes nationally representative, school-level administrative data to examine how learning modalities during the 2020 – 2021 academic year shaped subsequent patterns of criminalization and medicalization in U.S. public schools. The analysis draws primarily on data from the Civil Rights Data Collection (CRDC), administered by the U.S. Department of Education's Office for Civil Rights, and is supplemented with school-level demographic and contextual information from the National Center for Education Statistics (NCES). The primary data source for this chapter is the CRDC, a biennial census of nearly all U.S. public K-12 schools. The CRDC collects detailed school-level counts of disciplinary actions and special education participation disaggregated by race, gender, and disability status. This disaggregation makes the CRDC particularly well suited for examining racialized patterns of social control and for distinguishing between punitive and medicalized institutional responses to student behavior. To contextualize disciplinary and special education outcomes within broader institutional characteristics, additional school-level data are drawn from NCES. Specifically, the Common Core of Data (CCD) provides information on total enrollment, school grade levels, and socioeconomic disadvantage, measured as the percentage of students eligible for free or reduced-price lunch (FRL). The Education Demographic and Geographic Estimates (EDGE) program provides detailed locale classifications. The CRDC and NCES datasets were merged using stable NCES school identifiers to ensure consistent linkage across waves.

This chapter uses seven waves of CRDC data: 2009 – 2010, 2011 – 2012, 2013 – 2014, 2015 – 2016, 2017 – 2018, 2020 – 2021, and 2021 – 2022. The five pre-pandemic waves establish baseline trends in criminalization and medicalization prior to COVID-19. The 2021 – 2022 wave serves as the primary outcomes period, capturing suspension and IDEA identification rates following the widespread return to in-person schooling. The 2017 – 2018 wave serves an

additional role as the source of lagged dependent variables. The 2020 – 2021 wave is used exclusively to measure schools' dominant learning modality during the height of the educational disruption. During this year, suspension and IDEA measures are substantially distorted by ongoing pandemic conditions and uneven reporting practices. As a result, outcome measures from 2020 – 2021 are not used in the analysis. Restricting outcomes to 2021 – 2022 and using 2020 – 2021 modality as a predictor ensures clear temporal ordering between instructional arrangements and the following disciplinary outcomes in the 2021 – 2022 year.

The analytic sample includes all U.S. public K-12 schools with complete data across all seven waves and consistent NCES identifiers. Specifically, a school is included only if it appears in all seven CRDC waves. If a school is missing from a wave it is excluded from all analyses. Schools without a 2017 – 2018 match are excluded from regression models but retained in descriptive trend analyses. Both elementary and secondary schools are included to capture variation in how criminalization and medicalization operate across grade levels. After applying these criteria, the final analytic regression sample consists of 42,988 schools. School characteristics vary substantially in enrollment size, socioeconomic composition, and geographic locale, providing meaningful variation for both descriptive and regression analyses. One covariate warrants specific attention regarding sample coverage. The percentage of students eligible for free or reduced-price lunch (FRL), drawn from the CCD, is missing for approximately 27.9% of schools in the 2021 – 2022 wave. Missingness is distributed relatively proportionally across locales, suggesting it is not systematically concentrated in any single geographic context. Schools missing FRL data are excluded from the regression models that include this control. Future work should formally assess whether this exclusion affects the representativeness of regression estimates prior to publication.

Dependent Variables

This chapter examines two school-level outcomes capturing punitive and medicalized forms of social control. Both are constructed using school-level counts from the CRDC and standardized by enrollment to generate rates per 100 students. Standardizing by enrollment allows for meaningful comparisons across schools of varying size and ensures that coefficients reflect differences in rates rather than raw counts.

Criminalization: Suspension Rate

Criminalization is operationalized as the school-level suspension rate, the total number of suspension incidents per 100 students enrolled. This measure combines two items from the CRDC: the count of students who received one out-of-school suspension and the count of students who received more than one out-of-school suspension. These counts are summed at the school level and divided by total student enrollment, then multiplied by 100 to produce a rate per 100 students enrolled. Suspension represents a formal exclusionary discipline response and is among the most common mechanisms through which schools enact punitive control. Consistent with Ramey's framework, suspension is treated as an indicator of criminalization insofar as it removes students from instructional settings and reflects logics of exclusion and deterrence that

parallel those of the criminal justice system (Ramey 2015, 2018). Suspension rates are calculated for all students and disaggregated by race to examine racial inequality in exclusionary discipline.

Medicalization: IDEA Identification Rate

Medicalization is measured using the IDEA rate, the number of students receiving services under the Individuals with Disabilities Education Act (IDEA) per 100 students enrolled. This measure is drawn from the CRDC count of students served under IDEA, divided by total student enrollment and multiplied by 100 to produce a rate per 100 students enrolled. IDEA designation reflects a formal institutional process through which behavioral difficulties are classified as disability-related and addressed through diagnosis and specialized services. Drawing on Ramey's work, this measure captures a medicalized form of social control in which student behavior is reframed as a condition requiring treatment rather than punishment (Ramey 2015, 2018). Examining IDEA rates alongside suspension rates allows this chapter to assess whether the two pathways are applied simultaneously or diverge from each other following the learning modalities. If Black students show elevated rates on both outcomes simultaneously, this challenges Ramey's sorting model and supports an overlapping institutional control interpretation.

Independent Variables

Primary: Learning Modality

Learning modality is the key independent variable and captures the primary organizational structure of schooling during the 2020 – 2021 academic year. Learning modality is operationalized as a four-category nominal variable that includes no-change (reference category), in-person with safety measures, hybrid, and virtual-only. This was the only measure used during the 2020 – 2021 CRDC wave. Using 2020 – 2021 modality to predict 2021 – 2022 outcomes ensure clear temporal ordering between instructional arrangements and disciplinary outcomes.

School-Level Control Variables

All regression models include school-level covariates to account for differences in student composition and instructional context that prior research has shown to influence disciplinary practices. Controls include racial composition (percent Black enrollment), gender composition (percent male enrollment), socioeconomic disadvantage (percent eligible for free or reduced-price lunch), total student enrollment, and school level (elementary versus secondary). School locale (urban, suburban, town, and rural, with urban as the reference category) is also included as a control. The 2017 – 2018 school-level discipline rate is additionally included as a lagged dependent variable in all primary regression models as described in the Analytical Plan. Including these covariates ensures that observed differences across learning modalities are not attributable to pre-existing compositional or structural differences between schools.

ANALYTICAL PLAN

I begin with descriptive analyses establishing baseline levels of suspension and IDEA identification and documenting changes following the 2020 – 2021 academic year. Specifically, I examine school-level rates across six waves of nationally linked administrative data (CRDC 2009 – 2010 through 2017 – 2018 and 2021 – 2022), excluding the 2020 – 2021 wave due to substantial measurement distortion. Mean rates per 100 students are presented overall and separately for Black and White students, allowing visualization of both the overall trends and racial stratification of each pathway. A key descriptive contribution of this chapter is the examination of the within-race ratio of IDEA identification to suspension rates for Black and White students separately. This ratio is calculated as the IDEA rate divided by the suspension rate for each racial group. It provides a direct measure of the relative reliance on medicalization versus criminalization numerically. Comparing this ratio across racial groups allows for an assessment of whether students are sorted into separate pathways (a large ratio difference between groups) or subject to overlapping institutional control (both groups showing elevated rates on both outcomes). This descriptive is presented by modality to show whether the learning modalities during the 2020 – 2021 academic year altered the pathway structure of each racial group.

Prior to multivariate modeling, pairwise t-tests assess mean differences in suspension and IDEA rates between Black and White students overall and within each learning modality. These tests provide a preliminary assessment of whether racial disparities in each outcome are

statistically significant before the inclusion of covariates. T-test results are reported in the descriptive tables. To assess the relationship between the learning modalities in 2020 – 2021 and 2021 – 2022 outcomes, I estimate cross-sectional OLS regression models predicting school-level suspension and IDEA identification rates in 2021 – 2022. Schools' dominant learning modality during 2020 – 2021 is included as a lagged explanatory variable, ensuring temporal ordering between instructional modality and outcomes. To assess change rather than levels, each model also includes the school's corresponding 2017 – 2018 discipline rate as a lagged dependent variable. This controls for each school's pre-existing disciplinary and medicalization patterns, allowing modality coefficients to be interpreted as associations with change in outcomes relative to pre-pandemic baselines. Schools without a 2017 – 2018 match are excluded from regression models but retained in descriptive analyses. All models adjust for school-level covariates including racial composition, gender composition, socioeconomic disadvantage, total enrollment, school level, and locale. Models are estimated using OLS with standard errors clustered at the district level to account for non-independence among schools operating within the same administrative context.

I first estimate overall main effects models predicting total suspension and total IDEA rates from learning modality, prior to the race-stratified analysis. These models establish whether modality is associated with post-disruption discipline overall before examining whether those associations differ by student race. I then estimate race-stratified models for Black and White students separately, presenting suspension and IDEA results for each group side by side. This approach allows direct comparison of both the direction and magnitude of modality effects across outcomes and racial groups without requiring a gap regression model. The racial gap in each outcome is discussed in text based on the marginal predictions from the race-stratified

models. To supplement the side-by-side presentation, across-race gap models are estimated as a robustness check. The Black-White suspension gap and the Black-White IDEA gap (both coded as Black minus White, so positive values indicate Black students have higher rates) are each regressed on modality and controls. These models are presented in supplemental tables and are used to test whether the racial gap in each outcome varies significantly across modalities. To assess whether modality associations exist independently of school composition, I estimate a set of robustness models that include the 2017 – 2018 lagged dependent variable but exclude school-level controls. These no-control models allow for evaluation of whether modality is associated with outcomes in 2021 – 2022 before racial composition, gender composition, socioeconomic disadvantage, enrollment, and school level are accounted for. The full regression models are expressed as:

$$Y_i = \alpha + \beta_1 MODALITY_i + \beta_2 Y_{i,2018} + \beta_3 SCHOOLCHAR_i + \varepsilon_i$$

where Y_i represents the school-level suspension or IDEA identification rate per 100 students in school i in 2021–2022, $MODALITY_i$ is a vector of dummy variables representing the school's dominant learning modality during 2020–2021 (with no-change as the reference category), $Y_{i,2018}$ is the corresponding school-level rate in 2017–2018, $SCHOOLCHAR_i$ is a vector of school-level covariates (racial composition, gender composition, socioeconomic disadvantage, enrollment, school level, and locale), α is the intercept, and ε_i is the error term. Standard errors are clustered at the district level. Robustness models exclude $SCHOOLCHAR_i$ to evaluate modality associations prior to compositional controls. All analyses are conducted using Stata 19.

RESULTS

Descriptive Statistics

Table 4.1 presents descriptive statistics for the full analytic sample in 2021 – 2022. Schools in the sample enroll an average of 556 students. Across schools, 15.47% of students are Black, 51.82% are male, and 48.70% qualify for free or reduced-price lunch, indicating that many schools serve populations experiencing substantial socioeconomic disadvantage. Most schools are elementary schools (62.8%), with the remainder classified as secondary (37.2%). Geographically, schools are distributed across suburban (38%), urban (30%), rural (21%), and town (11%) locales. The learning modalities schools utilized during the 2020 – 2021 academic year were heavily concentrated in hybrid instruction (92.66%). Smaller shares reported virtual instruction (3.96%), in-person instruction with safety modifications (3.09%), or no instructional change (0.30%). These distributions confirm that hybrid was by far the dominant modality and that comparisons involving smaller modality groups, particularly no-change and in-person with safety measures, are subject to limited statistical power.

Descriptive patterns in the primary outcomes confirm the racialized structure of both pathways. For criminalization, schools report an average total suspension rate of 4.90 per 100 students, with substantial racial disparity. Black students average 8.63 suspensions per 100 students, while White students average 4.04 suspension per 100 students. For medicalization, schools report an average total IDEA identification rate of 15.15 per 100 students. Black students average 19.01 IDEA identifications per 100 students, exceeding both White students (16.23 per

100) and the overall sample mean. This descriptive pattern, Black students elevated on both suspension and IDEA, is the first indication of the overlapping institutional control pattern that the regression analyses examine in detail. The IDEA-to-suspension ratio across the full sample is 3.37 for Black students and 8.93 for White students, meaning Black students are identified for IDEA at approximately 3.4 times their suspension rate. The White ratio is 8.93, meaning White students are identified for IDEA at nearly nine times their suspension rate. This gap in ratios indicates that while both groups are more heavily medicalized than criminalized in absolute terms, White students' medicalization far exceeds their criminalization exposure relative to Black students.

Table 4.1 Descriptive Statistics, 2021–2022 Analytic Sample

Variable	Mean	SD
Criminalization (Suspension)		
Total Suspension Rate (per 100)	4.90	10.85
Black Suspension Rate (per 100)	8.63	18.03
White Suspension Rate (per 100)	4.04	8.87
Medicalization (IDEA)		
Total IDEA Rate (per 100)	15.15	9.74
Black IDEA Rate (per 100)	19.01	17.84
White IDEA Rate (per 100)	16.23	12.84
Pathway Ratios (IDEA Rate/Suspension Rate)		
Black IDEA-to-Suspension Ratio	3.37	
White IDEA-to-Suspension Ratio	8.93	
School Characteristics		
Percent Black Enrollment	15.47	22.32
Percent Male Enrollment	51.82	5.26
Percent FRL	48.70	29.38
Total Enrollment	556.10	486.10
Elementary School (%)	62.8%	
Secondary School (%)	37.2%	

Learning Modality 2020 – 2021	
No Change	0.30%
In-Person w/ Safety	3.09%
Virtual Only	3.96%
Hybrid	92.66%
School Locale	
Urban	30%
Suburban	38%
Town	11%
Rural	21%

Note: N=42,988. Statistics are from 2021–2022 wave. FRL = free or reduced-price lunch. Suspension and IDEA rates expressed per 100 students of the relevant enrollment group. IDEA-to-suspension ratio calculated as IDEA rate divided by suspension rate for each racial group. Values greater than 1 indicate medicalization exceeds criminalization numerically for that group. The substantially lower Black ratio relative to White reflects proportionally higher criminalization exposure for Black students. Ratios by learning modality are presented in Table 4.3.

Table 4.2 presents descriptive statistics by learning modality. Suspension rates vary modestly across modalities. Virtual schools report the highest overall suspension rate (5.29 per 100 students), followed by hybrid schools (4.84), in-person with safety measures (4.14), and no-change schools (3.51). Across all modalities, Black students experience substantially higher suspension rates than White students. IDEA identification shows a different pattern, rates are highest in in-person with safety measures schools (13.93 per 100 students) and hybrid schools (13.71), and lowest in virtual schools (12.22), suggesting that remote instruction reduced opportunities for teacher-initiated referrals. School composition also varies across modalities. Virtual schools serve the highest proportion of Black students (17.79%) and students eligible for FRL (56.35%), while no-change schools serve the lowest proportions of Black students (9.20%) and are predominantly rural (58%). Hybrid schools are compositionally similar to the full sample. These patterns confirm that learning modality was not randomly distributed across

school contexts, virtual schools disproportionately served more disadvantaged and racially diverse populations, reinforcing the importance of controlling for school characteristics in regression models.

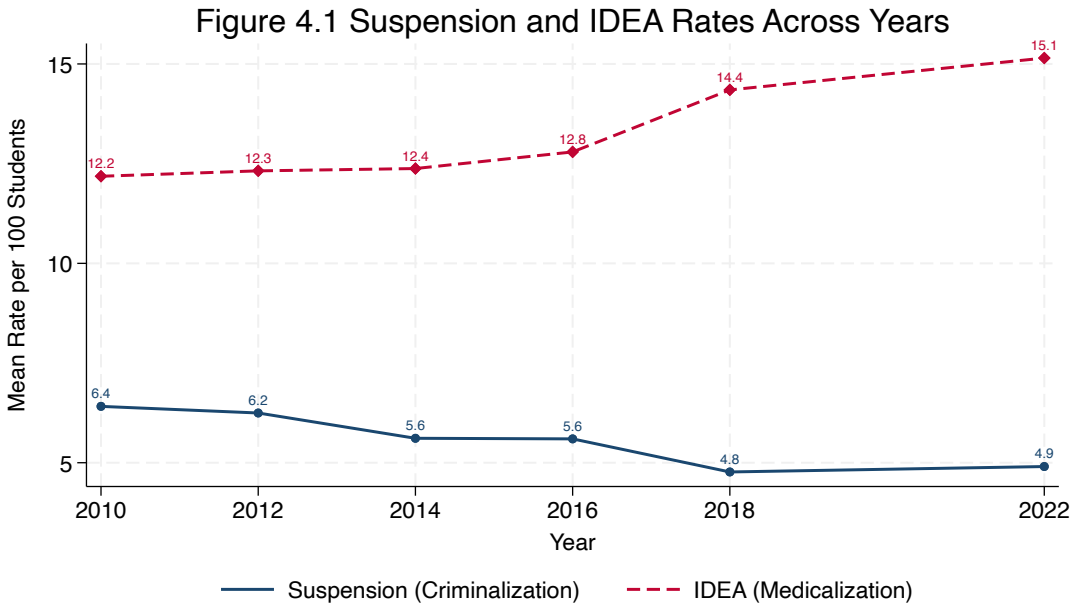
Table 4.2 Descriptive Statistics by Learning Modality, 2021–2022

	No Change		In-Person W/ Safety		Virtual Only		Hybrid	
Variable	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Suspension Rates								
Total Suspension	3.51	6.96	4.14	10.09	5.29	10.11	4.84	12.24
Black Suspension	6.45	19.28	7.84	20.29	8.46	17.76	8.65	18.76
White Suspension	2.18	8.57	3.62	10.11	4.21	12.26	4.05	26.14
IDEA Rates								
Total IDEA	12.40	11.70	13.93	12.44	12.22	9.88	13.71	9.73
Black IDEA	18.11	19.51	18.87	21.91	18.02	16.98	19.06	16.72
White IDEA	15.72	15.10	15.74	13.85	15.81	14.81	16.27	12.56
School Characteristics								
% Black Enrollment	9.20	21.86	9.38	17.03	17.79	27.01	15.61	22.23
% Male	51.69	9.36	52.67	8.11	51.90	5.33	51.79	5.12
% FRL	39.52	26.84	44.55	26.18	56.35	30.27	48.52	29.41
Total Enrollment	397.6	1055.3	333.9	350.0	589.3	547.0	562.6	482.8
Locale								
Urban	6%		12%		28%		31%	
Suburban	15%		16%		51%		38%	
Town	21%		24%		8%		11%	
Rural	58%		48%		13%		20%	
N	1,218		12,733		16,296		39,800	

Note: Descriptive statistics from 2021–2022 wave. Modality measured in 2020–2021. FRL = free or reduced-price lunch.

Descriptive Trends in Criminalization and Medicalization

Figure 4.1 displays mean school-level suspension and IDEA identification rates per 100 students across six waves (2009 – 2010 through 2021 – 2022), excluding the 2020 – 2021 academic year. Suspension rates followed a gradual downward trajectory across the pre-disruption period, declining from 6.4 per 100 students in 2009 – 2010 to 4.8 in 2017 – 2018. In 2021 – 2022, suspension rates increased modestly to 4.9 per 100 students. IDEA identification followed the opposite trajectory, rising steadily from 12.2 per 100 students in 2009 – 2010 to 15.1 in 2021 – 2022, the highest observed level across all waves. These divergent trends are consistent with H1a and H1b and provide early evidence for the theoretical asymmetry between



the two pathways. Criminalization is more sensitive to institutional disruption and recovery, while medicalization follows a slower-moving structural trend.

Figure 4.2 displays suspension rates separately for Black and White students across the six waves. Consistent with H3a, Black students experienced substantially higher suspension rates than White students across every wave. In 2009 – 2010, the mean Black suspension rate was 8.3 per 100 students compared to 4.4 for White students. Both groups declined across the pre-pandemic period. In 2021 – 2022, Black suspension rates increased modestly to 8.6 while White suspension rates remained stable at 4.0. The Black-White gap persisted across every wave.

Figure 4.2 Suspension Rates by Race Across Years

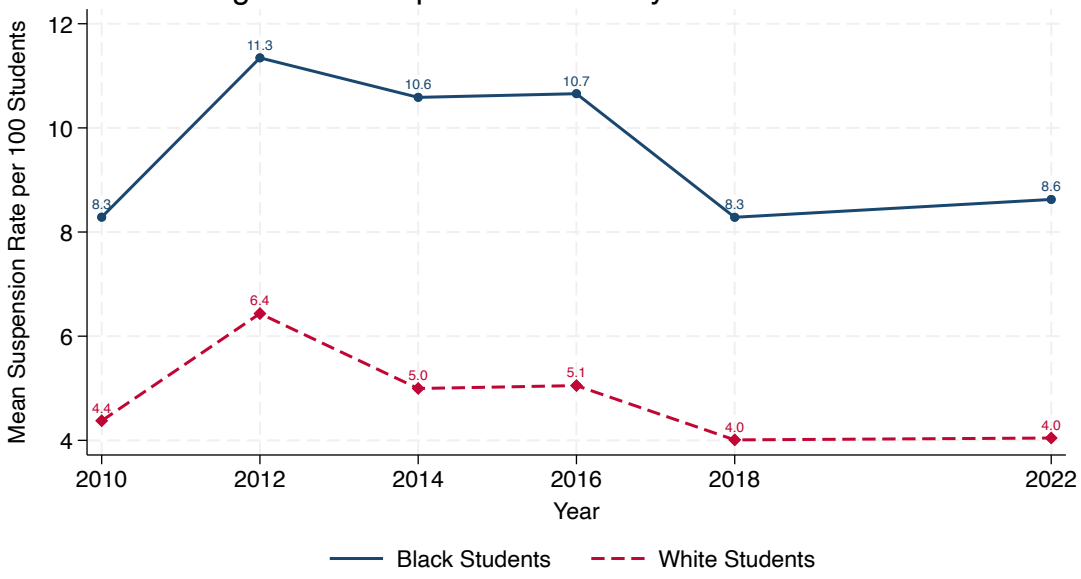
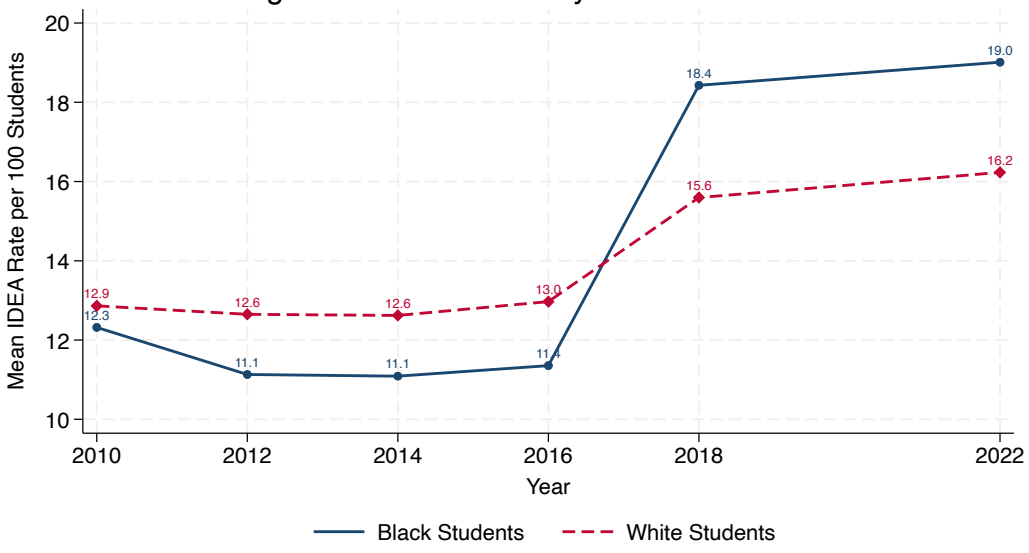


Figure 4.3 displays IDEA identification rates separately for Black and White students. In earlier waves, White students showed slightly higher IDEA rates. By 2017 – 2018, that pattern reversed with Black students averaged 18.4 IDEA identifications per 100 students compared to 15.6 for White students. In 2021 – 2022, Black IDEA rates reached 19.0 compared to 16.2 for White students. This directly informs H3b where rather than being sorted away from medicalization, Black students show elevated rates on both outcomes simultaneously. Both t-tests confirm these differences are statistically significant, Black students have significantly

higher suspension rates (mean difference 4.58, $p < 0.001$) and significant higher IDEA rates (mean difference = 2.78, $p < 0.001$) than White students in 2021 – 2022.

Figure 4.3 IDEA Rates by Race Across Years



Within-Race Pathway Ratios

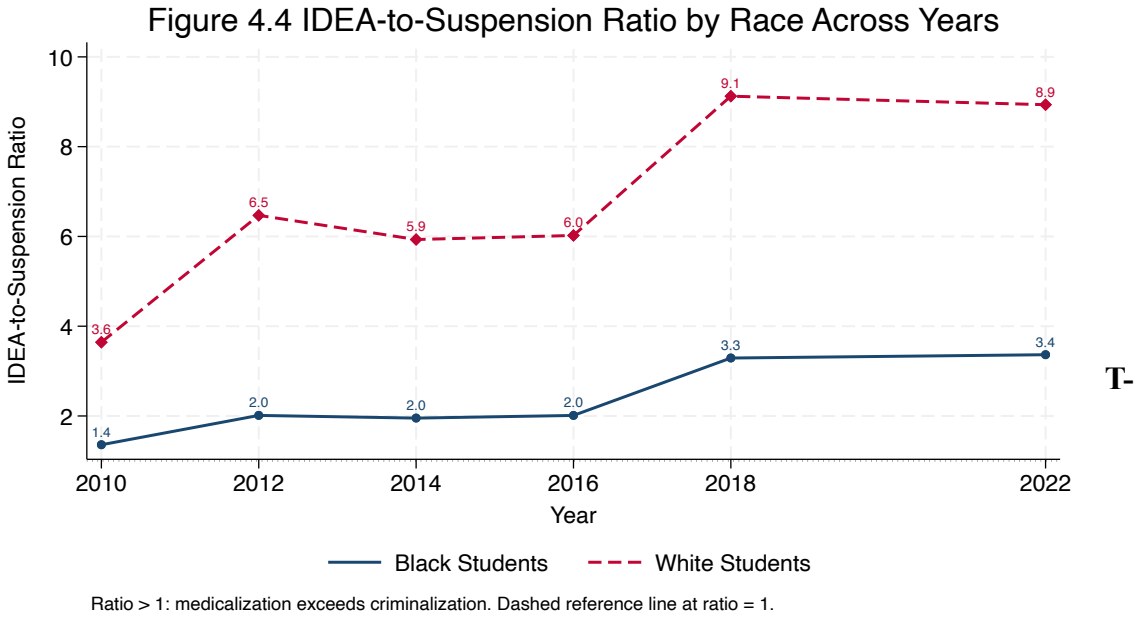
Table 4.3 presents the IDEA-to-suspension ratio for Black and White students overall and by learning modality. Figure 4.4 displays these ratios across all six waves. Overall in 2021 – 2022, the Black IDEA-to-suspension ratio is 3.37, meaning Black students are identified for IDEA at approximately 3.4 times their suspension rate. The White ratio is 8.93, meaning White students are identified for IDEA at nearly nine times their suspension rate. This gap in ratios is the clearest evidence of differential pathway routing. White students are substantially more heavily medicalized relative to their criminalization exposure than Black students. However, these ratios also complicate the simple sorting model. Black students are not excluded from

medicalization, their IDEA rate (19.0 per 100) substantially exceeds their suspension rate (8.6 per 100), and both are elevated relative to White students. The pattern is not that Black students are routed to criminalization instead of medicalization, but that they are subject to both at higher rates than White students. This is the overlapping institutional control pattern predicted by H3b. By modality, the Black ratio ranges from 2.09 in no-change schools to 3.40 in hybrid schools. The White ratio shows more variability, from 6.24 in virtual schools to 24.41 in no-change schools, though the no-change estimate is based on a very small sample and should be interpreted cautiously. Figure 4.4 shows that the gap between Black and White ratios widened substantially starting around 2015 – 2016, well before the pandemic disruption, confirming this is a structural trend rather than a pandemic-specific pattern.

Table 4.3 IDEA-to-Suspension Ratio by Race and Learning Modality, 2021–2022

	Black Students			White Students		
Learning Modality	**Suspension Rate**	**IDEA Rate**	**IDEA/Susp Ratio**	**Suspension Rate**	**IDEA Rate**	**IDEA/Susp Ratio**
No Change	6.45	18.11	2.09	2.18	15.72	24.41*
In-Person w/ Safety	7.84	18.87	2.59	3.62	15.74	9.33
Virtual Only	8.46	18.02	2.98	4.21	15.81	6.24
Hybrid	8.65	19.06	3.40	4.05	16.27	8.98
Overall	8.63	19.01	3.37	4.04	16.23	8.93

Note: Ratio = IDEA rate / Suspension rate. Values greater than 1 indicate medicalization exceeds criminalization numerically for that group. *No-change White ratio based on very small sample (N=167) and should be interpreted cautiously. Both Black and White students show ratios greater than 1 across all modalities, indicating both groups are subject to elevated medicalization relative to criminalization. The substantially lower Black ratio relative to White reflects that Black students have proportionally higher criminalization exposure.



T-Tests: Modality Differences in Suspension and IDEA

Table 4.4 presents pairwise t-test results comparing suspension and IDEA rates across learning modalities in 2021 – 2022. For total suspension, all three modality groups differ significantly from no-change schools. In-person with safety modifications (mean difference = 1.37, $p < 0.01$), virtual schools (mean difference = 1.95, $p < 0.001$), and hybrid schools (mean difference = 2.07, $p < 0.001$) all report significantly higher suspension rates than no-change schools. Virtual and hybrid schools do not differ significantly from each other. In-person schools report significantly lower suspension than hybrid schools. For total IDEA, modality differences are smaller and less consistent. No-change schools do not differ significantly from in-person, hybrid, or virtual schools. However, in-person schools report significantly higher IDEA rates than virtual schools (mean difference = 2.13, $p < 0.001$), and hybrid schools report significantly higher IDEA rates than virtual schools (mean difference = 1.87, $p < 0.001$). These descriptive patterns are consistent with the theoretical prediction that suspension is more sensitive to

modality-related disruption than IDEA identification. For race-specific modality comparisons, White suspension rates differ significantly from no-change schools across all modalities (hybrid $p < 0.001$, virtual $p < 0.001$, in-person $p < 0.001$). Black suspension rates, by contrast, do not differ significantly from no-change schools across any modality. IDEA rates for both Black and White students do not differ significantly across modality comparisons involving no-change schools. This descriptive pattern anticipates the main regression finding, that modality-associated suspension increases are driven by White students rather than Black students.

Table 4.4 Pairwise T-Tests: Suspension and IDEA Rates by Learning Modality, 2021–2022

Outcome	Comparison	Mean (Group 1)	Mean (Group 2)	Mean Diff	t	p
Total Suspension	No Change vs. In-Person	2.86	4.23	−1.37	−2.77	.006
	No Change vs. Virtual	2.86	4.82	−1.95	−3.90	<.001
	No Change vs. Hybrid	2.86	4.94	−2.07	−4.47	<.001
	In-Person vs. Virtual	4.23	4.82	−0.59	−2.21	.027
	In-Person vs. Hybrid	4.23	4.94	−0.70	−3.80	<.001
	Virtual vs. Hybrid	4.82	4.94	−0.12	−0.59	.555
Total IDEA	No Change vs. In-Person	14.60	15.47	−0.88	−1.05	.295
	No Change vs. Virtual	14.60	13.35	1.25	1.54	.126
	No Change vs. Hybrid	14.60	15.22	−0.62	−0.79	.432
	In-Person vs. Virtual	15.47	13.35	2.13	6.13	<.001
	Hybrid vs. Virtual	15.22	13.35	1.87	8.95	<.001
Black Suspension	No Change vs. In-Person	6.45	7.84	−1.40	−0.82	.417
	No Change vs. Virtual	6.45	8.46	−2.01	−1.18	.240
	No Change vs. Hybrid	6.45	8.65	−2.21	−1.33	.187
White Suspension	No Change vs. In-Person	2.18	3.62	−1.45	−3.67	<.001
	No Change vs. Virtual	2.18	4.21	−2.03	−4.64	<.001
	No Change vs. Hybrid	2.18	4.05	−1.88	−5.30	<.001
Black IDEA	No Change vs. In-Person	18.11	18.87	−0.76	−0.33	.745

White IDEA	No Change vs. Virtual	18.11	18.02	0.09	0.04	.967
	No Change vs. Hybrid	18.11	19.06	−0.95	−0.42	.676
	No Change vs. In-Person	15.72	15.74	−0.02	−0.02	.984
	No Change vs. Virtual	15.72	15.81	−0.09	−0.09	.929
	No Change vs. Hybrid	15.72	16.27	−0.54	−0.55	.586

Multivariate Regression Results

Overall Suspension and IDEA by Modality

Table 4.5 presents OLS regression results predicting total school-level suspension and IDEA rates in 2021 – 2022 from pandemic-era learning modality, controlling for the 2017 -2018 baseline rate and school characteristics. Standard errors are clustered at the district level. For suspension, in-person with safety modifications ($b = 1.37$, $p < 0.05$) and hybrid schools ($b = 1.44$, $p < 0.05$) are both significantly associated with higher post-disruption suspension rates relative to no-change schools. Virtual-only schools do not differ significantly from no-change schools. Predicted margins show that no-change schools average 3.3 suspensions per 100 students, while in-person with safety measures and hybrid schools both average 4.7, a difference of approximately 1.4 per 100 students after accounting for pre-existing disciplinary levels and school composition.

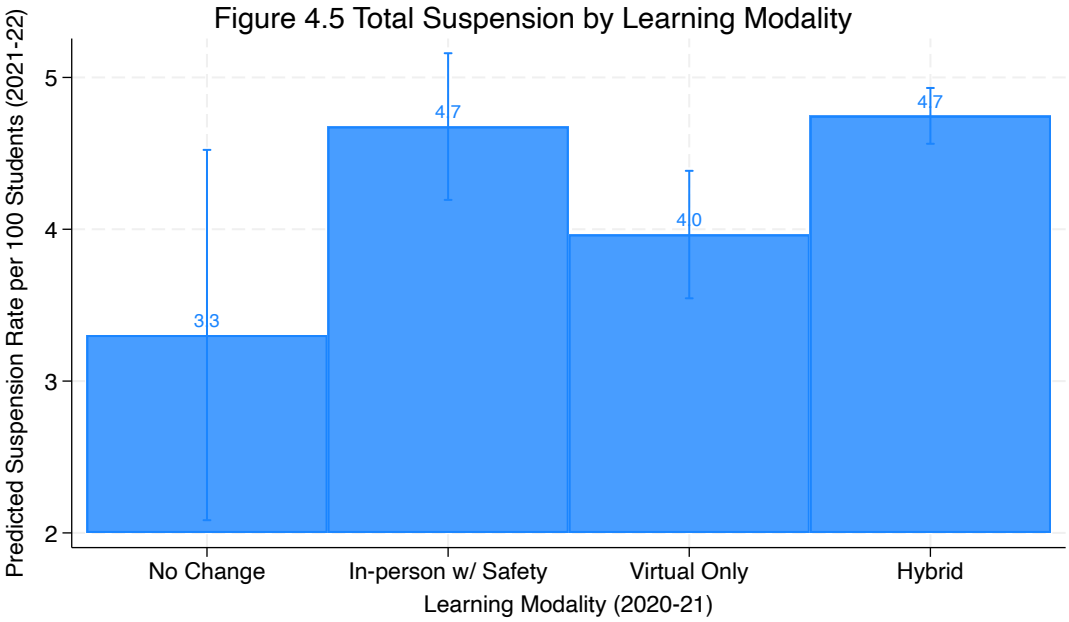
For IDEA, no modality reaches statistical significance. Predicted IDEA margins: no-change 14.9, in-person 15.4, virtual 13.6, hybrid 14.6 per 100 students. This null result for IDEA is consistent with the theoretical argument that medicalization is more insulated from short-term disruptions to relational contact than suspension. No-controls robustness models confirm these

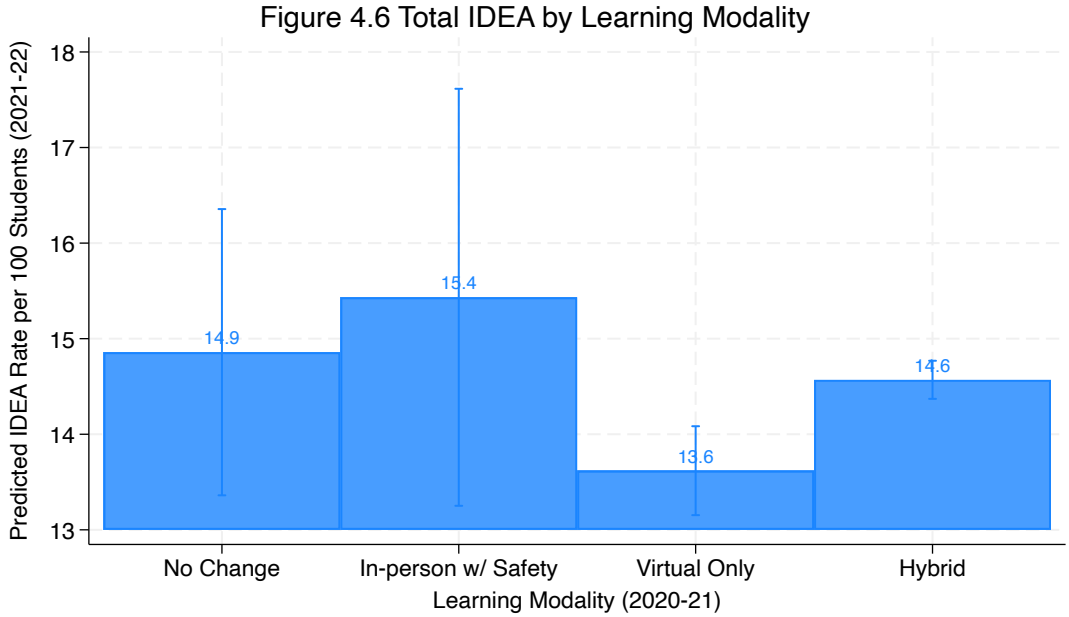
patterns with in-person (b = 1.11, p < 0.05) and hybrid (b = 1.21, p < 0.05) remain significant for suspension without composition controls, while no modality reaches significance for IDEA.

Table 4.5 OLS Regression of Learning Modality on Overall Suspension and IDEA Rates, 2021–2022

	Total Suspension		Total IDEA	
	b	**SE**	**b**	**SE**
Learning Modality (No-Change Ref.)				
In-Person w/ Safety	1.37*	(0.65)	0.57	(1.33)
Virtual Only	0.66	(0.66)	−1.24	(0.79)
Hybrid	1.44*	(0.62)	−0.29	(0.76)
Controls				
Lagged 2017–18 Rate	0.65***	(0.05)	0.76***	(0.02)
% Black Enrollment	0.04***	(0.01)	−0.01	(0.00)
% Male Enrollment	0.11**	(0.04)	0.13***	(0.02)
% FRL	0.01***	(0.01)	0.01***	(0.01)
Total Enrollment	−0.01	(0.01)	−0.01***	(0.00)
Secondary (vs. Elementary)	2.74***	(0.30)	0.48***	(0.08)
Locale (Urban Ref.)				
Suburban	-0.07	(0.21)	-0.28	(0.28)
Town	0.31	(0.26)	-0.29	(0.30)
Rural	0.10	(0.25)	-0.46	(0.30)
Predicted Margins:				
No Change	3.3		14.9	
In-Person w/ Safety	4.7		15.4	
Virtual Only	4.0		13.6	
Hybrid	4.7		14.6	

Note: N = 42,988. Standard errors clustered at district level. Lagged 2017–18 rate included. *p < .05; **p < .01; ***p < .001





Race-Stratified Suspension Results

Table 4.6 presents race-stratified regression results for suspension. The most important finding is a sharp asymmetry between Black and White students. For White students, all three

modalities are significantly associated with higher suspension relative to no-change schools: in-person with safety measures ($b = 1.98$, $p < 0.001$), virtual ($b = 1.85$, $p < 0.001$), and hybrid ($b = 2.22$, $p < 0.001$). Predicted White suspension margins range from 1.8 in no-change schools to 4.0 in hybrid schools. For Black students, none of the modality coefficients reach statistical significance. Predicted Black suspension margins are substantially higher than White students across all modalities, but do not differ significantly across modalities after accounting for 2017 – 2018 baselines and school composition. This asymmetry is the key finding for H2a and the racial disparity hypotheses. Modality is associated with changes in White student suspension but not Black student suspension. This is not because Black students experienced less disruption, but because Black student suspension rates are structurally elevated and do not move further in response to modality-specific disruption. The relational and supervisory disruptions introduced by hybrid and in-person with safety measures modalities appear to have elevated the threshold for formal discipline among White students who were previously managed informally, but for Black students, whose behavior is already more likely to be interpreted as requiring formal sanction regardless of relational context, modality did not change the institutional response. No-controls robustness models confirm this pattern. Without composition controls, Black suspension shows no significant modality associations, while White suspension remains significant across all three modalities. The modality effect on suspension is robustly concentrated in White students.

Table 4.6 OLS Regression of Learning Modality on Suspension Rates by Race, 2021–2022

	Black Suspension		White Suspension	
	b	**SE**	**b**	**SE**
Learning Modality (No-Change Ref.)				
In-Person w/ Safety	3.13	(3.25)	1.98***	(0.52)
Virtual Only	2.83	(3.21)	1.85**	(0.57)

Hybrid	3.60	(3.17)	2.22***	(0.46)
Controls				
Lagged 2017–18 Baseline	0.39***	(0.04)	0.35***	(0.03)
% Black Enrollment	0.05***	(0.01)	0.04***	(0.01)
% Male Enrollment	0.23**	(0.07)	0.15***	(0.03)
% FRL	0.01***	(0.01)	0.01***	(0.01)
Total Enrollment	−0.01***	(0.00)	−0.01***	(0.00)
Secondary (vs. Elementary)	7.80***	(0.56)	3.69***	(0.24)
Locale (Urban Ref.)				
Suburban	-0.04	(0.50)	-0.16	(0.25)
Town	1.09	(0.63)	0.52	(0.31)
Rural	0.29	(0.61)	0.04	(0.29)
Predicted Margins:				
No Change	5.0		1.8	
In-Person w/ Safety	8.2		3.7	
Virtual Only	7.9		3.6	
Hybrid	8.6		4.0	

Note: N = 42,988. Standard errors clustered at district level. Lagged 2017–18 rate included. Black suspension: no modality coefficients significant. White suspension: all three modalities significant. *p < .05; **p < .01; ***p < .001

Figure 4.7 Black Student Suspension by Learning Modality

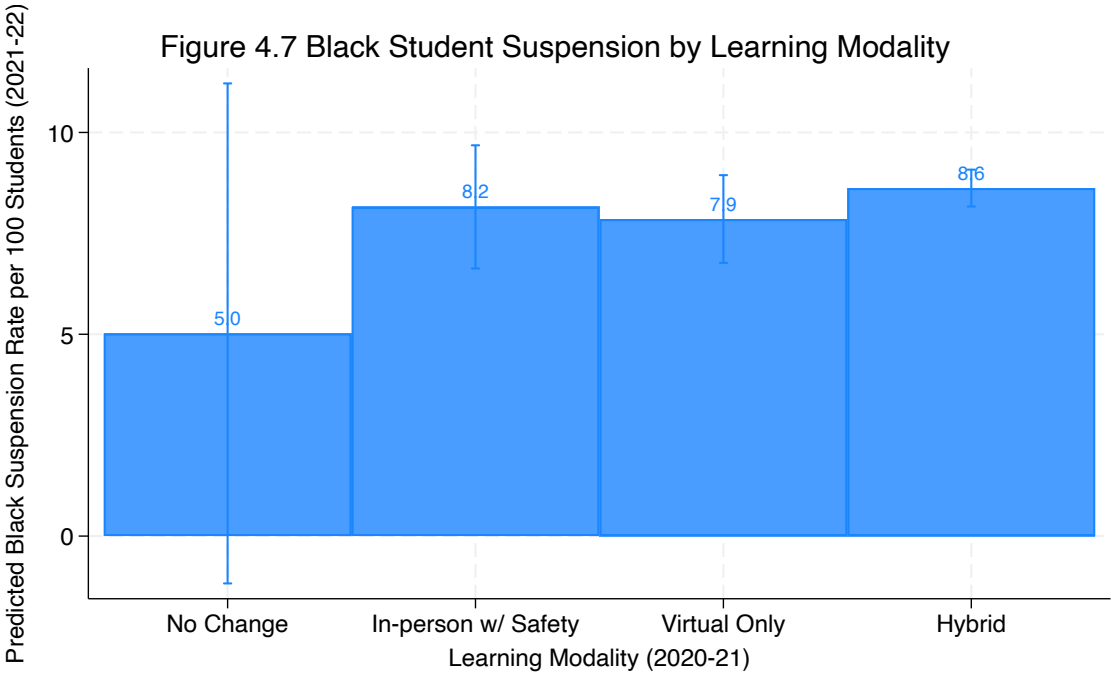
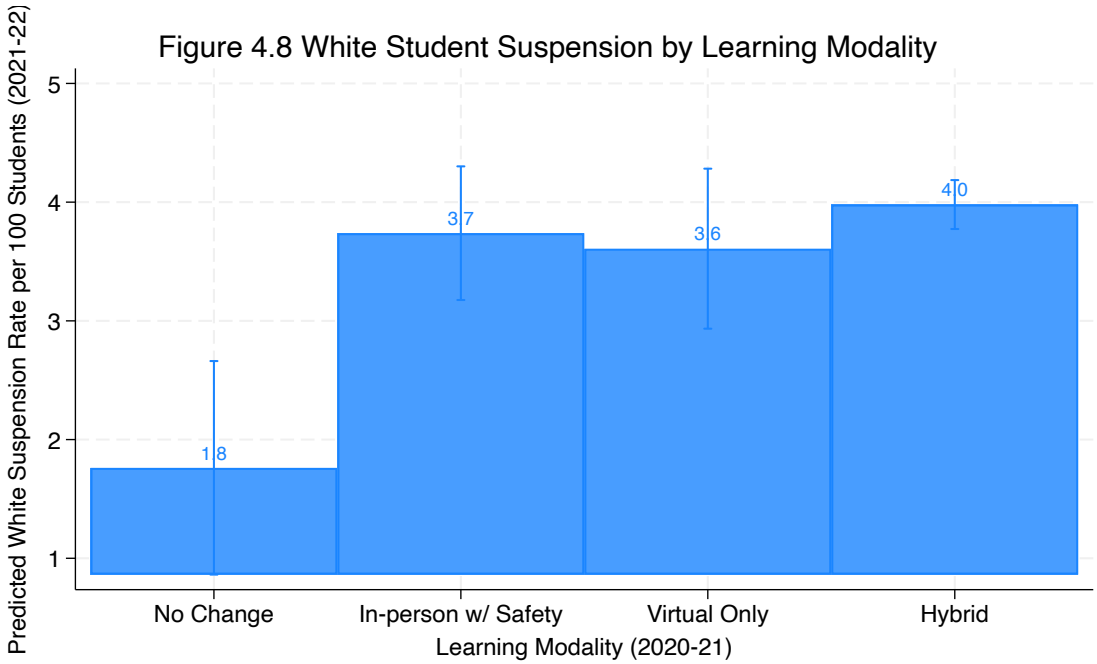


Figure 4.8 White Student Suspension by Learning Modality



Race-Stratified IDEA Results

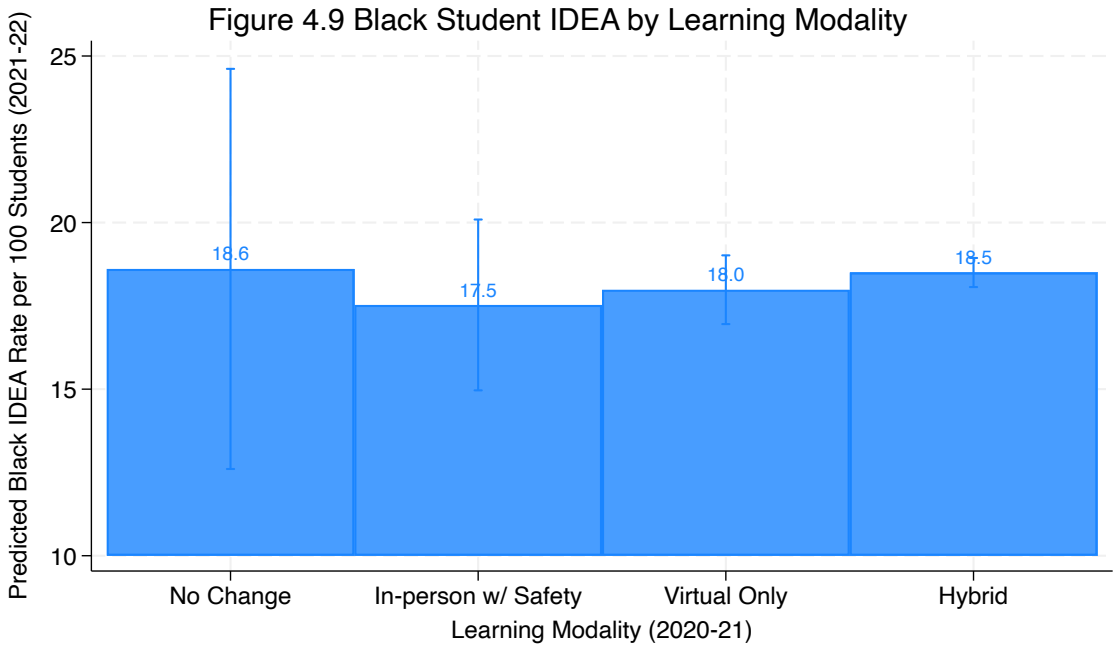
Table 4.7 presents race-stratified regression results for IDEA identification. For Black students, no modality is significantly associated with IDEA rates. Predicted Black IDEA margins range from 17.5 to 18.6 per 100 students across modalities. For White students, no modality is significant either. Predicted White IDEA margins range from 14.9 to 16.6 per 100 students. For both racial groups, IDEA rates are largely insensitive to modality variation after accounting for pre-2018 baselines and school characteristics. No-controls robustness models confirm this. The null IDEA findings confirm that the disruption operated primarily through the criminalization pathway and left the medicalization pathway relatively intact.

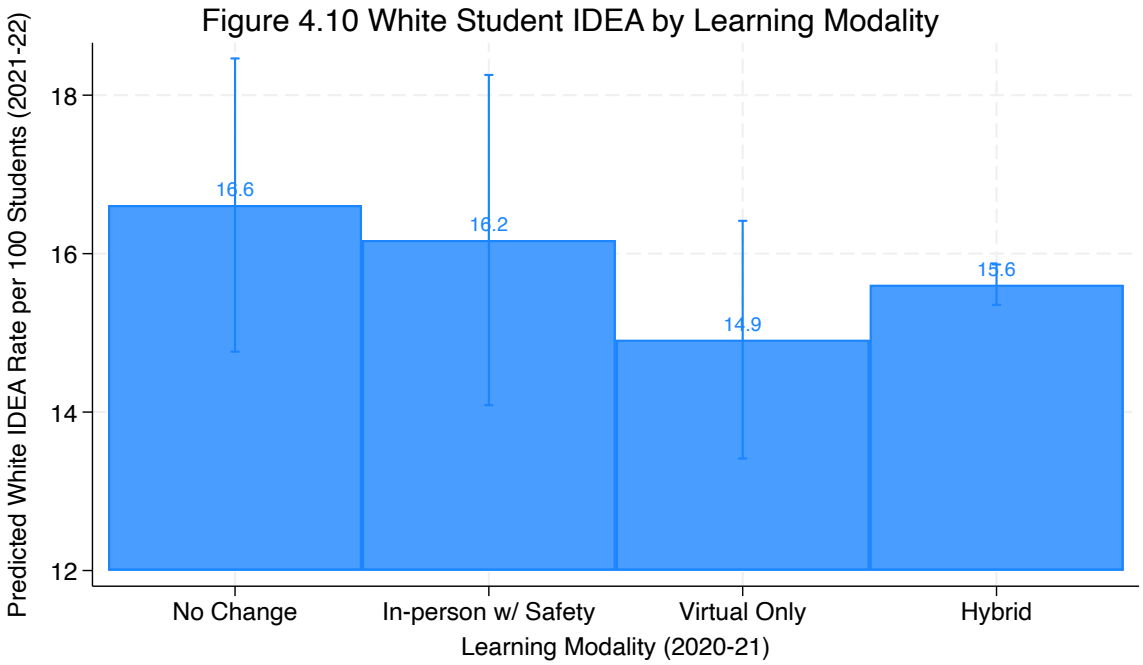
Table 4.7 OLS Regression of Learning Modality on IDEA Rates by Race, 2021–2022

	Black IDEA		White IDEA	
	b	**SE**	**b**	**SE**
Learning Modality (No-Change Ref.)				
In-Person w/ Safety	-1.08	(3.31)	-0.44	(1.40)
Virtual Only	-0.62	(3.11)	-1.70	(1.20)
Hybrid	-0.11	(3.06)	-1.00	(0.94)
Controls				
Lagged 2017–18 Baseline	0.23***	(0.01)	0.41***	(0.03)
% Black Enrollment	-0.05***	(0.01)	0.03***	(0.01)
% Male Enrollment	0.39***	(0.04)	0.25***	(0.03)
% FRL	0.01	(0.00)	0.02***	(0.00)
Total Enrollment	-0.01***	(0.00)	−0.01***	(0.00)
Secondary (vs. Elementary)	2.80***	(0.22)	0.37*	(0.19)
Locale (Urban Ref.)				
Suburban	-0.48	(0.58)	-0.33	(0.35)
Town	-0.34	(0.67)	-0.69	(0.36)
Rural	-0.52	(0.64)	-0.96**	(0.34)
Predicted Margins:				

No Change	18.6	16.6
In-Person w/ Safety	17.5	16.2
Virtual Only	18.0	14.9
Hybrid	18.5	15.6

Note: N = 42,988. Standard errors clustered at district level. Lagged 2017–18 rate included. No modality coefficients reach statistical significance for either racial group. *p < .05; **p < .01; ***p < .001





Across-Race Gap Models

Table 4.8 presents supplemental regression results predicting the Black-White suspension and IDEA gaps (coded as Black minus White, so positive values indicate Black students have higher rates). For the suspension gap, no modality reaches statistical significance. This is consistent with the race-stratified results, because modality increased White suspension significantly but did not significantly increase Black suspension, the gap between the two actually narrowed descriptively in modality schools relative to no-change schools, but this narrowing is not statistically significant. Predicted suspension gap margins are 3.8 in no-change schools and approximately 3.9-4.5 across the other modalities, reflecting the Black students'

suspension rates exceed White students' across all contexts. For the IDEA gap, modality is also not significant after controlling for locale and school characteristics. This means that schools that altered their modality during the pandemic show larger gaps in which Black students exceed White students in IDEA identification, relative to schools that did not change. Predicted IDEA gap margins are negative in no-change schools (−1.96) and positive in modality schools (1.6–3.1), with a directional pattern suggesting modality schools show larger Black–White IDEA gaps. However, these differences do not reach conventional significance thresholds once locale is controlled. The most substantively important predictor of the IDEA gap is racial composition (b = −0.12, p < .001) and school level (b = 3.09, p < .001), reinforcing that structural school characteristics are the dominant drivers of pathway differentiation between Black and White students.

Table 4.8 OLS Regression of Learning Modality on Black–White Gaps in Suspension and IDEA, 2021–2022 (Supplemental)

	Suspension Gap (Black-White)		IDEA Gap (Black-White)	
	b	**SE**	**b**	**SE**
Learning Modality (No-Change Ref.)				
In-Person w/ Safety	0.08	(2.87)	3.59	(3.09)
Virtual Only	0.15	(2.84)	5.08	(3.10)
Hybrid	0.68	(2.81)	4.90	(3.00)
Controls				
Lagged 2017–18 Rate	0.41***	(0.06)	0.01	(0.02)
% Black Enrollment	-0.01	(0.01)	-0.12***	(0.01)
% Male Enrollment	0.01	(0.05)	0.02	(0.03)
% FRL	-0.01	(0.01)	-0.03***	(0.01)
Total Enrollment	0.01***	(0.00)	0.00	(0.00)
Secondary (vs. Elementary)	3.37***	(0.36)	3.09***	(0.22)
Locale (Urban Ref.)				
Suburban	0.09	(0.25)	0.20	(0.40)
Town	0.38	(0.39)	0.59	(0.52)

Rural	-0.13	(0.33)	1.28**	(0.48)
Predicted Margins:				
No Change	3.8		-1.96	
In-Person w/ Safety	3.9		1.63	
Virtual Only	4.0		3.12	
Hybrid	4.5		2.93	

Note: N = 42,988. Positive values indicate Black students have higher rates than White students. *p < .05; **p < .01; ***p < .001

Figure 4.11 Black-White Suspension Gap by Learning Modality

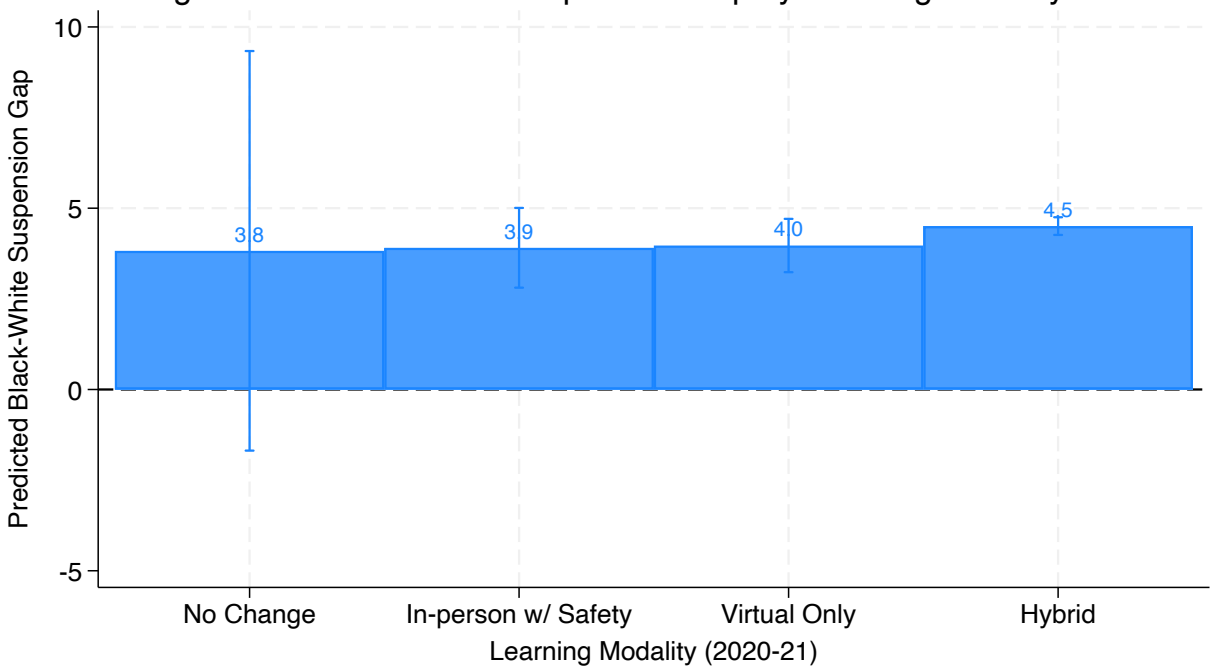
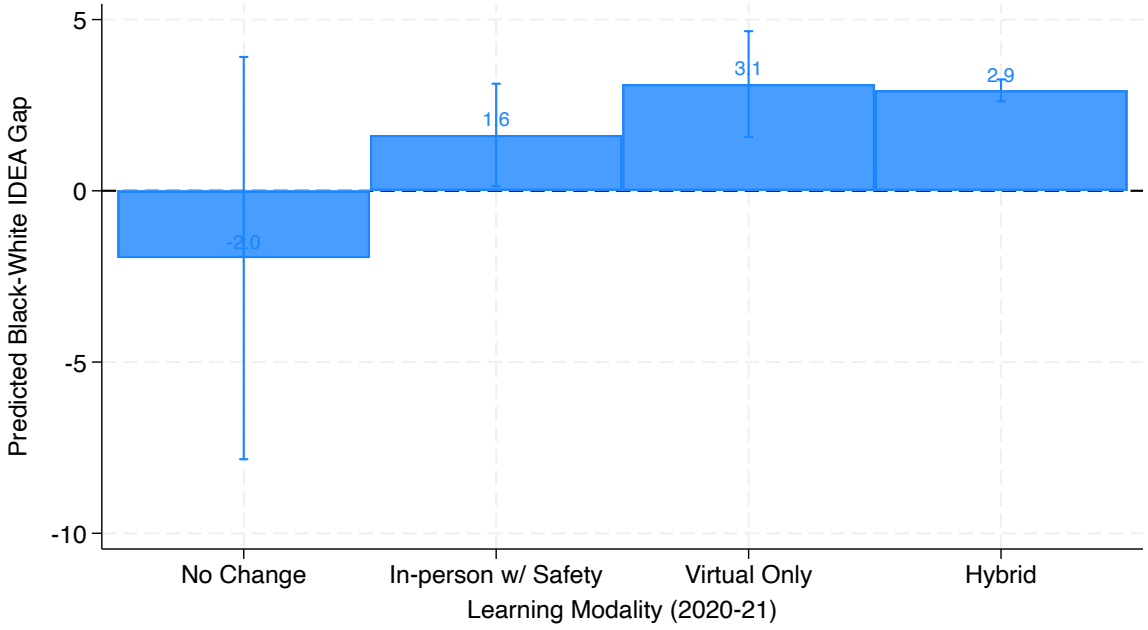


Figure 4.12 Black-White IDEA Gap by Learning Modality



Summary of Findings

Several consistent patterns emerge across all analyses. Suspension is significantly more sensitive to learning modalities than IDEA identification, confirming the theoretical asymmetry between the two pathways. Modality-associated suspension increases are concentrated in White students, not Black students, and this holds across all model specifications. Regardless of modality, Black students show elevated rates of both criminalization and medicalization simultaneously, contradicting the simple sorting model and supporting the overlapping institutional control interpretation. The IDEA-to-suspension ratio for Black students (3.37) is substantially lower than for White students (8.93), but both ratios exceed one, which indicate medicalization exceeds criminalization numerically for both groups. Neither the Black-White

suspension gap nor the Black-White IDEA gap varies significantly by modality after controlling for locale and school characteristics, indicating that the racial structure of both pathways is primarily determined by pre-existing structural conditions rather than the learning modalities schools utilized during 2020 – 2021.

DISCUSSION

This chapter examined how the learning modalities schools utilized during the 2020–2021 academic year shaped patterns of school-based criminalization and medicalization in 2021–2022. Building on Ramey's (2015, 2016, 2018) framework that these pathways operate as parallel mechanisms of social control through which schools manage student behavior, this study finds that the relationship between modality and these pathways may be more complex than prior research anticipated. The pandemic and the learning modalities schools utilized did alter the intensity of disciplinary responses in some contexts, but they did not fundamentally restructure the established systems of social control in schools. The two pathways responded differently to modality-related disruption, as predicted, and the racial stratification of those pathways proved more durable than the disruption could alter.

Across all analyses, suspension rates were more sensitive to learning modalities than IDEA identification rates, consistent with H1a and H2a. Suspension is fast and discretionary and does not require the paperwork and formal evaluation that IDEA identification needs. As schools began returning to more traditional in-person learning in 2021–2022, teachers and administrators were reestablishing behavioral expectations in buildings that operated very differently than the year before. In schools that had been hybrid or in-person with safety measures, behavioral norms

during the disruption year were inconsistent and fragmented. Hybrid schools did not eliminate in-person contact, it was merely fragmented. Because of this, students and teachers interacted inconsistently, which made it harder to develop the individualized relational knowledge that normally mediates between behavior and punitive responses to behavior. When those schools began returning to more traditional in-person instruction, suspension may have functioned as the quickest mechanisms for reestablishing that behavioral foundation. Virtual schools were different. Students who had been fully remote had no in-person behavioral baseline to return to. This means schools could establish expectations from scratch rather than reasserting norms that had been inconsistently enforced. This may explain why virtual schools do not show the same suspension elevation as hybrid or in-person with safety measures schools. In contrast, IDEA identification remained stable. No modality coefficient reaches significance in either the overall or race-stratified IDEA models. IDEA identification requires formal evaluation, diagnostic assessments, and documentation required for procedural review. This process takes time and does not provide the immediate discretionary judgment through which suspension works. Results show that IDEA is following the pre-existing upward trend. The absence of significant modality effects on IDEA does not mean referrals were not initiated — the beginning stages of IDEA identification may have increased during this year with results appearing in subsequent waves as the formal process is completed. It is also worth noting that virtual and hybrid instruction increased parental exposure to their children's daily behavior, which may have facilitated parent-initiated rather than teacher-initiated referrals for diagnosis which is a pathway this analysis cannot capture but that future research should examine. Future work should continue adding waves to assess whether IDEA rates increase as referrals initiated during the disruption years are

finalized. These results confirm that suspension is the quicker mechanism for reestablishing social control following an educational disruption.

An important aspect of these findings concerns the racial differences in how modality shaped suspension. Prior research establishes that White student behavior is typically perceived as treatable while Black student behavior is perceived as dangerous and met with punitive response. These results complicate that picture. All three learning modalities are significantly associated with higher suspension rates for White students only while Black students show no significant modality effects. These comparisons should be interpreted with caution given that no-change schools represent less than one percent of the analytic sample, meaning that higher modality-associated rates are relative to a very small reference group that may differ compositionally from the other school types. This does not mean Black students were unaffected. Black students still had higher rates of both criminalization and medicalization than White students across every modality. What it means is that the interpretation of Black student behavior did not drastically change because it already operates through the racialized lenses that modality could not shift. For White students, the relational buffers that normally mediate between behavior and formal punishment appear to have suffered more during the disruption, meaning that as schools reestablished order, White students were being suspended at higher rates than before. The overall structure of Black student social control remained relatively stable. This supports H3a as Black students did experience higher suspension rates than White students across all modalities, consistent with the persistence of racialized criminalization, and modality-associated increases were concentrated among White students rather than Black students. The racial structure of suspension was determined by pre-existing conditions, not by the learning modality schools utilized. The pandemic did not amplify racial disparities in criminalization

through modality. If anything, modality narrowed the gap but only because White students were being punished more, not because Black students were being punished less. That is not progress toward equity.

The most interesting finding may be how these results complicate the dual pathways of social control as explained by Ramey (2015, 2018). In Ramey's framework, criminalization and medicalization are parallel pathways through which students are sorted with Black students toward criminalization and White students toward medicalization (Ramey 2015, 2018). The 2021–2022 data complicate this in ways that go beyond the context of the pandemic. Black students show elevated rates on both pathways simultaneously, meaning they are subject to more institutional control than White students across both dimensions. At the same time, White students remain more likely to be medicalized even with the modality-associated increases in criminalization. The overlap was anticipated. It is not a sign of equity across racial groups. The increase in Black student IDEA rates does not reflect greater resources or therapeutic care, it reflects a broader expansion of institutional oversight and the continued perception of Black student behavior as requiring formal intervention. The pandemic did not create this pattern, nor did it change it. This was established prior to the disruption and may reflect broader societal shifts in recognizing behaviors that warrant support or increases in access to medical frameworks more generally.

The gap models support this interpretation. Neither the Black-White suspension gap nor the Black-White IDEA gap varies significantly by modality once other contextual factors are accounted for. This null finding is still meaningful. The racial structure of both pathways is determined primarily by where schools started — their pre-existing disciplinary culture, student

composition, and structural context — rather than by the instructional disruption they experienced. The pandemic did not reorganize the racial architecture of criminalization or medicalization, instead it appears to have reproduced it. This shows how deeply embedded these racial structures are within schools. Even a prolonged educational disruption like COVID-19 could not move the racial architecture of either pathway. If anything, the pandemic reinforced these structures rather than disrupting them, suggesting that the institutional conditions that produce racial disparities in criminalization and medicalization are more durable than any single external shock could alter.

These findings reinforce how deeply embedded these pathways are within schools. Across all models, school-level structural characteristics are more strongly and consistently associated with post-disruption criminalization and medicalization than learning modality. The lagged 2017–2018 discipline and IDEA rates are among the strongest predictors of 2021–2022 outcomes in every model, which again supports the argument that these pathways are institutionally embedded rather than responsive to short-term disruption. Secondary schools report substantially higher suspension rates than elementary schools, consistent with adolescent behavior being more formally controlled than child behavior. Racial composition, gender composition, and socioeconomic disadvantage are all positively associated with suspension across racial groups, consistent with prior research on school discipline (Cribb Fabersunne et al. 2023; Skiba et al. 2014; Welch and Payne 2010, 2012). Even when looking at IDEA rates, the pre-existing upward trend continued regardless of learning modality. Schools did not medicalize more or less in response to the disruption, instead they continued at the pace established before the pandemic. The pandemic was large, but not large enough to disrupt the structural patterns that govern how schools manage student behavior.

These findings extend Ramey's framework in a couple of important ways. They show that criminalization and medicalization do not simply sort students into separate pathways but operate cumulatively for Black students, with higher rates on both dimensions simultaneously. Future work should continue to examine this complexity and move beyond the parallel pathways model to consider how these systems interact both generally and as we move further from this large educational disruption. They also show that the racial asymmetry in modality effects suggests that the mechanisms linking disruption to formal sanction are themselves racialized. The pandemic did not produce more punishment generally; it simply removed relational buffers that differentially protected White students from punitive responses. For Black students, the relational disruption mattered less because they were already operating with fewer relational buffers in place. Relational ties function as a protective factor for White students in ways they do not for Black students, and that asymmetry became visible when those ties were disrupted.

From a policy standpoint, these findings make clear that organizational disruptions to schooling, even ones that are large and sustained, do not on their own disrupt the racial structures of discipline embedded within them. The racialized structures of criminalization and medicalization proved resistant to a disruption as large and sustained as the COVID-19 pandemic. If a disruption of that magnitude could not move these structures, targeted policy change is required. This means investment in teacher-student relationship building to create the relational buffers that currently function as a protective factor only for White students. It means professional development on implicit bias and discretionary decision-making so that teachers are aware of how racialized perceptions shape their responses to behavior. And it means explicit attention to how referral processes for both suspension and IDEA identification are structured and monitored across racial groups. Restorative justice policies are also worth continued

implementation as an alternative framework that addresses behavior without relying on the punitive and medicalized defaults that these findings show are so deeply embedded in how schools operate.

Limitations and Future Directions

This study has limitations I must mention. The measures of criminalization and medicalization are based on school-level administrative data, meaning the decision-making process behind each disciplinary or diagnostic event is not observable. Suspension rates reflect aggregate outcomes but cannot distinguish between events that differ in severity or institutional response. IDEA identification also reflects the end of a long process where the beginning stages of this process may have started during the 2021 – 2022 and so they are not captured in this wave of data. These rates could change in additional waves of the CRDC as the process is finalized. Future research should add the subsequent waves to examine if this is true and IDEA rates continue to increase as referrals initiated during the disruption years are finalized. The data for this study is also at the school level, so it is not possible to track whether the same individual students are subject to both suspension and IDEA simultaneously. The pathway from criminalization to medicalization, or medicalization to criminalization, has been documented in prior research and is important for understanding how these mechanisms of social control interact. Future research using student-level administrative data linked across disciplinary and special education records would allow direct examination of whether the same students are being regulated through both pathways and whether that overlap varies by race or modality.

Another limitation is that schools were only able to report one dominant learning modality for the 2020 – 2021 academic year, but many shifted between formats throughout the year as public health conditions evolved. These within-year shifts in modality likely also impacted the relational buffers that shape criminalization and medicalization in ways this analysis cannot capture. Additionally, the 2021 – 2022 academic year cannot be treated as a uniform return to traditional in-person instruction. Some schools and students never fully returned to in-person learning, and in some districts modified or hybrid formats persisted into 2021 – 2022 and beyond. To the extent that a meaningful share of schools in the analytic sample had not fully restored traditional in-person routines, the modality effects estimated here may understate the true association between disruption and post-disruption discipline. Future research should examine whether modality-based patterns persist in subsequent CRDC waves as schools continue to stabilize further from the disruption. Future research should also examine how teachers are building relational buffers with students in a school environment that still looks different than it did before the pandemic and whether those buffers are forming equally across racial groups.

CONCLUSION

This chapter examined how the learning modalities schools utilized during the 2020 – 2021 academic year shaped school-based criminalization and medicalization in the 2021 – 2022 academic year. The findings indicate that the educational disruption, caused by the COVID-19 pandemic, mattered but only selectively. Criminalization was found to be more sensitive to

modality-related disruption than medicalization was which is consistent with the argument that suspension is fast and discretionary while IDEA identification depends on more formal procedural processes that take time. Overall, schools that utilized in-person and hybrid learning showed higher suspension rates in 2021 – 2022 relative to schools that did not change their learning modalities while IDEA rates remained largely stable across all the learning modalities. The most important finding concerns the racial structure of these modality effects on school-based social control. Modality-associated suspension increases were concentrated among White students only. Black students, who did have higher overall rates, do not vary significantly across modalities after accounting for pre-pandemic baselines and school composition. The relational disruptions introduced by hybrid and in-person modalities appear to have elevated the threshold for formal sanction among White students who had previously managed informally because of the relational ties. For Black students, exposure to the criminalization path remained anchored to the structural conditions that modality did not alter.

The results of this chapter also challenge the simple sorting model through which criminalization and medicalization have been understood. Black students show elevated rates in both outcomes simultaneously. This overlapping of the pathways extends the framework and points toward a more cumulative understanding of how school-based social control operates for Black students. This pattern was established prior to the pandemic and seems to have continued after, or at least during, the pandemic. Schools are durable institutions of social control. Even a disruption as large and sustained as the COVID-19 pandemic did not fundamentally reorganize the structure of school-based social control. What the pandemic did reveal is how quickly and selectively these systems reassert themselves when routine conditions began to be restored and how resistant the racialized logic of criminalization and medicalization is to institutional

disruption. Addressing the logic requires more than changing how learning is organized. It requires sustained attention to the interpretive processes through which student behavior is perceived and routed toward punishment or treatment.

CHAPTER FIVE

Conclusion

Schools are key sites of child and adolescent social control in the United States. While the primary purpose of schooling is education, schools also carry a hidden curriculum through which student behavior is interpreted and regulated through formal and informal mechanisms of social control. Research shows that these mechanisms are not evenly distributed and mirror broader societal patterns of inequality. Black students are more likely to be controlled through punitive measures like suspension and expulsion, while White students are more likely to have relational buffers that protect them from formal sanction or to be medicalized because their behavior is interpreted as symptomatic of an underlying condition rather than intentional deviance. This dissertation examined how these mechanisms of social control were impacted around the COVID-19 pandemic. Specifically, I look at how the measures of social control in 2021 – 2022 compared to pre-pandemic years based on the learning modalities schools implemented during 2020 – 2021. The COVID-19 pandemic was one of the most significant disruptions to society and American education in recent history. Schools built for in-person instruction had to implement different learning modalities to continue educating students while following the ever-changing public health protocols. These modalities (virtual, hybrid, or in-person with safety measures) disrupted the traditional ways that formal and informal mechanisms of social control operate. Each modality shaped teacher-student relationships differently across an entire academic year, which meant that as students began returning to more traditional schooling in 2021 – 2022, teachers were reestablishing behavioral expectations and mechanisms

of control in contexts that had been altered in different ways depending on what the disruption year looked like.

Using nationally representative data from the CRDC and school-level data from the NCES, this dissertation examines discipline practices across K-12 public schools from 2009 – 2010 through 2021 – 2022 to assess how the learning modalities schools utilized during 2020 – 2021 shaped exclusionary discipline and medicalization the following year, whether those relationships varied across urban, suburban, and rural contexts, and whether racial disparities in these outcomes persisted or changed.

SUMMARY OF FINDINGS

The findings across the three empirical chapters show that the learning modalities schools utilized during the 2020 – 2021 academic year were associated with changes in disciplinary practices in 2021 – 2022, but the broader structure of racial inequality proved more durable than the disruption could alter. Criminalization rates were more responsive to the pandemic than medicalization, but racial disparities persisted across all contexts and all modalities.

Chapter Two found that learning modality during the disruption year was significantly associated with suspension rates the following year. Schools that utilized hybrid or in-person with safety measures reported higher suspension rates than schools that experienced no change, and virtual schools showed elevated rates as well, though the magnitude was smaller. These patterns suggest that the disruptions to routine and relational contact between teachers and students during the pandemic led schools to rely more heavily on exclusionary discipline as they worked to reestablish order. Expulsion rates, however, remained relatively stable regardless of

modality which suggests that more severe disciplinary actions are less sensitive to short-term organizational disruption than suspensions. This makes sense given that suspensions involve fewer procedural barriers and can be deployed more quickly as a mechanism for reestablishing behavioral expectations. Racial disparities were evident across all modalities. Some modalities were associated with slight reductions in the racial gap, but those reductions reflected increases in suspension rates among White students rather than meaningful decreases among Black students. The structure of racial inequality in discipline remained largely intact.

Chapter Three extended the analysis to geographic context and found that locale conditioned but did not fundamentally alter the modality-discipline relationship. Consistent with prior research, urban schools reported higher levels of exclusionary discipline than suburban and rural schools. The relationship between learning modality and discipline rates was relatively modest across all locales, hybrid and in-person with safety measures schools tended to show slightly higher suspension rates, but these effects were small compared to the influence of more stable structural factors like school composition and socioeconomic context. In this chapter, suspensions again proved more responsive to modality than expulsions across every locale. It showed that schools serving higher proportions of Black students, male students, and socioeconomically disadvantaged students consistently reported higher disciplinary rates regardless of instructional modality or geographic setting, reinforcing that structural context is the dominant driver of disciplinary outcomes.

Chapter Four broadened the analysis to include a second pathway of school-based social control. This chapter examines both criminalization and medicalization as dual pathways of school-based social control, building on David Ramey's framework. Suspension rates (criminalization) varied across learning modalities, with higher rates in hybrid, virtual, and in-

person with safety measures. IDEA rates (medicalization) followed the pre-existing upward structural trend but were not strongly associated with learning modality. This asymmetry reflects the institutional requirements governing each pathway. Suspension can be enacted through fast discretionary judgment while IDEA identification requires formal evaluation and investment over time that the pandemic could not accelerate or shortcut. Racial disparities persisted across both pathways. Black students continued to experience higher suspension rates across all modalities, and the patterns of IDEA remained uneven. Rather than being sorted cleanly between criminalization and medicalization as Ramey's framework predicts, Black students show elevated rates on both pathways simultaneously showing an overlapping pattern of institutional control that predates the pandemic and was not altered by it.

THEORETICAL CONTRIBUTIONS

This dissertation contributes to research on school-based social control in several ways. The findings show that exclusionary discipline functions as an adaptable tool schools use to reassert social control when traditional routines are disrupted. Suspensions increased following the disruption and learning modalities in 2020 – 2021 while expulsions did not, which points to the discretionary and fast nature of suspension as a mechanism for reestablishing order. This extends existing work by showing that disciplinary practices are shaped not only by student behavior but by the institutional conditions under which behavior is interpreted and responded to. When the conditions through which behavior is interpreted and responded to are disrupted, schools fall back on the mechanisms most immediately available, mainly suspension as it is the fastest. This dissertation also contributes to research on medicalization as a form of social control

by showing its relative stability even during a major disruption. Unlike suspensions, IDEA identification changed very little in response to the pandemic. This stability reflects the bureaucratic and procedural nature of special education, meaning the formal evaluation and time investment cannot be accelerated by a return to in-person instruction, it may have made this process slower. This suggests that medicalized responses to student behavior are more insulated from short-term institutional disruption than criminalized ones, and that the two pathways of school-based social control are not equally sensitive to the same conditions. The findings also reinforce how durable racialized social control is in schools. Racial disparities persisted across all analyses even as overall disciplinary patterns shifted. When the racial gaps narrowed, it was because White student suspension rates increased and not because Black student rates decreased. The relational buffers that seem to be a protective factor for White students were the most impacted. This shows that the educational disruption caused by the COVID-19 pandemic redistributed disciplinary practices without changing who bears the burden of them. This supports the broader argument that institutional disruption can reshape how social control is enacted but cannot alter the underlying inequalities that structure it. Addressing those inequalities will require more than organizational change.

POLICY IMPLICATIONS

The findings point to several implications for policy and practice. Disciplinary practices are closely tied to the institutional conditions schools operate in. The increased reliance on suspension in schools that utilized hybrid or in-person with safety measures suggests that when routines are disrupted and the relational ties are weakened, schools fall back on exclusionary

discipline. Efforts to reduce the suspension rates should focus on strengthening the conditions that buffer from these formal sanctions, including investing in teacher-student relationship building, staffing comprehensive counseling services, and potentially building school climates that do not default to punishment when student misbehavior is observed. The stability of medicalized social control points to a different set of policy needs. Because IDEA is governed by formal evaluation processes and procedural requirements, meaningful reform will likely require changes to how evaluations are initiated and resourced, not just how schools are organized. Schools that serve higher proportions of Black students and socioeconomically disadvantaged students need sustained investment in the personnel and resources that make the medicalization pathway accessible, not as a substitute for addressing racial disparities in criminalization, but as part of a broader effort to ensure that both pathways are distributed more equitably. The persistence of racial disparities across all analyses is the most direct policy finding. Interventions like restorative justice or culturally responsive practices can help, but they are unlikely to produce substantial change without broader efforts to address the structural conditions that produce racial inequality in discipline in the first place. The relational buffers that modality disruption removed were already less operative for Black students before the pandemic. Building those buffers, and ensuring they function as a protective factor for all students, and not just white students, is where the policy work needs to focus.

LIMITATIONS AND FUTURE RESEARCH

This dissertation is not without limitations. The analysis relies on school-level administrative data, which means it captures reported disciplinary outcomes rather than the

decision-making processes that produced them. Suspension and expulsion rates reflect just what the schools reported, and not direct measures of student behavior or the interpretive judgments educators made in individual disciplinary situations. Prior research consistently shows that racial disparities persist even after accounting for behavioral differences, but the absence of individual-level data limits the ability to examine how institutional conditions shaped those decisions in practice. This study also cannot track whether the same individual students are subject to both suspension and IDEA identification simultaneously. The overlapping control pattern documented in Chapter Four, where Black students show elevated rates on both pathways, is observable at the school level but cannot be confirmed at the student level with this data. Student-level administrative data linked across disciplinary and special education records would allow a more direct test of whether the same students are being regulated through both pathways and whether that overlap varies by race or modality. The learning modality measure is operationalized through schools reporting their dominant learning modality for the 2020 – 2021 academic year, however many schools shifted between these formats throughout the year as public health conditions changed. A school that reported hybrid instruction may have been predominantly in-person for part of the year and predominantly virtual for another, and that variation is not captured here. Additionally, this analysis focused on 2021 – 2022, a year when many schools had only just begun returning to more traditional in-person instruction. In some ways that year could still be considered part of the pandemic period. Future research should continue adding waves as we move further from the disruption to determine whether the patterns documented here continue on the same trajectory or change as schools continue to stabilize. Schooling itself may have fundamentally changed in ways that make the pre-pandemic baseline less useful as a comparison point. Some students never returned to in-person learning. Days that would

previously have been canceled are now moved to virtual instruction. Future research should examine how teachers are building relational ties with students in a school environment that still looks different than it did before the pandemic, and whether those ties are forming equally across racial groups or whether the structural conditions that already limited relational buffers for Black students continue to do so.

KEY TAKEAWAYS

Three findings from this dissertation stand out as the most important for understanding how school-based social control operates and what it takes to change it. Suspension is the mechanism schools reach for first when authority needs to be reestablished. It is fast, discretionary, and does not require the procedural investment that expulsion or IDEA identification demand. The pandemic confirmed this. Suspension responded to disruption in ways that expulsion and medicalization did not. That asymmetry is not a pandemic-specific finding. It reflects something fundamental about how schools manage behavior when informal controls break down.

The racial structure of school-based social control is more durable than the disruption it faced. Black students continued to face higher rates of both criminalization and medicalization than White students regardless of modality, locale, or year. When racial gaps narrowed, it was because White student rates increased. The relational buffers that modality disruption weakened were already less operative for Black students before the pandemic began. Their exposure to formal sanction did not require disruption to be elevated because it was already elevated. The pandemic made that asymmetry visible, but it did not create it.

What the pandemic also revealed is that the effect of disruption is conditioned by what exists to respond when relational ties break down. Urban schools had formalized systems in place. Suburban schools had resources and flexibility. Rural hybrid schools had neither. That unevenness is not a pandemic problem. Instead, it is a structural one that predates COVID-19 and will persist long after it. Addressing the racial inequalities embedded in school discipline requires sustained attention to those structural conditions. Changing how learning is organized is not enough. The interpretive processes through which teachers perceive and label student behavior, and the structural conditions that make those processes so resistant to disruption, are where the work remains.

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